Mr. W. H. Shillingford
Ford Electronics and Refrigeration Corporation
4747 Western Avenue
Connersville, IN 47331

Re: 041-10295
Significant Source Modification to:
OP No.: T-041-6896-00004

Dear Mr. Shillingford:

Ford Electronics and Refrigeration Corporation has applied to modify the Part 70 major source located at 4747 Westerm Avenue, Connersville, Indiana. The application was received on October 28,1998. Pursuant to 326 IAC 2-7-10.5 the following new emission units are approved for construction at the source:

(a) Induction Hardening Line with a maximum averaged throughput of 147 pounds of parts per hour (based on a batch weight of 880 pounds) consisting of the following units:

(1) two (2) natural gas fired furnaces designated TQ-13-G Nos. 1 and 2, each with a maximum heat input rate of 0.75 MMBtu per hour (note: these emission units will be considered Insignificant Activities under the Part 70 Operating Permit program);

(2) one (1) Endothermic Gas Generator fired by natural gas at a maximum heat input rate of 0.25 MMBtu per hour (note: this emission unit will be considered an Insignificant Activity under the Part 70 Operating Permit program);

(3) two (2) oil quenching tanks utilizing 0.5 pounds of oil per hour (note: these emission units will be considered Insignificant Activities under the Part 70 Operating Permit program);

(4) one (1) Spray-Dunk parts washer, designated WRD-13, fired by natural gas at a maximum heat input rate of 0.50 MMBtu per hour and utilizing 30 pounds of wash solution per hour (note: this emission unit will be considered an Insignificant Activity under the Part 70 Operating Permit program);

(5) two (2) natural gas fired tempering furnaces designated DL-13-G Nos. 1 and 2, each with a maximum heat input rate of 0.65 MMBtu per hour (note: these emission units will be considered Insignificant Activities under the Part 70 Operating Permit program);

(b) Anodizing Line with a maximum throughput of 390 pounds of parts per hour consisting of the following units:

(1) one (1) anodizing tank utilizing a maximum of 15 pounds per hour of acid solution, with acid mist controlled by a fume scrubber; and

(2) one (1) Anodizing Line Dryer fired by natural gas at a maximum heat input rate of 0.30 MMBtu per hour (note: this emission unit will be considered an Insignificant Activity under the Part 70 Operating Permit program);

(c) Machining Operations with a maximum throughput of 1,965 pounds of parts per hour with five (5) oil mist collectors for controls (OMC Nos. 1 through 5). The operations consist of steel turning and grinding, scroll milling, scroll turning, and front and rear heads.

(d) Miscellaneous combustion units:

(1) two (2) Air Makeup Units, Nos. 1 and 2, fired by natural gas at a maximum heat input rate of 4.7 MMBtu per hour, each (note: these emission units will be considered Insignificant Activities under the Part 70 Operating Permit program).

The following construction conditions are applicable to the proposed project:

1. General Construction Conditions
The data and information supplied with the application shall be considered part of this source modification approval. Prior to any proposed change in construction which may affect the potential to emit (PTE) of the proposed project, the change must be approved by the Office of Air Management (OAM).

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

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

4. Pursuant to 326 IAC 2-1.1-9 (Revocation), the Commissioner may revoke this approval if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.

5. All requirements and conditions of this construction approval shall remain in effect unless modified in a manner consistent with procedures established pursuant to 326 IAC 2.

6. Pursuant to 326 IAC 2-7-10.5(l) the emission units constructed under this approval shall not be placed into operation prior to revision of the source's Part 70 Operating Permit to incorporate the required operation conditions.

The proposed operating conditions applicable to these emission units are attached to this Source Modification approval. These proposed operating conditions shall be incorporated into the Part 70 operating permit as an administrative amendment in accordance with 326 IAC 2-7-10.5(l)(1) and 326 IAC 2-7-11.

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 call (800) 451-6027, press 0 and ask for Janusz Johnson or extension (2-8325), or dial (317) 232-8325.

Sincerely,

Paul Dubenetzky, Chief
Permits Branch
Office of Air Management

JKJ
Attachments: proposed operation conditions (2 pages)

cc: File - Fayette County
U.S. EPA, Region V
Fayette County Health Department
Air Compliance Section Inspector - Warren Greiling
Compliance Data Section - Mindy Jones
Administrative and Development - Janet Mobley
Technical Support and Modeling - Nancy Landau

SECTION D.6 FACILITY OPERATION CONDITIONS

one (1) anodizing tank utilizing a maximum of 15 pounds per hour of acid solution, with acid mist controlled by a fume scrubber

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.6.1 Particulate Matter (PM) [326 IAC 6-3]

Pursuant to 326 IAC 6-3 (Process Operations), the allowable PM emission rate from the anodizing operation shall not exceed 1.41 pounds per hour when operating at a process weight rate of 405 pounds per hour.

The pounds per hour limitation was calculated with the following equation:

Interpolation and extrapolation of the data for the process weight rate up to 60,000 pounds per hour shall be accomplished by use of the equation:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour; and P = process weight rate in tons per hour

Compliance Determination Requirements

D.6.2 Testing Requirements [326 IAC 2-7-6(1),(6)]

The Permittee is not required to test this facility by this permit. However, IDEM may require compliance testing at any specific time when necessary to determine if the facility is in compliance. If testing is required by IDEM, compliance with the PM limit specified in Condition D.6.1 shall be determined by a performance test conducted in accordance with Section C - Performance Testing.

D.6.3 Particulate Matter (PM)

The scrubber for PM control shall be in operation at all times when the anodizing system is in operation and exhausting to the outside atmosphere.

SECTION D.7 FACILITY OPERATION CONDITIONS

Machining Operations with a maximum throughput of 1,965 pounds of parts per hour with five (5) oil mist collectors for controls (OMC Nos. 1 through 5). The operations consist of steel turning and grinding, scroll milling, scroll turning, and front and rear heads.

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.7.1 Particulate Matter (PM) [326 IAC 6-3]

Pursuant to 326 IAC 6-3 (Process Operations), the allowable PM emission rate from the machining operations shall not exceed 4.09 pounds per hour when operating at a process weight rate of 1,990 pounds per hour.

The pounds per hour limitation was calculated with the following equation:

Interpolation and extrapolation of the data for the process weight rate up to 60,000 pounds per hour shall be accomplished by use of the equation:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour; and
P = process weight rate in tons per hour

Compliance Determination Requirements

D.7.2 Testing Requirements [326 IAC 2-7-6(1),(6)]

The Permittee is not required to test this facility by this permit. However, IDEM may require compliance testing at any specific time when necessary to determine if the facility is in compliance. If testing is required by IDEM, compliance with the PM limit specified in Condition D.6.1 shall be determined by a performance test conducted in accordance with Section C - Performance Testing.

D.7.3 Particulate Matter (PM)

The oil mist eliminators for PM control shall be in operation at all times when the machining operations are in operation and exhausting to the outside atmosphere.

Indiana Department of Environmental Management
Office of Air Management

Technical Support Document (TSD) for a Significant Source Modification

Source Background and Description

Source Name:	Ford Electronics and Refrigeration Corp.
Source Location:	4747 Western Avenue, Connersville, IN 47331
County:	Fayette
Permit No.:	041-10295-00004
SIC Code:	3714
Permit Reviewer:	Janusz Johnson

The Office of Air Management (OAM) has reviewed an application from Ford Electronics and Refrigeration Corp. relating to the construction of the following Induction Hardening Line, combustion units, an Anodizing System and machining equipment:

(a) Induction Hardening Line with a maximum averaged throughput of 147 pounds of parts per hour (based on a batch weight of 880 pounds) consisting of the following units:

(1) two (2) natural gas fired furnaces designated TQ-13-G Nos. 1 and 2, each with a maximum heat input rate of 0.75 MMBtu per hour (note: these emission units will be considered Insignificant Activities under the Part 70 Operating Permit program);

(2) one (1) Endothermic Gas Generator fired by natural gas at a maximum heat input rate of 0.25 MMBtu per hour (note: this emission unit will be considered an Insignificant Activity under the Part 70 Operating Permit program);

(3) two (2) oil quenching tanks utilizing 0.5 pounds of oil per hour (note: these emission units will be considered Insignificant Activities under the Part 70 Operating Permit program);

(4) one (1) Spray-Dunk parts washer, designated WRD-13, fired by natural gas at a maximum heat input rate of 0.50 MMBtu per hour and utilizing 30 pounds of wash solution per hour (note: this emission unit will be considered an Insignificant Activity under the Part 70 Operating Permit program);

(5) two (2) natural gas fired tempering furnaces designated DL-13-G Nos. 1 and 2, each with a maximum heat input rate of 0.65 MMBtu per hour (note: these emission units will be considered Insignificant Activities under the Part 70 Operating Permit program);

(b) Anodizing Line with a maximum throughput of 390 pounds of parts per hour consisting of the following units:

(1) one (1) anodizing tank utilizing a maximum of 15 pounds per hour of acid solution, with acid mist controlled by a fume scrubber; and

(2) one (1) Anodizing Line Dryer fired by natural gas at a maximum heat input rate of 0.30 MMBtu per hour (note: this emission unit will be considered an Insignificant Activity under the Part 70 Operating Permit program);

(c) Machining Operations with a maximum throughput of 1,965 pounds of parts per hour with five (5) oil mist collectors for controls (OMC Nos. 1 through 5). The operations consist of steel turning and grinding, scroll milling, scroll turning, and front and rear heads.

(d) Miscellaneous combustion units:

(1) two (2) Air Makeup Units, Nos. 1 and 2, fired by natural gas at a maximum heat input rate of 4.7 MMBtu per hour, each (note: these emission units will be considered Insignificant Activities under the Part 70 Operating Permit program).

Existing Approvals

The Part 70 Operating permit (T-041-6896-00004) for this source has been proposed to EPA without the equipment covered in this construction permit. This new equipment is being reviewed as a combined Significant Source Modification and Minor Permit Modification to Part 70 Operating Permit and will be incorporated into the Part 70 Operating Permit by administrative amendment pursuant to 326 IAC 2-7-11 at the time that the Part 70 Permit is issued.

Stack Summary

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (^{0}F)
TQF #1	TQ-13-G Furnace No. 1	46	1.5	2200	1000
TQF #2	TQ-13-G Furnace No. 2	46	1.5	2200	1000
EG #1	Endothermic Gas Generator	46	1	785	1000
PW #1	WRD-13 Parts Washer	46	0.38	115	150
TF #1	DL-13-G Temper Furnace No. 1	46	1.3	1500	875
TF #1	DL-13-G Temper Furnace No. 2	46	1.3	1500	875
FS #1	Anodizing Tank Fume Scrubber	38	2.9	12700	ambient
OMC #1	Machining Operation Mist Collector	46	2.5	18000	ambient+10
OMC #2	Machining Operation Mist Collector	46	2.5	18000	ambient+10
OMC #3	Machining Operation Mist Collector	46	2	8000	ambient+10
OMC #4	Machining Operation Mist Collector	46	1.7	10000	ambient+10
OMC #5	Machining Operation Mist Collector	46	2.5	18000	ambient+10

Recommendation

The staff recommends to the Commissioner that the Significant Source Modification 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 October 28, 1998. Additionally, a letter was received from the company requesting review under the revised 326 IAC 2 rules which were promulgated on December 25, 1998.

Emissions Calculations

See Appendix A (Emissions Calculation Spreadsheets) for detailed calculations (5 pages).

Proposed Project PTE

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit (PTE) is defined as "the maximum capacity of a stationary source or emissions unit 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, the department, or the appropriate local air pollution control agency."

Pollutant	Potential To Emit (tons/year)
PM	267.8
PM-10	267.8
SO_2	negligible
VOC	0.3
CO	4.9
NO_x	5.8
Single HAP	0
Combined HAPS	0

(a) This existing source is subject to the provisions of the Part 70 permitting program pursuant to 326 IAC 2-7 and the potential to emit particulate matter (PM) and particulate matter 10 microns or less in diameter (PM10) from the proposed project is equal to or greater than 25 tons per year. Therefore, the proposed project requires a Significant Source Modification pursuant to 326 IAC 2-7-10.5.

(b) For the purpose of determining the level of approval required for the proposed project under the Part 70 rules, the Potential to Emit (PTE) from the new equipment does not include controls because the application of controls in this case is not considered enforceable by the U.S. EPA until incorporated into the source's Part 70 Operating Permit.

County Attainment Status

The source is located in Decatur 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 emissions are considered when evaluating the rule applicability relating to the ozone standards. Fayette County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NOx emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

(b) Fayette 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.

PSD Source Status

Existing Source PSD, 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	less than 250
PM10	less than 250
SO_2	less than 250
VOC	greater than 250
CO	less than 250
NO_x	greater than 250

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

(b) These emissions were based on the AIRS Facility Quick Look Report, dated April 1, 1998.

PSD 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	14.2	14.2	0.0	0.3	4.9	5.8
Contemporaneous Increases	-	-	-	-	-	-
Contemporaneous Decreases	-	-	-	-	-	-
Net Emissions	14.2	14.2	0.0	0.3	4.9	5.8
PSD 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 PSD significant levels. Therefore, pursuant to 326 IAC 2-2, and 40 CFR 52.21, the PSD requirements do not apply.

Federal Rule Applicability

There are no New Source Performance Standards (326 IAC 12) and 40 CFR Part 63 applicable to these facilities.

State Rule Applicability

326 IAC 2-6 (Emission Reporting)

These facilities are subject to 326 IAC 2-6 (Emission Reporting), because the source emits more than 100 tons/yr of VOC. Pursuant to this rule, the owner/operator of these facilities must annually submit an emission statement of the facilities. The annual statement must be received by July 1 of each year and must contain the minimum requirements specified in 326 IAC 2-6-4.

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) Opacity shall not exceed an average of 40% in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(b) Opacity shall not exceed 60% for more than a cumulative total of 15 minutes (sixty (60) readings) as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

326 IAC 6-3-2 (Particulate Emissions Limitations for Process Operations)

No person shall operate a facility such that particulate matter is emitted in excess of the pound per hour limit calculated as follows according to part (c) of the rule:

for “P” less than 30 tons per hour: $E = 4.10 * P^{0.67}$

- or -

for “P” greater than 30 tons per hour: $E = 55.0 * P^{0.11} - 40$

where: "E" is the emission rate limit in pounds per hour, and
"P" is the process throughput in tons per hour.

The anodizing operation exhausting through stack FS #1 is subject to this rule. Based on a process weight rate of 405 pounds per hour (0.2025 tons per hour), particulate matter (PM) emissions from the anodizing operation shall not exceed 1.41 pounds per hour. Controlled emissions from the anodizing operation are calculated to be less than this allowable emissions rate, therefore, the anodizing operation can comply with the rule provided the scrubber is in operation at all times that the machining operations are being utilized. See Appendix A for detailed calculations.

The machining operations exhausting through stacks OMC #1 through OMC #5 are subject to this rule. Based on a process weight rate of 1,990 pounds per hour (0.995 tons per hour), particulate matter (PM) emissions from these machining operations shall not exceed 4.09 pounds per hour combined. Controlled emissions from the machining operations are calculated to be less than this allowable emissions rate, therefore, the machining operations can comply with the rule provided the oil mist collectors are in operation at all times that the machining operations are being utilized. See Appendix A for detailed calculations.

Air Toxic Emissions

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

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

(b) See attached spreadsheets for detailed air toxic calculations.

Conclusion

The construction of this Induction Hardening Line, combustion units, Anodizing System and machining equipment shall be subject to the Construction Conditions of the attached proposed **Significant Source Modification No. 041-10295-00004.** Operation of the equipment shall be subject to the Operation Conditions of the attached proposed Significant Source Modification at such time as it is incorporated into the source's Part 70 Operating Permit (T-041-6896-00004) by administrative amendment.

Indiana Department of Environmental Management
Office of Air Management

Addendum to the
Technical Support Document for Significant Source Modification

Source Name:	Ford Electronics and Refrigeration Corp.
Source Location:	4747 Western Avenue, Connersville, IN 47331
County:	Fayette
Permit No.:	041-10295-00004
SIC Code:	3714
Permit Reviewer:	Janusz Johnson

On February 1, 1999, the Office of Air Management (OAM) had a notice published in the *News Examiner*, Connersville, Indiana, stating that Ford Electronics and Refrigeration Corp. had applied for a significant source modification to construct and operate an Induction Hardening Line, combustion units, an Anodizing System and machining equipment with control. 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 January 22, 1999, the IDEM, OAM, determined that the following change to the proposed source modification was necessary:

1. The header information on the proposed Title V operation condition pages has been revised to reflect the Part 70 Operating permit number and reviewer, and the new pages have been renumbered in a manner consistent with the issued Part 70 Operating permit.

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

Company Name: **Ford Electronics and Refrigeration Corp.** **CP#:** **041-10295**
City, Indiana: **Connersville, IN** **Plt ID:** **041-00004**
Reviewer: **Janusz Johnson**
Date: **12/28/98**

Total Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr	*TQ-13-G #1 & #2, DL-13-G #1 & #2, WRD-13, Endo Generator,* Anodizing Line Dryer, and Air Makeup Units #1 & #2
13.3	116.1	

	Pollutant					
	PM	PM10	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF **	7.6	7.6	0.6	100.0	5.5	84.0
Potential Emission in tons/yr	0.4	0.4	0.0	5.8	0.3	4.9

	Uncontrolled	Low NOx Burn	Flue Recirculation
**Emission Factor for NOx:	100	50	32
**Emission Factor for CO:	84	84	84

Methodology

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

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

Emission Factors are from AP 42, Chapter 1.4, EPA 450/4-90-003 SCC #1-02-006-02

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

Appendix A: Emissions Calculations
Process line emissions

Company Name:	**Ford Electronics and Refrigeration Corp.**	**CP#:**	**041-10295**
City, Indiana:	**Connersville, IN**	**Plt ID:**	**041-00004**
Reviewer:	**Janusz Johnson**		
Date:	**12/28/98**		

Induction Hardening Line Oil Quench Tanks

oil usage rate = 0.5 lbs/hr

This oil does not contain VOCs or HAPs, therefore no VOC or HAP emissions are expected.

Induction Hardening Line Parts Cleaner

solvent usage rate = 30 lbs/hr

This solvent does not contain VOCs or HAPs, therefore no VOC or HAP emissions are expected.

Anodizing Tank

solvent usage rate = 15 lbs/hr (sufluric acid)

PM potential emission rate = 1.809 lbs/hr (acid mist)

potential uncontrolled emissions (ton/yr) = 1.809 lbs PM/hr * 8760 hrs/yr * 1 ton/2000 lbs
= 7.92 tons/yr

scrubber control efficiency = 90.0%

potential controlled emissions (ton/yr) = 0.79 tons/yr

allowable PM emissions based on 326 IAC 6-3:

E=4.1 * P^0.67 where: P is process weight rate (ton/hr) and E is emission rate limit (lb/hr)

For a total anodizing operation process weight rate of 405 lbs/hr (weight of parts plus weight of Sulfuric acid):

E = 4.1 * (0.2025)^0.67
E = 1.41 lbs/hr

allowable emissions (ton/yr) = 6.18 tons/yr

Appendix A: Emissions Calculations
Process line emissions

Company Name: **Ford Electronics and Refrigeration Corp.** **CP#:** **041-10295**
City, Indiana: **Connersville, IN** **Plt ID:** **041-00004**
Reviewer: **Janusz Johnson**
Date: **12/28/98**

Machining Operations

assumed emission factor = 0.0048 gr/acf (based on stack tests of similar units)
[after controls]

OMC#1
potential controlled emissions (ton/yr) = 0.0048 gr/acf * 18,000 cfm * 1 lb/7000 gr * 525600 min/yr * 1 ton/2000 lbs
= 3.24 tons/yr

control efficiency = 95.0%

potential uncontrolled emissions (ton/yr) = controlled emissions / (1-control efficiency)
= 64.87 tons/yr

OMC#2
potential controlled emissions (ton/yr) = 0.0048 gr/acf * 18,000 cfm * 1 lb/7000 gr * 525600 min/yr * 1 ton/2000 lbs
= 3.24 tons/yr

control efficiency = 95.0%

potential uncontrolled emissions (ton/yr) = controlled emissions / (1-control efficiency)
= 64.87 tons/yr

OMC#3
potential controlled emissions (ton/yr) = 0.0048 gr/acf * 8,000 cfm * 1 lb/7000 gr * 525600 min/yr * 1 ton/2000 lbs
= 1.44 tons/yr

control efficiency = 95.0%

potential uncontrolled emissions (ton/yr) = controlled emissions / (1-control efficiency)
= 28.83 tons/yr

OMC#4
potential controlled emissions (ton/yr) = 0.0048 gr/acf * 10,000 cfm * 1 lb/7000 gr * 525600 min/yr * 1 ton/2000 lbs
= 1.80 tons/yr

control efficiency = 95.0%

potential uncontrolled emissions (ton/yr) = controlled emissions / (1-control efficiency)
= 36.04 tons/yr

OMC#5
potential controlled emissions (ton/yr) = 0.0048 gr/acf * 18,000 cfm * 1 lb/7000 gr * 525600 min/yr * 1 ton/2000 lbs
= 3.24 tons/yr

control efficiency = 95.0%

potential uncontrolled emissions (ton/yr) = controlled emissions / (1-control efficiency)
= 64.87 tons/yr

Combined Machining Emissions (OMC#1 through OMC#5)

potential uncontrolled PM emissions (ton/yr) = 259.50
potential controlled PM emissions (ton/yr) = 12.97

allowable PM emissions based on 326 IAC 6-3:

E=4.1 * P^0.67 where: P is process weight rate (ton/hr) and E is emission rate limit (lb/hr)

For a total machining operations process weight rate of 1,990 lbs/hr (weight of parts and cutting oil):

E = 4.1 * (0.995)^0.67
E = 4.09 lbs/hr

allowable emissions (ton/yr) = 17.91 tons/yr

Appendix A: Emissions Calculations
Emissions Summary

Company Name: **Ford Electronics and Refrigeration Corp.** **CP#:** **041-10295**
City, Indiana: **Connersville, IN** **Plt ID:** **041-00004**
Reviewer: **Janusz Johnson**
Date: **12/28/98**

Total Potential Emissions (ton/yr)

Process/Line	PM/PM10	SO2	NOx	VOC	CO
Combustion Sources	0.40	0.00	5.80	0.30	4.90
Induction Hardening	-	-	-	-	-
Anodizing	7.92	-	-	-	-
Machining	259.50	-	-	-	-
TOTAL	267.82	0.00	5.80	0.30	4.90

Total Controlled Potential Emissions (ton/yr)

Process/Line	PM/PM10	SO2	NOx	VOC	CO
Combustion Sources	0.40	0.00	5.80	0.30	4.90
Induction Hardening	-	-	-	-	-
Anodizing	0.79	-	-	-	-
Machining	12.97	-	-	-	-
TOTAL	14.16	0.00	5.80	0.30	4.90