Mr. Ron Terrell
Milestone Contractors, L..P.
P.O. Box 421459
Indianapolis, Indiana 46242-1459

Re: 177-11573
First Minor Revision to
FESOP 177-5632-03232

Dear Mr. Terrell:

Milestone Contractors, L.P., was issued a Federally Enforceable State Operating Permit (FESOP) on December 9, 1996, for a stationary hot mix asphalt concrete source located in Cambridge City, Indiana. A letter requesting changes to this permit was received on November 19, 1999. 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 and as follows (bold emphasis added to new language):

1. The facility descriptions in Section A.2 on Page 4 of the FESOP shall be revised to account for the replacement of the existing aggregate dryer/mixer, burner and wet scrubber with a new aggregate dryer, a new aggregate mixer which is a separate unit, a new dryer burner and a baghouse. Additionally there is a replacement of an existing conveyor with a new scale conveyor. The revisions to the descriptions shall be as follows:

A.2 Emission Units and Pollution Control Summary
The stationary source consists of the following emission units and pollution control devices:

(a) one (1) aggregate drum ~~mix~~ dryer **and one (1) aggregate drum mixer**, identified as emission unit No**s**. 2**a and 2b**, with a maximum capacity of 300 tons per hour**.**~~,~~ **The dryer is** equipped with one (1) re-refined waste oil fired ~~aggregate dryer~~ burner with a maximum rated capacity of ~~103.5~~ **85.0** million (MM) British thermal units (Btu) per hour using natural gas and No. 2 distillate fuel oil as back-up fuels and one (1) ~~wet scrubber~~ **baghouse** for air pollution control, exhausting at one (1) stack, identified as S-1;

(b) one (1) drag slat conveyor, one (1) Recycled Asphalt Pavement (RAP) conveyor, ~~two (2)~~ **one (1)** feed conveyor~~s~~, **one (1) scale conveyor,** and one (1) screen;

(c) one (1) liquid asphalt storage tank, identified as Tank 11, with a maximum storage capacity of 20,000 gallons, exhausting at one (1) stack, identified as V-3; and

(d) cold-mix (stockpile mix) asphalt storage piles.

2. The facility description in Section D.1 at the top of Page 23 of the permit have been revised consistent with the changes to Items (a) and (b) of Section A.2 as detailed in Item 1, above.

3. Condition D.1.4 (Sulfur Dioxide) on Page 23 of the permit has been revised to account for the smaller size of the replacement dryer burner as follows:

D.1.4 Sulfur Dioxide (SO_2)

Pursuant to 326 IAC 7-1.1 (Sulfur Dioxide Emission Limitations), sulfur dioxide emissions from the ~~103.5~~ **85.0** million Btu per hour burner for the aggregate dryer shall be limited to 1.6 pounds per million Btu heat input or a sulfur content of less than or equal to 1.31 percent when using re-refined waste oil. This source has accepted a sulfur content limit of 0.75 percent when using re-refined waste oil. When using distillate oil as a back-up fuel, the sulfur dioxide emissions from the ~~103.5~~ **85.0** million Btu per hour burner for the aggregate dryer shall be limited to 0.5 pound per million Btu heat input or a sulfur content of less than or equal to 0.49 percent.

Pursuant to 326 IAC 7-1.1-2, this sulfur dioxide limit applies at all times including periods of startup, shutdown, and malfunction.

4. Condition D.1.5 (Re-refined Waste Oil Usage) on Page 24 of the permit has been changed to reflect the appropriate fuel usage limitation for and size of the replacement aggregate dryer burner as follows:

D.1.5 Re-refined Waste Oil Usage

Pursuant to 326 IAC 2-8-4(1), the input of re-refined waste oil to the ~~103.5~~ **85.0** million Btu per hour burner for the aggregate dryer shall be limited, in total, to ~~1,707,198~~ **1,707,210** U.S. gallons per 365 day period, rolled on a daily basis based on a maximum oil sulfur content of 0.75 percent. For purposes of determining compliance, ~~every million cubic feet of natural gas burned shall be equivalent to 5.4 gallons of re-refined waste oil based on SO_2 emissions and~~ every 1,000 gallons of No. 2 distillate fuel oil burned shall be equivalent to 626.0 gallons of re-refined waste oil based on SO_2 emissions and a maximum sulfur content of 0.49 percent such that the total gallons of re-refined waste oil and re-refined waste oil equivalent input does not exceed the limit specified. During the first 365 days of operation under this permit, the input of re-refined waste oil and re-refined waste oil equivalents shall be limited such that the total gallons divided by the accumulated days of operation shall not exceed 4,677 U.S. gallons per day. Therefore, the requirements of 326 IAC 2-7 will not apply.

5. The following Condition D.1.6 (Natural Gas Usage) on Page 24 of the permit has been deleted from the permit because the smaller size of the replacement dryer burner is such that no natural gas usage limit is required to avoid applicability of 326 IAC 2-7:

D.1.6 ~~Natural Gas Usage~~

~~Pursuant to 326 IAC 2-8-4(1), the input of natural gas to the 103.5 million Btu per hour burner for the aggregate dryer shall be limited, in total, to 354.8 million cubic feet (MMCF) per 365 day period, rolled on a monthly basis. For purposes of determining compliance, every 1,000 gallons of No. 2 distillate fuel oil burned shall be equivalent to 0.036 MMCF of natural gas based on NO_x emissions and 0.49 percent sulfur content of fuel and every 1,000 gallons of re-refined waste oil burned shall be equivalent to 0.035 MMCF of natural gas based on NO_x emissions and 0.75 percent sulfur content such that the total MMCF of natural gas and natural gas equivalents input does not exceed the limit specified. During the first 365 days of operation under this permit, the input of~~

~~natural gas and natural gas equivalents shall be limited such that the total MMCF divided by the accumulated days of operation shall not exceed 0.97 MMCF per day. Therefore, the requirements of 326 IAC 2-7 will not apply.~~

6. Condition D.1.8 (Sulfur Dioxide Emissions and Sulfur Content) on Page 24 of the permit has been changed to reflect the size of the replacement aggregate dryer burner as follows:

D.1.8 Sulfur Dioxide Emissions and Sulfur Content
The Permittee shall test for:

(a) Sulfur content of oil burned as fuel by the ~~103.5~~ **85.0** million Btu per hour burner for the aggregate dryer using 40 CFR Part 60, Appendix A, Method 19 for each load of oil delivered; or

(b) Sulfur dioxide emissions from the ~~103.5~~ **85.0** million Btu per hour burner for the aggregate dryer using 40 CFR Part 60, Appendix A, Method 6 each time a test to comply with condition D.1.6 is performed.

Sulfur content tests may be made by the oil supplier.

7. The compliance monitoring provisions in Condition D.1.10 () on Page 25 of the permit have been revised due to the replacement of the wet scrubber with a baghouse. The condition shall be changed as follows:

D.1.10 ~~Pressure and Water Flow Rate Readings~~ **Pressure Drop Readings**
~~The Permittee shall take pressure and scrubbing liquid (water) flow rate readings from the centrifugal scrubber controlling the mixing and drying operation, at least once a day when the mixing and drying process is in operation. Unless operated under conditions for which the Preventive Maintenance Plan specifies otherwise, the pressure drop across the centrifugal scrubber shall be maintained within the range of 10 and 20 inches of water and the flow rate for scrubbing liquid shall be maintained within the range of 150 and 500 gallons of water per minute. The Preventive Maintenance Plan for this unit shall contain troubleshooting contingency and corrective actions for when the pressure reading or flow rate is outside of the above mentioned range for any one reading.~~
The Permittee shall record the total static pressure drop across the baghouse used in conjunction with the aggregate dryer, mixer and burner, at least once a day when the dryer, mixer or burner is in operation. Unless operated under conditions for which the Preventive Maintenance Plan specifies otherwise, the pressure drop across the baghouse shall be maintained within a range of 1.0 and 8.0 inches of water or a range established during the latest stack test. The Preventive Maintenance Plan for this unit shall contain troubleshooting contingency and response steps for when the pressure reading is outside of the above mentioned range for any one reading. The instrument used for determining the pressure shall comply with condition C.11 - Pressure Gauge Specifications, be subject to approval by IDEM, OAM, and shall be calibrated at least once every six (6) months.

The inlet temperature to the baghouse shall be maintained within a range of 200-400 degrees Fahrenheit (^{o}F) to prevent overheating of the bags and to prevent low temperatures from mudding up the bags. The thermocouple at the inlet has a temperature switch which automatically shuts the burner off if the high end range

is exceeded. In the event that bag failure has occurred due to rupture, melting, etc., corrective action shall be taken. The Preventive Maintenance Plan for this unit shall contain troubleshooting contingency and corrective actions for when the inlet temperature reading is outside of the above mentioned range for any one reading. The baghouse shall shutdown for visual inspection within 24 hours and bags shall be replaced as needed.

8. Condition D.1.12 (Preventive Inspections) starting on Page 25 of the permit has been removed because it is specific to the wet scrubber control system which is being replaced by a baghouse.

9. Condition D.1.13 (Scrubber Failure Detection) on Page 26 of the permit has been changed to be consistent with the replacement of the wet scrubber with a new baghouse as follows:

D.1.13 ~~Scrubber~~ **Broken Bag or** Failure Detection
In the event that ~~scrubber~~ **bag** failure has been observed:

(a) ~~The asphalt mixing and aggregate drying operation shall be shut down immediately until the units have been repaired.~~ **The affected compartments will be shut down immediately until the failed units have been repaired or replaced. For single compartment baghouses, failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced.**

(b) ~~Based upon the findings of the inspection, any additional corrective actions shall be devised within eight (8) hours of discovery and shall include a timetable for completion.~~ **Within eight (8) hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Preventive Maintenance Plan, response steps shall be devised within eight (8) hours of discovery of the failure and shall include a timetable for completion.**

10. The following Condition D.1.17 (Natural Gas Usage) has been removed from Page 27 of the permit because the underlying fuel usage limitation specified in Condition D.1.6 (Natural Gas Usage) was removed (see Item 5, above).

D.1.17 ~~Natural Gas Usage~~
~~(a) Complete and sufficient records shall be kept to establish compliance with the natural gas usage limit established in this permit and contain a minimum of the following:~~

~~(1) Calendar dates covered in the compliance determination period; and~~

~~(2) Daily usage and calculated natural gas equivalent.~~

11. Condition D.1.19 (Quarterly Reporting) on Page 27 of the permit has been modified to remove the reporting requirements associated with Condition D.1.6 (Natural Gas Usage) which was removed (see Item 5, above). The revised condition is as follows:

D.1.19 Quarterly Reporting
A quarterly summary to document compliance with operation conditions numbers D.1.4~~,~~ **and** D.1.5, ~~and D.1.6~~ shall be submitted, to the address listed in Section C.16 - General Reporting Requirements, using the enclosed forms or their equivalent, within thirty (30) days after the end of the quarter being reported.

12 The quarterly report form for reporting the re-refined waste oil and equivalents usage, Page 33 of the permit, has been revised to be consistent with the changes to the limiting condition (D.1.5) outlined in Item 4, above.

13. The quarterly report form for reporting the natural gas and equivalents usage, Page 34 of the permit, has been removed from the permit because the underlying fuel usage limitation specified in Condition D.1.6 (Natural Gas Usage) was removed (see Item 5, above).

14. The following construction conditions are applicable to the proposed project:

(a) 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 Management (OAM).

(b) 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.

(c) Effective Date of the Permit
Pursuant to IC 13-15-5-3, this approval becomes effective upon its issuance.

(d) 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.

(e) 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 Janusz Johnson, OAM, 100 North Senate

Avenue, P.O. Box 6015, Indianapolis, Indiana, 46206-6015, or call at (800) 451-6027, press 0 and ask for extension (2-8325), or dial (317) 232-8325.

Sincerely,

Paul Dubenetzky, Chief
Permits Branch
Office of Air Management

Attachments
JKJ
cc: File - Wayne County
U.S. EPA, Region V
Wayne County Health Department
Air Compliance Section Inspector - Warren Greiling
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

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015
Phone: 1-800-451-6027

Milestone Contractors, L.P.
14413 West U.S. 40
Cambridge City, Indiana 47327

(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.: F177-5632-03232	
Issued by: Paul Dubenetzky, Branch Chief Office of Air Management	Issuance Date: December 9, 1996

First Administrative Amendment: 177-8404, issued April 16, 1997.
Second Administrative Amendment: 177-8418, issued April 18, 1997.
Third Administrative Amendment: 177-10478, issued March 8, 1999.

First Minor Permit Revision: 177-11573	Pages Affected: 4, 23, 24, 25, 26, 27, 33 and 34
Issued by: Paul Dubenetzky, Branch Chief Office of Air Management	Issuance Date:

SECTION A SOURCE SUMMARY

A.1 General Information

The Permittee owns and operates a hot mix asphalt concrete source.

Responsible Official:	Ron Terrell, Senior Manager Asphalt Plants
Source Address:	14413 West U.S. 40, Cambridge City, Indiana 47327
Mailing Address:	P.O. Box 421459, Indianapolis, Indiana 46242-1459
SIC Code:	2951
County Location:	Wayne
County Status:	Attainment for all criteria pollutants
Source Status:	Synthetic Minor Source, FESOP Program

A.2 Emission Units and Pollution Control Summary

The stationary source consists of the following emission units and pollution control devices:

(a) one (1) aggregate drum dryer and one (1) aggregate drum mixer, identified as emission unit Nos. 2a and 2b, with a maximum capacity of 300 tons per hour. The dryer is equipped with one (1) re-refined waste oil fired burner with a maximum rated capacity of 85.0 million (MM) British thermal units (Btu) per hour using natural gas and No. 2 distillate fuel oil as back-up fuels and one (1) baghouse for air pollution control, exhausting at one (1) stack, identified as S-1;
(b) one (1) drag slat conveyor, one (1) Recycled Asphalt Pavement (RAP) conveyor, one (1) feed conveyor, one (1) scale conveyor, and one (1) screen;
(c) one (1) liquid asphalt storage tank, identified as Tank 11, with a maximum storage capacity of 20,000 gallons, exhausting at one (1) stack, identified as V-3; and
(d) cold-mix (stockpile mix) asphalt storage piles.

A.3 Insignificant Activities

This stationary source also includes the following insignificant activities, as defined in 326 IAC 2-7-1(20):

(a) two (2) asphalt storage tank heaters, identified as emission unit Nos. 12 and 14, each burning natural gas or No. 2 distillate fuel oil, each rated at 1.4 and 0.864 MMBtu per hr, respectively, and each exhausting at two (2) stacks, identified as S-2A, S-2B, S-4A and S-4B, respectively;
(b) one (1) re-refined waste oil storage tank, identified as Tank 10, with a maximum storage capacity of 20,000 gallons, exhausting at one (1) stack, identified as V-6;
(c) one (1) liquid asphalt storage tank, identified as Tank 13, with a maximum storage capacity of 25,000 gallons, exhausting at one (1) stack, identified as V-5;
(d) one (1) cold feed system consisting of six (6) compartments with a total aggregate holding capacity of 150 tons;
(e) three (3) hot mix asphalt cement storage silos, each with a maximum storage capacity of 200 tons;
(f) one (1) RAP feed bin;
(g) aggregate storage piles, with a maximum storage capacity of 22,000 tons;
(h) propane or liquefied petroleum gas, or butane-fired combustion sources with heat input equal to or less than 6.0 MMBtu per hr;
(i) Volatile Organic Compound (VOC) and Hazardous Air Pollutant (HAP) storage tanks with capacity less than or equal to 1,000 gallons and annual throughput less than 12,000 gallons;

SECTION D.1 FACILITY OPERATION CONDITIONS

(a)	one (1) aggregate drum dryer and one (1) aggregate drum mixer, identified as emission unit Nos. 2a and 2b, with a maximum capacity of 300 tons per hour. The dryer is equipped with one (1) re-refined waste oil fired burner with a maximum rated capacity of 85.0 million (MM) British thermal units (Btu) per hour using natural gas and No. 2 distillate fuel oil as back-up fuels and one (1) baghouse for air pollution control, exhausting at one (1) stack, identified as S-1;
(b)	one (1) drag slat conveyor, one (1) Recycled Asphalt Pavement (RAP) conveyor, one (1) feed conveyor, one (1) scale conveyor, and one (1) screen;

Emissions Limitations and Standards [326 IAC 2-8-4(1)][326 IAC 6-3][326 IAC 12][40 CFR Part 60.90]

D.1.1 Particulate Matter

State: Pursuant to 326 IAC 6-3 (Process Operations) and 326 IAC 2-2 (Prevention of Significant Deterioration), the particulate matter emissions from the aggregate mixing and drying operation shall not exceed 40.2 pounds per hour.

Federal: Pursuant to 326 IAC 12, (40 CFR Part 60.90, Subpart I) "Standards of Performance for Hot Mix Asphalt Facilities", the particulate matter emissions from the mixing and drying operations shall be limited to 0.04 grains per dry standard cubic foot (gr/dscf).

D.1.2 Particulate Matter 10 Microns (PM-10)

Pursuant to 326 IAC 2-8-4, particulate matter 10 microns emissions from the aggregate mixing and drying operation shall not exceed 16.7 pounds per hour, including both filterable and condensible fractions. Compliance with this limit will satisfy 326 IAC 2-8-4. Therefore, the Part 70 rules (326 IAC 2-7) do not apply.

D.1.3 Opacity

Pursuant to 326 IAC 12, (40 CFR Part 60.92, Subpart I) "Standards of Performance for Hot Mix Asphalt Facilities", the mixing and drying operations shall not discharge or cause the discharge into the atmosphere any gases which exhibit 20 percent opacity or greater.

D.1.4 Sulfur Dioxide (SO_2)

Pursuant to 326 IAC 7-1.1 (Sulfur Dioxide Emission Limitations), sulfur dioxide emissions from the 85.0 million Btu per hour burner for the aggregate dryer shall be limited to 1.6 pounds per million Btu heat input or a sulfur content of less than or equal to 1.31 percent when using re-refined waste oil. This source has accepted a sulfur content limit of 0.75 percent when using re-refined waste oil. When using distillate oil as a back-up fuel, the sulfur dioxide emissions from the 85.0 million Btu per hour burner for the aggregate dryer shall be limited to 0.5 pound per million Btu heat input or a sulfur content of less than or equal to 0.49 percent.

Pursuant to 326 IAC 7-1.1-2, this sulfur dioxide limit applies at all times including periods of startup, shutdown, and malfunction.

D.1.5 Re-refined Waste Oil Usage

Pursuant to 326 IAC 2-8-4(1), the input of re-refined waste oil to the 85.0 million Btu per hour burner for the aggregate dryer shall be limited, in total, to 1,707,210 U.S. gallons per 365 day period, rolled on a daily basis based on a maximum oil sulfur content of 0.75 percent. For purposes of determining compliance, every 1,000 gallons of No. 2 distillate fuel oil burned shall be equivalent to 626.0 gallons of re-refined waste oil based on SO_2 emissions and a maximum sulfur content of 0.49 percent such that the total gallons of re-refined waste oil and re-refined waste oil equivalent input does not exceed the limit specified. During the first 365 days of operation under this permit, the input of re-refined waste oil and re-refined waste oil equivalents shall be limited such that the total gallons divided by the accumulated days of operation shall not exceed 4,677 U.S. gallons per day. Therefore, the requirements of 326 IAC 2-7 will not apply.

D.1.6 ***** This condition has been removed *****

Testing Requirements [326 IAC 2-8-4(3)]

D.1.7 Particulate Matter

During the period between 42 and 48 months after issuance of this permit, the Permittee shall perform PM and PM-10 testing utilizing methods per 40 CFR Part 60 Appendix A, Method 5, 17, 40 CFR Part 51 Appendix M, Method 201, 201a, 202, as approved by the Commissioner. This test shall be repeated at least once every five years from the date of this valid compliance demonstration. PM-10 includes filterable and condensible PM-10.

D.1.8 Sulfur Dioxide Emissions and Sulfur Content

The Permittee shall test for:

(a) Sulfur content of oil burned as fuel by the 85.0 million Btu per hour burner for the aggregate dryer using 40 CFR Part 60, Appendix A, Method 19 for each load of oil delivered; or

(b) Sulfur dioxide emissions from the 85.0 million Btu per hour burner for the aggregate dryer using 40 CFR Part 60, Appendix A, Method 6 each time a test to comply with condition D.1.6 is performed.

Sulfur content tests may be made by the oil supplier.

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

D.1.9 Daily Visible Emissions Notations

Daily visible emission notations of the conveyors, transfer points, aggregate storage piles, unpaved roads, and the mixing and drying operation stack exhaust, shall be performed during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal. For processes operated continuously "normal" means those conditions prevailing, or expected to prevail, 80 percent of the time the process is in operation, not counting startup or shut down time. 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. A trained employee is an employee who has worked at the plant at least one month and has been trained in the appearance and characteristics of normal visible emissions for that specific process. The Preventive Maintenance Plan for this unit shall contain troubleshooting contingency and corrective actions for when an abnormal emission is observed.

D.1.10 Pressure Drop Readings

The Permittee shall record the total static pressure drop across the baghouse used in conjunction with the aggregate dryer, mixer and burner, at least once a day when the dryer, mixer or burner is in operation. Unless operated under conditions for which the Preventive Maintenance Plan specifies otherwise, the pressure drop across the baghouse shall be maintained within a range of 1.0 and 8.0 inches of water or a range established during the latest stack test. The Preventive Maintenance Plan for this unit shall contain troubleshooting contingency and response steps for when the pressure reading is outside of the above mentioned range for any one reading. The instrument used for determining the pressure shall comply with condition C.11 - Pressure Gauge Specifications, be subject to approval by IDEM, OAM, and shall be calibrated at least once every six (6) months.

The inlet temperature to the baghouse shall be maintained within a range of 200-400 degrees Fahrenheit (^{o}F) to prevent overheating of the bags and to prevent low temperatures from mudding up the bags. The thermocouple at the inlet has a temperature switch which automatically shuts the burner off if the high end range is exceeded. In the event that bag failure has occurred due to rupture, melting, etc., corrective action shall be taken. The Preventive Maintenance Plan for this unit shall contain troubleshooting contingency and corrective actions for when the inlet temperature reading is outside of the above mentioned range for any one reading. The baghouse shall shutdown for visual inspection within 24 hours and bags shall be replaced as needed.

D.1.11 Preventive Maintenance [326 IAC 2-8-4(9)]

A Preventive Maintenance Plan, in accordance with condition B.13 of this permit, is required for this source.

D.1.12 ***** This condition has been removed *****

D.1.13 Broken Bag or Failure Detection
In the event that bag failure has been observed:

(a) The affected compartments will be shut down immediately until the failed units have been repaired or replaced. For single compartment baghouses, failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced.

(b) Within eight (8) hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Preventive Maintenance Plan, response steps shall be devised within eight (8) hours of discovery of the failure and shall include a timetable for completion.

D.1.14 Fuel Oil Sampling and Analysis
Oil samples shall be collected from the fuel tank immediately after the fuel tank is filled and before any oil is combusted. The Permittee shall analyze the oil sample to determine the sulfur content of the oil in accordance with 326 IAC 3-3-4. If a partially empty fuel tank is refilled, a new sample and analysis is required upon filling. Vendor analysis of the fuel oil is acceptable, in lieu of the above, if accompanied by a certification.

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

D.1.15 Operational Parameters
The Permittee shall maintain a daily record for the wet scrubber controlling particulate matter emissions from asphalt mixing and aggregate drying operations of the following values:

(a) Inlet and outlet differential static pressure;

(b) Visible observations;

(c) Checklist with dates and initials for each preventive action performed; and

(d) Records of corrective actions.

D.1.16 Re-refined Waste Oil Usage

(a) Complete and sufficient records shall be kept to establish compliance with the re-refined waste oil usage limits and sulfur dioxide emission limit established in this permit and contain a minimum of the following:

(1) Calendar dates covered in the compliance determination period;

(2) Daily usage and calculated re-refined waste oil equivalent;

(3) 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; and

(4) Fuel supplier certifications.

(b) The supplier certification shall contain, as a minimum, the following:

(1) The name of the oil supplier; and

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

D.1.17 ***** This condition has been removed *****

D.1.18 Re-refined Waste Oil Usage

The burning of waste oil in the aggregate dryer burner shall comply with 329 IAC 13 (Standards for the management of waste oil). The burning of hazardous waste, as defined by 40 CFR 261, and the burning of used oil that has been mixed with hazardous waste, is prohibited at this facility.

D.1.19 Quarterly Reporting

A quarterly summary to document compliance with operation conditions numbers D.1.4 and D.1.5 shall be submitted, to the address listed in Section C.16 - General Reporting Requirements, using the enclosed forms or their equivalent, within thirty (30) days after the end of the quarter being reported.

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

FESOP Quarterly Report

Source Name: Milestone Contractors, L.P.
Source Address: 14413 West U.S. 40, Cambridge City, Indiana 47327
FESOP No.: F177-5632-03178
Facility: 103.5 million Btu per hr burner for the aggregate dryer
Parameter: sulfur dioxide (SO_2)
Limits:

sulfur content of No. 2 distillate fuel not to exceed 0.49%; sulfur content of re-refined waste oil not to exceed 0.75%; and 1,707,198 gallons of re-refined waste oil and re-refined waste oil equivalent per last 365 day period. For purposes of determining compliance, every 1,000 gallons of No. 2 distillate fuel oil burned shall be equivalent to 626 gallons of re-refined waste oil based on SO_2 emissions and a maximum sulfur content of 0.49%. During the first 365 days of operation under this permit, the input of re-refined waste oil and re-refined waste oil equivalents shall be limited such that the total gallons divided by the accumulated days of operation shall not exceed 4,677 U.S. gallons per day.

Month: _____ **Year:** _____

Day	Fuel Type	Sulfur Content of Fuel Oils (%)	Heat Content of Fuel Oils (Btu/gal)	Re-refined W.O. and equivalent Fuel usage (gal/day)	Re-refined W.O. and equivalent Fuel usage last 365 days (gallons)	Day	Fuel Type	Sulfur Content of Fuel Oils (%)	Heat Content of Fuel Oils (Btu/gal)	Re-refined W.O. and equivalent Fuel usage (gal/day)	Re-refined W.O. and equivalent Fuel usage last 365 days (gallons)
1						17					
2						18					
3						19					
4						20					
5						21					
6						22					
7						23					
8						24					
9						25					
10						26					
11						27					
12						28					
13						29					
14						30					
15						31					
16											

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

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

***** The quarterly report form on this page has been removed from the permit *****

Indiana Department of Environmental Management
Office of Air Management

Technical Support Document (TSD) for a Permit Revision to a Federally Enforceable State Operating Permit (FESOP)

Source Background and Description

Source Name:	**Milestone Contractors, L.P.**
Source Location:	**14413 West U.S. 40, Cambridge City, Indiana 47327**
County:	**Wayne**
SIC Code:	**2951**
Operation Permit No.:	**F 177-5632-03232**
Operation Permit Issuance Date:	**December 9, 1996**
Permit Revision No.:	**177-11573-03232**
Permit Reviewer:	**Janusz Johnson**

The Office of Air Management (OAM) has reviewed a revision application from Milestone Contractors, L.P., relating to the following changes to the process and control equipment at the hot mix asphalt concrete source:

(a) the existing wet scrubber for air pollution control on the aggregate drum mix dryer will be replaced with a knock out box in series with one (1) jet pulse baghouse;

(b) the existing aggregate dryer burner, rated at 103.5 million (MM) British thermal units (Btu) per hour heat input, will be replaced with one (1) 85.0 million (MM) British thermal units (Btu) per hour burner;

(c) the existing aggregate drum dryer/mixer will be replaced by one (1) aggregate drum dryer and one (1) aggregate drum mixer, having the same maximum throughput capacity of 300 tons per hour. The separate drum mixer has a hydrocarbon capture system exhausting to the aggregate dryer burner for reduction of volatile organic compound emissions;

(d) one (1) of the two (2) existing feed conveyors will be removed, and one (1) scale conveyor will be added to the aggregate feed system.

Existing Approvals

The source was issued a Federally Enforceable State Operating Permit (F 177-5632-03232) on December 9, 1999. The source has since received the following:

(a) First Administrative Amendment No.: 177-8404, issued on April 16, 1997;

(b) Second Administrative Amendment No.: 177-8418, issued on April 18, 1997; and

(c) Third Administrative Amendment No.: 177-10478, issued on March 8, 1999.

Enforcement Issue

There are no enforcement actions pending.

Recommendation

The staff recommends to the Commissioner that the Minor Permit 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.

An application for the purposes of this review was received on November 19, 1999.

Emission Calculations

While the change in size of the aggregate dryer burner will not affect the limited PTE of the source, the applicable emission factors used to determine the limited fuel consumption amounts associated with that limited PTE will change. See Appendix A of this document for detailed calculations including the revised fuel usage limitations for the new dryer burner (3 pages).

Potential To Emit

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as "the maximum capacity of a stationary source to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA."

There will be no significant increase in potential to emit (PTE) due to the changes requested because:

(1) the baghouse will be more efficient than the wet scrubber at controlling particulate matter;

(2) the change from a combined aggregate drum dryer/mixer to a configuration of a separate drum dryer and drum mixer, and the changes to the conveying system will not increase the maximum throughput capacity of the plant; and

(3) the replacement aggregate dryer burner is smaller than the existing burner and the source has agreed to accept limits on fuel combustion which maintain the existing limited PTE of the source.

Justification for Revision

The Federally Enforceable State Operating Permit (FESOP) is being modified through a Minor Permit Revision. This revision is being performed pursuant to 326 IAC 2-8-11.1(d)(3) because the modification involves a pollution control project as defined in 326 IAC 2-1.1-1 that does not increase the potential to emit of any regulated pollutant greater than the thresholds under subsection (e)(1), but requires a significant change in the method or methods to demonstrate or monitor compliance. The potential to emit (PTE) from the modification is less than the thresholds established in 326 IAC 2-8-11.1(f)(1); therefore, a Significant Permit Revision is not required.

County Attainment Status

The source is located in Wayne 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 (NOx) 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. Wayne County has been designated as attainment or unclassifiable for ozone.

(b) Wayne County has been classified as attainment or unclassifiable for all other regulated air 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.

(c) Fugitive Emissions
Since this type of operation is not one of the 28 listed source categories under 326 IAC 2-2 but has an applicable New Source Performance Standard that was in effect on August 7, 1980, the fugitive PM emissions are counted toward determination of PSD and Emission Offset applicability.

Potential to Emit of Modification After Issuance

The table below summarizes the source's revised potential to emit, reflecting all limits, of the significant emission units after controls. The source has accepted a federally enforceable limit for sulfur dioxide (SO_2) and volatile organic compounds (VOC) of less than 100 tons per year.

	Limited PTE (tons/year)						
Process/facility	PM	PM-10	SO2	VOC	CO	NOx	HAPs
combustion	0.19	0.15	94.27	2.34	26.94	43.21	neg.
aggregate drying and mixing	24.97	5.78	0.00	8.13	0.00	0.00	8.13
bin loading & conveying	0.40	0.19	0.00	0.00	0.00	0.00	0.00
screening & batch drops	1.16	0.55	0.00	0.00	0.00	0.00	0.00
unpaved roads	71.03	24.86	0.00	0.00	0.00	0.00	0.00
storage	1.81	0.63	0.00	0.00	0.00	0.00	0.00
cold mix VOC storage	0.00	0.00	0.00	82.47	0.00	0.00	0.00
insignificant sources	0.14	0.12	4.89	0.05	0.35	1.42	0.00
Total Emissions	99.7	32.28	99.16	92.99	27.29	44.63	8.13

(a) This existing source is not a major stationary source under Prevention of Significant Deterioration requirements because no attainment regulated pollutant is emitted at a rate of 250 tons per year or more, and it is not one of the 28 listed source categories.

Federal Rule Applicability

There is no change in the applicable Federal rules for this facility as a result of the changes to the aggregate dryer, mixer and burner changes:

(a) The hot mix asphalt source is still subject to the New Source Performance Standard, 326 IAC 12, (40 CFR Part 60.90 through 60.93, Subpart I) "Standards of Performance for Hot Mix Asphalt Facilities". This rule limits particulate matter emissions to 0.04 grains per dry standard cubic foot (gr/dscf) and also limits visible emissions to 20% opacity. The source will comply with this rule by using a bag type dust collection system to limit particulate matter emissions to 0.04 gr/dscf.

(b) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs)(326 IAC 14 and 40 CFR art 63) applicable to this source.

State Rule Applicability

There is no change to the applicable State rules as a result of the changes to the aggregate dryer, mixer, and burner. The following applicable rule analyses have been revised to reflect the new equipment:

326 IAC 6-3 (Process Operations)

The aggregate drying operation is subject to 326 IAC 6-3-2 (Particulate Emission Limitations). Pursuant to this rule, particulate matter emissions shall not exceed 63.0 pounds per hour. However, this PM emission rate would exceed the 326 IAC 2-2 (Prevention of Significant Deterioration) allowable PM emission rate of 250 tons per year, therefore, pursuant to 326 IAC 2-2, the allowable PM emission rate was truncated to 40.2 pounds per hour. The source will comply with the requirements under 326 IAC 6-3-2 by utilizing a baghouse for controlling particulate matter emissions to 5.74 pounds per hour.

326 IAC 7-1.1 (Sulfur Dioxide Emission Limitations)

The sulfur dioxide emissions from the 85.0 MMBtu/hr dryer and the 1.4 and 0.864 MMBtu/hr asphalt storage tank heaters burning distillate oil shall be limited to 0.5 lb/MMBtu heat input. This equates to a fuel oil sulfur content limit of 0.49%. Therefore, the sulfur content of the fuel must be less than or equal to 0.49% in order to comply with this rule (See Appendix A, Page 11 of 13 for detailed calculations). The source will comply with this rule by using No. 2 distillate oil with a sulfur content of 0.486% or less in the dryer and tank heaters. The sulfur dioxide emissions from the 85.0 MMBtu/hr dryer burning re-refined waste oil shall be limited to 1.6 lb/MMBtu/hr heat input. This equates to a fuel oil sulfur content limit of 1.28%. Therefore, the sulfur content of the fuel must be less than or equal to 1.28% in order to comply with this rule (See Appendix A, Page 11 of 13 for detailed calculations). The source will comply with this rule by using re-refined waste oil with a sulfur content of 0.75%.

Compliance Requirements

Permits issued under 326 IAC 2-7are 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, OAM, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-7-5. 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.

Some of the compliance monitoring requirements applicable to this source have changed. The monitoring requirements for the control have been revised as a result of replacing the wet scrubber with a jet pulse baghouse. Additionally, changes have been made to the fuel usage limits because the new dryer burner has different emission factors that the existing burner it replaces. The revised applicable compliance monitoring requirements are as follows:

1. The combustion of re-refined waste oil and No. 2 distillate fuel oil has applicable compliance monitoring conditions as specified below:

   (a) the consumption of re-refined waste oil and its equivalents for the entire source must be limited to 1,707,210 U.S. gallons per year, based on a maximum sulfur content of 0.75% for re-refined waste oil and a maximum sulfur content of 0.486% for No. 2 distillate fuel oil, in order to ensure compliance with 326 IAC 2-8 (FESOP).

   (b) Quarterly reports shall be submitted to OAM. These reports shall include:

      (1) the monthly usages of re-refined waste oil and No. 2 distillate fuel oil expressed as re-refined waste oil equivalents in gallons for SO_2 emissions; and

      (2) sulfur content and heating value of the fuel oils.

   These monitoring conditions are necessary because SO_2 emissions from the combustion of re-refined waste oil and No. 2 fuel oil must be limited to below the Title V major source level of 100 tons per year. Additionally, the sulfur content of the fuel oils must comply with 326 IAC 7-1.1. The source must demonstrate compliance with the FESOP limit and also with limits established in 326 IAC 2-8-4 and 326 IAC 7-1.1.

2. The mixing and drying operation has applicable compliance assurance monitoring conditions as specified below:

   (a) The Permittee shall record the total static pressure drop across the baghouse used in conjunction with the aggregate dryer, mixer and burner, at least once a day when the dryer, mixer or burner is in operation. Unless operated under conditions for which the Compliance Response Plan specifies otherwise, the pressure drop across the baghouse shall be maintained within a range of 1.0 and 8.0 inches of water or a range established during the latest stack test. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when the pressure reading is outside of the above mentioned range for any one reading. The instrument used to determine the pressure shall comply with Section C - Pressure Gauge Specifications, of this permit, shall be subject to approval by IDEM, OAM and shall be calibrated at least once every six (6) months.

   (b) The inlet temperature to the baghouse shall be maintained within a range of 200-400 degrees Fahrenheit (^oF) to prevent overheating of the bags and to prevent

low temperatures from mudding up the bags. The thermocouple at the inlet has a temperature switch which automatically shuts the burner off if the high end range is exceeded. In the event that bag failure has occurred due to rupture, melting, etc., corrective action shall be taken. The Preventive Maintenance Plan for this unit shall contain troubleshooting contingency and corrective actions for when the inlet temperature reading is outside of the above mentioned range for any one reading. The baghouse shall shutdown for visual inspection within 24 hours and bags shall be replaced as needed.

(c) Daily visible emissions observations of the dryer stack shall be performed by a trained employee, i.e., an employee who has worked at the plant at least one month and has been trained in the appearance and characteristics of normal visible emissions. The employee will record whether the emissions are normal or abnormal, and if the reading is abnormal, corrective action shall be taken in accordance with the Preventive Maintenance Plan.

These monitoring conditions are necessary because the baghouse for the drying and mixing process must operate properly to ensure compliance with 326 IAC 6-3 (Process Operations) and 326 IAC 2-8 (FESOP).

Conclusion

The operation of this new equipment shall be subject to the conditions of the attached proposed **Minor Permit Revision No. 177-11573-03232**.

Appendix A: Emission Calculations Permit Revision No.- 177-11573 Plant I D 177-03232

Company Name:	Milestone Contractors, L.P.
Plant Location:	14413 West U.S. 40, Cambridge City, IN 47327
County:	Wayne
Date Received:	November 19, 1999
Permit Reviewer:	Janusz Johnson

**** Existing 103.5 MMBtu/hr aggregate dryer burner****

(As previously determined in FESOP 177-5632-03232 issued December 9, 1996)

The following calculations determine the amount of emissions created by natural gas combustion, from the aggregate dryer burner, based on 8,760 hours of operation and US EPA's AP-42, 5th Edition, Section 1.4 - Natural Gas Combustion, Tables 1.4-1, 1.4-2, and 1.4-3.

Criteria Pollutant: 103.5 MMBtu/hr * 8,760 hr/yr * Ef (lb/MMcf) = (ton/yr)
1000 Btu/cf * 2,000 lb/ton

P M:	5.0 lb/MMcf =	**2.27**	**ton/yr**
P M-10:	5.0 lb/MMcf =	**2.27**	**ton/yr**
S O 2:	0.6 lb/MMcf =	**0.27**	**ton/yr**
N O x:	550.0 lb/MMcf =	**249.33**	**ton/yr**
V O C:	1.4 lb/MMcf =	**0.63**	**ton/yr**
C O:	40.0 lb/MMcf =	**18.13**	**ton/yr**

The following calculations determine the amount of emissions created by the combustion of #2 distillate fuel oil @ 0.49 % sulfur, from the aggregate dryer burner, based on 8,760 hours of use and US EPA's AP-42, 5th Edition, Section 1.3 - Fuel Oil Combustion, Tables 1.3-2, 1.3-4, and 1.3-7.

Criteria Pollutant: 103.5 MMBtu/hr * 8,760 hr/yr * Ef (lb/1,000 gal) = (ton/yr)
140,000 Btu/gal * 2,000 lb/ton

P M:	2.0 lb/1000 gal =	**6.48**	**ton/yr**
P M-10:	1.0 lb/1000 gal =	**3.24**	**ton/yr**
S O 2:	69.0 lb/1000 gal =	**223.47**	**ton/yr**
N O x:	20.0 lb/1000 gal =	**64.76**	**ton/yr**
V O C:	0.20 lb/1000 gal =	**0.65**	**ton/yr**
C O:	5.0 lb/1000 gal =	**16.19**	**ton/yr**

The following calculations determine the amount of emissions created by re-refined waste oil @ 0.75 % sulfur, 0.947 % ash, based on 8,760 hours of use and US EPA's AP-42, 5th Edition, Section 1.11 - Waste Oil Combustion, Tables 1.11-1, 1.11-2, and 1.11-3.

Criteria Pollutant: 103.5 MMBtu/hr * 8760 hr/yr * Ef (lb/1000 gal) = (ton/yr)
120,000 Btu/gal * 2000 lb/ton

P M:	57.8 lb/1000 gal =	**218.23**	**ton/yr**
P M-10:	48.3 lb/1000 gal =	**182.45**	**ton/yr**
S O 2:	110.3 lb/1000 gal =	**416.50**	**ton/yr**
N O x:	19.0 lb/1000 gal =	**71.78**	**ton/yr**
V O C:	1.0 lb/1000 gal =	**3.78**	**ton/yr**
C O:	5.0 lb/1000 gal =	**18.89**	**ton/yr**

The maximum potential emissions from the existing aggregate dryer burner due to fuel combustion are the following:

		Worst Case Fuel
P M:	**218.23 ton/yr**	Re-refined Waste Oil
P M-10:	**182.45 ton/yr**	Re-refined Waste Oil
S O 2:	**416.50 ton/yr**	Re-refined Waste Oil
N O x:	**249.33 ton/yr**	Natural Gas
V O C:	**3.78 ton/yr**	Re-refined Waste Oil
C O:	**18.89 ton/yr**	Re-refined Waste Oil

**** Replacement 85 MMBtu/hr aggregate dryer burner****

The following calculations determine the amount of emissions created by natural gas combustion, from the aggregate dryer burner, based on 8,760 hours of operation and US EPA's AP-42, 5th Edition, Section 1.4 - Natural Gas Combustion, Tables 1.4-1, 1.4-2, and 1.4-3.

Criteria Pollutant: 85 MMBtu/hr * 8,760 hr/yr * Ef (lb/MMcf) = (ton/yr)
1000 Btu/cf * 2,000 lb/ton

Potential Fuel Usage
744.60 MMCF

P M:	1.9 lb/MMcf =	**0.71**	**ton/yr**
P M-10:	5.7 lb/MMcf =	**2.12**	**ton/yr**
S O 2:	0.6 lb/MMcf =	**0.22**	**ton/yr**
N O x:	100.0 lb/MMcf =	**37.23**	**ton/yr**
V O C:	5.5 lb/MMcf =	**2.05**	**ton/yr**
C O:	84.0 lb/MMcf =	**31.27**	**ton/yr**

The following calculations determine the amount of emissions created by the combustion of #2 distillate fuel oil @ 0.49 % sulfur, from the aggregate dryer burner, based on 8,760 hours of use and US EPA's AP-42, 5th Edition, Section 1.3 - Fuel Oil Combustion, Tables 1.3-2, 1.3-4, and 1.3-7.

Criteria Pollutant: 85 MMBtu/hr * 8,760 hr/yr * Ef (lb/1,000 gal) = (ton/yr)
140,000 Btu/gal * 2,000 lb/ton

Potential Fuel Usage
5318.57 kgal

P M:	2.0 lb/1000 gal =	**5.32**	**ton/yr**
P M-10:	1.0 lb/1000 gal =	**2.66**	**ton/yr**
S O 2:	69.0 lb/1000 gal =	**183.52**	**ton/yr**
N O x:	20.0 lb/1000 gal =	**53.19**	**ton/yr**
V O C:	0.34 lb/1000 gal =	**0.90**	**ton/yr**
C O:	5.0 lb/1000 gal =	**13.30**	**ton/yr**

The following calculations determine the amount of emissions created by re-refined waste oil @ 0.75 % sulfur, 0.947 % ash, based on 8,760 hours of use and US EPA's AP-42, 5th Edition, Section 1.11 - Waste Oil Combustion, Tables 1.11-1, 1.11-2, and 1.11-3.

Criteria Pollutant: 85 MMBtu/hr * 8760 hr/yr * Ef (lb/1000 gal) = (ton/yr)
120,000 Btu/gal * 2000 lb/ton

Potential Fuel Usage
6205.00 kgal

P M:	60.6 lb/1000 gal =	**188.04**	**ton/yr**
P M-10:	48.3 lb/1000 gal =	**149.84**	**ton/yr**
S O 2:	110.3 lb/1000 gal =	**342.05**	**ton/yr**
N O x:	19.0 lb/1000 gal =	**58.95**	**ton/yr**
V O C:	1.0 lb/1000 gal =	**3.10**	**ton/yr**
C O:	5.0 lb/1000 gal =	**15.51**	**ton/yr**

The maximum potential emissions from the replacement aggregate dryer burner due to fuel combustion are the following:

		Worst Case Fuel
P M:	**188.04 ton/yr**	Re-refined Waste Oil
P M-10:	**149.84 ton/yr**	Re-refined Waste Oil
S O 2:	**342.05 ton/yr**	Re-refined Waste Oil
N O x:	**58.95 ton/yr**	Re-refined Waste Oil
V O C:	**3.10 ton/yr**	Re-refined Waste Oil
C O:	**15.51 ton/yr**	Re-refined Waste Oil

Summary of Unlimited Potential Emissions change associated with burner replacement:

Pollutant	Existing 103.5 MMBtu/hr burner, worst case emissions (ton/yr)	New 85 MMBtu/hr burner, worst case emissions (ton/yr)	Change due to replacement (ton/yr) [new minus existing]
P M:	218.23	188.04	-30.19
P M-10:	182.45	149.84	-32.61
S O 2:	416.50	342.05	-74.45
N O x:	249.33	58.95	-190.38
V O C:	3.78	3.10	-0.68
C O:	18.89	15.51	-3.38

Revised Fuel Usage limitations based on replacement 85 MMBtu/hr burner

Primary Fuel Usage Limitations

Fuel Oil: re-refined waste oil

$$\frac{94.11 \text{ tons SO2/year limited}}{342.05 \text{ tons SO2/year potential}} * 6205.00 \frac{\text{Kgals}}{\text{year potential}} = 1707.21 \frac{\text{Kgals}}{\text{year limited}}$$

Primary fuel equivalence limit for #2 distillate fuel oil based on SO2 emissions from re-refined waste oil

$$\frac{183.52 \text{ \#2 F.O. potential emissions (ton/yr)}}{5318.57 \text{ \#2 F.O. potential usage (kgal/yr)}} / \frac{342.05 \text{ W.O. potential emissions (ton/yr)}}{6205.00 \text{ W.O. potential usage (kgal/yr)}}$$

$$= 0.6260 \frac{\text{Kgal W.O. burned}}{\text{Kgal \#2 F.O. burned}}$$

***** TOTAL LIMITED COMBUSTION EMISSIONS for Replacement Burner *****

BASED ON LIMITED WASTE OIL AND #2 OIL USAGE, UNLIMITED NATURAL GAS USAGE, AND 8760 HOURS OF OPERA

Pollutant	Emissions from limited fuel oils. Minimum hours of operation required to reach limit: 2410.2	Emissions from unlimited natural gas used during remaining possible hours of operation: 6349.8	Total possible emissions from both fuels
P M:	51.74	0.51	52.25
P M-10:	41.23	1.54	42.76
S O 2:	94.11	0.16	94.27
N O x:	16.22	26.99	43.21
V O C:	0.85	1.48	2.34
C O:	4.27	22.67	26.94

*** * analysis of aggregate dryer/mixer and burner emissions after controls * ***

Controlled PTE with existing scrubber (99.82% control efficiency):

aggregate dryer/mixer:

P M:	24,966.00	ton/yr x	0.18%	emitted after controls =	**44.94**	**ton/yr**
P M-10:	5,781.60	ton/yr x	0.18%	emitted after controls =	**10.41**	**ton/yr**

dryer burner (103.5 MMBtu/hr)

P M:	218.23	ton/yr x	0.18%	emitted after controls =	**0.39**	**ton/yr**
P M-10:	182.45	ton/yr x	0.18%	emitted after controls =	**0.33**	**ton/yr**

Controlled PTE with replacement baghouse (99.9% control efficiency):

new aggregate dryer and mixer:

P M:	24,966.00	ton/yr x	0.10%	emitted after controls =	**24.97**	**ton/yr**
P M-10:	5,781.60	ton/yr x	0.10%	emitted after controls =	**5.78**	**ton/yr**

new dryer burner (85.0 MMBtu/hr)

P M:	188.04	ton/yr x	0.10%	emitted after controls =	**0.19**	**ton/yr**
P M-10:	149.84	ton/yr x	0.10%	emitted after controls =	**0.15**	**ton/yr**