



State of Ohio Environmental Protection Agency

**RE: FINAL PERMIT TO INSTALL CERTIFIED MAIL  
LUCAS COUNTY**

Street Address:

122 S. Front Street

Lazarus Gov. Center TELE: (614) 644-3020 FAX: (614) 644-2329

Mailing Address:

Lazarus Gov. Center  
P.O. Box 1049

**Application No: 04-01228**

**DATE: 9/19/2000**

Environmental Rubber Recycling Inc  
Patrick Knox  
1621 Terminal Dr.  
Saginaw, MI 48601

Enclosed please find an Ohio EPA Permit to Install which will allow you to install the described source(s) in a manner indicated in the permit. Because this permit contains several conditions and restrictions, I urge you to read it carefully.

The Ohio EPA is urging companies to investigate pollution prevention and energy conservation. Not only will this reduce pollution and energy consumption, but it can also save you money. If you would like to learn ways you can save money while protecting the environment, please contact our Office of Pollution Prevention at (614) 644-3469.

You are hereby notified that this action by the Director is final and may be appealed to the Ohio Environmental Review Appeals Commission pursuant to Chapter 3745.04 of the Ohio Revised Code. The appeal must be in writing and set forth the action complained of and the grounds upon which the appeal is based. It must be filed within thirty (30) days after the notice of the Directors action. A copy of the appeal must be served on the Director of the Ohio Environmental Protection Agency within three (3) days of filing with the Commission. An appeal may be filed with the Environmental Review Appeals Commission at the following address:

Environmental Review Appeals Commission  
236 East Town Street, Room 300  
Columbus, Ohio 43215

Very truly yours,

Thomas G. Rigo, Manager  
Field Operations and Permit Section  
Division of Air Pollution Control

CC: USEPA

TDES



**Permit To Install**

STATE OF OHIO ENVIRONMENTAL PROTECTION AGENCY

**FINAL PERMIT TO INSTALL 04-01228**

Application Number: 04-01228  
APS Premise Number: 0448011703  
Permit Fee: **\$200**  
Name of Facility: Environmental Rubber Recycling Inc  
Person to Contact: Patrick Knox  
Address: 1621 Terminal Dr.  
Saginaw, MI 48601

Location of proposed air contaminant source(s) [emissions unit(s)]:  
**4401-4425 Creekside Ave**  
**Toledo, Ohio**

Description of proposed emissions unit(s):  
**325 bhp diesel fueled internal combustion engine used to operate a rubber tire shredder.**

The above named entity is hereby granted a Permit to Install for the above described emissions unit(s) pursuant to Chapter 3745-31 of the Ohio Administrative Code. Issuance of this permit does not constitute expressed or implied approval or agreement that, if constructed or modified in accordance with the plans included in the application, the above described emissions unit(s) of environmental pollutants will operate in compliance with applicable State and Federal laws and regulations, and does not constitute expressed or implied assurance that if constructed or modified in accordance with those plans and specifications, the above described emissions unit(s) of pollutants will be granted the necessary permits to operate (air) or NPDES permits as applicable.

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency



Director

## Part I - GENERAL TERMS AND CONDITIONS

### A. Permit to Install General Terms and Conditions

#### 1. Compliance Requirements

The emissions unit(s) identified in this Permit to Install shall remain in full compliance with all applicable State laws and regulations and the terms and conditions of this permit.

#### 2. Reporting Requirements Related to Monitoring and Recordkeeping Requirements

The permittee shall submit required reports in the following manner:

- a. Reports of any required monitoring and/or recordkeeping information shall be submitted to the appropriate Ohio EPA District Office or local air agency.
- b. Except as otherwise may be provided in the terms and conditions for a specific emissions unit, quarterly written reports of (a) any deviations (excursions) from emission limitations, operational restrictions, and control device operating parameter limitations that have been detected by the testing, monitoring, and recordkeeping requirements specified in this permit, (b) the probable cause of such deviations, and (c) any corrective actions or preventive measures which have been or will be taken, shall be submitted to the appropriate Ohio EPA District Office or local air agency. If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted quarterly, i.e., by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. (These quarterly reports shall exclude deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06.)

#### 3. Records Retention Requirements

Each record of any monitoring data, testing data, and support information required pursuant to this permit shall be retained for a period of five years from the date the record was created. Support information shall include, but not be limited to, all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. Such records may be maintained in computerized form.

#### 4. Inspections and Information Requests

The Director of the Ohio EPA, or an authorized representative of the Director, may, subject to the safety requirements of the permittee and without undue delay, enter upon the premises of this source at any reasonable time for purposes of making inspections, conducting tests, examining records or reports pertaining to any emission of air contaminants, and determining compliance with any applicable State air pollution laws and regulations and the terms and conditions of this permit. The permittee shall furnish to the Director of the Ohio EPA, or an authorized

representative of the Director, upon receipt of a written request and within a reasonable time, any information that may be requested to determine whether cause exists for modifying, reopening or revoking this permit or to determine compliance with this permit. Upon verbal or written request, the permittee shall also furnish to the Director of the Ohio EPA, or an authorized representative of the Director, copies of records required to be kept by this permit.

**5. Scheduled Maintenance/Malfunction Reporting**

Any scheduled maintenance of air pollution control equipment shall be performed in accordance with paragraph (A) of OAC rule 3745-15-06. The malfunction of any emissions units or any associated air pollution control system(s) shall be reported to the appropriate Ohio EPA District Office or local air agency in accordance with paragraph (B) of OAC rule 3745-15-06. Except as provided in that rule, any scheduled maintenance or malfunction necessitating the shutdown or bypassing of any air pollution control system(s) shall be accompanied by the shutdown of the emissions unit(s) that is (are) served by such control system(s).

**6. Permit Transfers**

Any transferee of this permit shall assume the responsibilities of the prior permit holder. The appropriate Ohio EPA District Office or local air agency must be notified in writing of any transfer of this permit.

**7. Air Pollution Nuisance**

The air contaminants emitted by the emissions units covered by this permit shall not cause a public nuisance, in violation of OAC rule 3745-15-07.

**8. Termination of Permit to Install**

This Permit to Install shall terminate within eighteen months of the effective date of the Permit to Install if the owner or operator has not undertaken a continuing program of installation or modification or has not entered into a binding contractual obligation to undertake and complete within a reasonable time a continuing program of installation or modification. This deadline may be extended by up to 12 months if application is made to the Director within a reasonable time before the termination date and the party shows good cause for any such extension.

**9. Construction of New Sources(s)**

The proposed emissions unit(s) shall be constructed in strict accordance with the plans and application submitted for this permit to the Director of the Ohio Environmental Protection Agency. There may be no deviation from the approved plans without the express, written approval of the Agency. Any deviations from the approved plans or the above conditions may lead to such sanctions and penalties as provided under Ohio law. Approval of these plans does not constitute an assurance that the proposed facilities will operate in compliance with all Ohio laws and regulations. Additional facilities shall be installed upon orders of the Ohio

Environmental Protection Agency if the proposed sources are inadequate or cannot meet applicable standards.

If the construction of the proposed emissions unit(s) has already begun or has been completed prior to the date the Director of the Environmental Protection Agency approves the permit application and plans, the approval does not constitute expressed or implied assurance that the proposed facility has been constructed in accordance with the approved plans. The action of beginning and/or completing construction prior to obtaining the Director's approval constitutes a violation of OAC rule 3745-31-02. Furthermore, issuance of the Permit to Install does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. Approval of the plans in any case is not to be construed as an approval of the facility as constructed and/or completed. Moreover, issuance of the Permit to Install is not to be construed as a waiver of any rights that the Ohio Environmental Protection Agency (or other persons) may have against the applicant for starting construction prior to the effective date of the permit. Additional facilities shall be installed upon orders of the Ohio Environmental Protection Agency if the proposed facilities prove to be inadequate or cannot meet applicable standards.

#### **10. Public Disclosure**

The facility is hereby notified that this permit, and all agency records concerning the operation of this permitted source, are subject to public disclosure in accordance with OAC rule 3745-49-03.

#### **11. Applicability**

This Permit to Install is applicable only to the emissions unit(s) identified in the Permit to Install. Separate application must be made to the Director for the installation or modification of any other emissions unit(s).

#### **12. Best Available Technology**

As specified in OAC Rule 3745-31-05, all new sources must employ Best Available Technology (BAT). Compliance with the terms and conditions of this permit will fulfill this requirement.

#### **13. Source Operation and Operating Permit Requirements After Completion of Construction**

This facility is permitted to operate each source described by this Permit to Install for a period of up to one year from the date the source commenced operation. This permission to operate is granted only if the facility complies with all requirements contained in this permit and all applicable air pollution laws, regulations, and policies. Pursuant to OAC Chapter 3745-35, the permittee shall submit a complete operating permit application within thirty (30) days after commencing operation of the emissions unit(s) covered by this permit.

**Environmental Rubber Recycling Inc**  
**PTI Application: 04-01228**  
**Issued: 9/19/2000**

**Facility ID: 0448011703**

**14. Construction Compliance Certification**

The applicant shall provide Ohio EPA with a written certification (see enclosed form) that the facility has been constructed in accordance with the Permit to Install application and the terms and conditions of the Permit to Install. The certification shall be provided to Ohio EPA upon completion of construction but prior to startup of the source.

**15. Fees**

The permittee shall pay fees to the Director of the Ohio EPA in accordance with ORC section 3745.11 and OAC Chapter 3745-78. The permittee shall pay all applicable Permit to Install fees within 30 days after the issuance of this Permit to Install.

**B. Permit to Install Summary of Allowable Emissions**

The following information summarizes the total allowable emissions, by pollutant, based on the individual allowable emissions of each air contaminant source identified in this permit.

**SUMMARY (for informational purposes only)**  
**TOTAL PERMIT TO INSTALL ALLOWABLE EMISSIONS**

<u>Pollutant</u>	<u>Tons Per Year</u>
NOx	44.2
CO	9.6
PM	3.2
SO <sub>2</sub>	2.9
VOC	3.5

**PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)**

**A. Applicable Emissions Limitations and/or Control Requirements**

- 1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	
325 bhp diesel fueled internal combustion engine used to operate a rubber tire shredder.	OAC rule 3745-31-05(A)(3)	OAC 3745-17-11(B)(5) OAC 3745-18-06(B) OAC 3745-21-07(B) OAC 3745-21-08(B) OAC 3745-23-06(B)
	OAC 3745-17-07(A)(1)	

Applicable Emissions  
Limitations/Control Measures

The requirements established pursuant to this rule are equivalent to the requirements of OAC rule 3745-17-07(A)(1) and 3745-17-11(B)(5).

3.2 tons of PM per rolling 12-month period;

0.67 lb of sulfur dioxide (SO<sub>2</sub>) per hour;

2.9 tons of SO<sub>2</sub> per rolling 12-month period;

2.2 lbs of carbon monoxide (CO) per hour;

9.6 tons of CO per rolling 12-month period;

10.1 lbs of nitrogen oxides (NO<sub>x</sub>) per hour;

44.2 tons of NO<sub>x</sub> per rolling 12-month period;

0.81 lb of volatile organic compounds (VOC) per hour; and,

3.5 tons of VOC per rolling 12-month period.

20% opacity, as a 6-minute average except as provided by rule.

0.310 lb PM/MMBtu input.

Exempt, see A.2.a.

see A.2.b.

see A.2.c.

see A.2.d.

**2. Additional Terms and Conditions**

- 2.a** The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
- 2.b** Minimize photochemically reactive materials by use of the latest available control techniques and operating practices in accordance with best current technology.
- 2.c** Minimize CO emissions by use of best available control techniques and operating practices in accordance with best current technology.
- 2.d** Minimize NO<sub>x</sub> emissions by use of best available control techniques and operating practices in accordance with best current technology.

**B. Operational Restrictions**

- 1. The permittee shall use only diesel fuel with a maximum sulfur content of 0.5% by weight for combustion in this emission unit.

**C. Monitoring and/or Recordkeeping Requirements**

- 1. For each day during which the permittee burns a fuel other than diesel fuel with a maximum sulfur content of 0.5% by weight, the permittee shall maintain a record of the type, sulfur content and quantity of fuel burned in this emissions unit.

**D. Reporting Requirements**

- 1. The permittee shall submit deviation (excursion) reports that identify each day during which a fuel other than diesel fuel with a maximum sulfur content of 0.5% by weight is used in this emissions unit.
- 2. The deviation reports shall be submitted in accordance with the reporting requirements of the General Terms and Conditions of this permit.

**E. Testing Requirements**

- 1. Compliance with the emission limitations of these terms and conditions shall be determined in accordance with the following methods:
  - a. Emission Limitation:

0.310 lb PM/MMBtu input.

Applicable Compliance Method:

Compliance shall be based upon an emission factor of 0.310 lb PM/MMBtu. This emission factor is specified in USEPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, dated 10/96 Section 3.3, Table 3.3-1. If required, the permittee shall demonstrate compliance with this emission limitation in accordance with the methods and procedures specified in Method 5 of 40 CFR Part 60, Appendix A.

b. Emission Limitation:

0.67 lb SO<sub>2</sub> per hour.

Applicable Compliance Method:

Compliance shall be based upon an emission factor of 0.00205 lb SO<sub>2</sub>/bhp-hr and a maximum engine size of 325 bhp. This emission factor is specified in USEPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, dated 10/96 Section 3.3, Table 3.3-1. If required, the permittee shall demonstrate compliance with this emission limitation in accordance with the methods and procedures specified in Method 6 of 40 CFR Part 60, Appendix A.

c. Emission Limitation:

2.2 lbs CO per hour.

Applicable Compliance Method:

Compliance shall be based upon an emission factor of 0.00668 lb CO/bhp-hr and a maximum engine size of 325 bhp. This emission factor is specified in USEPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, dated 10/96 Section 3.3, Table 3.3-1. If required, the permittee shall demonstrate compliance with this emission limitation in accordance with the methods and procedures specified in Method 10 of 40 CFR Part 60, Appendix A.

d. Emission Limitation:

10.1 lbs NO<sub>x</sub> per hour.

11

**Environmental Rubber Recycling Inc**

**PTI Application: 04-01228**

**Issued**

**Facility ID: 0448011703**

**Emissions Unit ID: P901**

Applicable Compliance Method:

Compliance shall be based upon an emission factor of 0.031 lb NO<sub>x</sub>/bhp-hr and a maximum engine size of 325 bhp. This emission factor is specified in USEPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, dated 10/96 Section 3.3, Table 3.3-1. If required, the permittee shall demonstrate compliance with this emission limitation in accordance with the methods and procedures specified in Method 7 of 40 CFR Part 60, Appendix A.

e. Emission Limitation:

0.81 lb VOC per hour.

Applicable Compliance Method:

Compliance shall be based upon an emission factor of 0.0025 lb/bhp-hr and a maximum engine size of 325 bhp. This emission factor is specified in USEPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, dated 10/96 Section 3.3, Table 3.3-1. If required, the permittee shall demonstrate compliance with this emission limitation in accordance with the methods and procedures specified in Method 25 of 40 CFR Part 60, Appendix A.

f. Emission Limitation:

20% opacity as a six-minute average for the engine

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with this emission limitation in accordance with the methods and procedures specified in OAC 3745-17-03(B)(1).

## **F. Miscellaneous Requirements**

1. Pursuant to Ohio Administrative Code (OAC) rule 3745-31-03(A)(1)(p)(i), the permittee of a portable or mobile emissions unit may relocate within the State of Ohio without first obtaining a PTI providing the following criteria are met:
  - a. the portable emissions unit is equipped with the best available control technology for such

- portable emissions unit;
- b. the portable emissions unit is operating pursuant to a currently effective permit to operate (PTO);
  - c. the applicant has provided proper notice of intent to relocate the portable emissions unit to the TDOES and the appropriate field office having jurisdiction over the new site within a minimum of thirty days prior to the scheduled relocation; and
  - d. in the TDOES's and the appropriate field office's judgement, the proposed site is acceptable under the rule 3745-15-07 of the Administrative Code.
2. In the alternative, pursuant to OAC rule 3745-31-03(A)(1)(p)(ii), the permittee of a portable or mobile emissions unit may relocate within the State of Ohio without first obtaining a PTI providing the following criteria of OAC rule 3745-31-05(F) are met:
- a. the portable emissions unit permittee possesses an Ohio EPA PTI, PTO or registration status;
  - b. the portable emissions unit is equipped with best available technology;
  - c. the portable emission unit owner has identified the proposed site to Ohio EPA;
  - d. Ohio EPA has determined that the portable emissions unit, at the proposed site, will have an acceptable environmental impact;
  - e. a public notice, consistent with Chapter 3745-47 of the Administrative Code, is published in the county where the proposed site is located;
  - f. the owner of the proposed site has provided the portable emissions unit owner with approval or equivalent declaration that it is acceptable to the site owner to move the portable emissions unit to this proposed site; and
  - g. the portable emissions unit owner has provided Ohio EPA with fifteen days written notice of the relocation.
3. Any site approvals issued by the Ohio EPA, pursuant to section F.2. above, shall be valid for no longer than three years and are subject to renewal.

In order for the TDOES and the appropriate field office having jurisdiction over the new site to

**Environmental Rubber Recycling Inc****PTI Application: 04-01228****Issued****Facility ID: 0448011703**Emissions Unit ID: **P901**

determine compliance with all of the above criteria, the permittee of the portable or mobile emissions unit must file a "Notice of Intent to Relocate", within the specified time frame (30 or 15 days) prior to the relocation of the emissions unit with the TDOES (348 S. Erie Street, Toledo, OH 43602) and the appropriate field office having jurisdiction over the new site. Upon receipt of the notice, the TDOES and/or appropriate field office having jurisdiction over the new site, will evaluate the request in accordance with the above criteria.

Failure to submit said notification and to receive Ohio EPA approval prior to relocation of the emissions unit may result in fines and civil penalties.

4. The permittee shall operate the engine with a minimum stack height of 20 feet from ground level in order to maintain the air quality for NOx emissions.
5. The permittee shall ensure that all tires entering the shredder are thoroughly wetted with water.

**NEW SOURCE REVIEW FORM B**

PTI Number: 04-01228 Facility ID: 0448011703  
 FACILITY NAME Environmental Rubber Recycling Inc  
 FACILITY DESCRIPTION Tire shredder with a 325 hp diesel engine CITY/TWP Toledo  
 SIC CODE 5014 SCC CODE 3-99-999-94 EMISSIONS UNIT ID P901  
 EMISSIONS UNIT DESCRIPTION 325 hp diesel fueled internal combustion engine used for rubber tire shredder  
 DATE INSTALLED September 2000 or as soon as permit is issued

EMISSIONS: (Click on bubble help for Air Quality Descriptions)

Pollutants	Air Quality Description	Actual Emissions Rate		PTI Allowable	
		Short Term Rate	Tons Per Year	Short Term Rate	Tons Per Year
Particulate Matter	attainment	0.27	1.2	0.72	3.2
PM <sub>10</sub>	unclassified				
Sulfur Dioxide	attainment	0.59	2.6	0.67	2.9
Organic Compounds	attainment	0.43	1.9	0.81	3.5
Nitrogen Oxides	unclassified	9.1	39.9	10.1	44.2
Carbon Monoxide	attainment	1.7	7.4	2.2	9.6
Lead	not designated				
Other: Air Toxics					

APPLICABLE FEDERAL RULES:

NSPS? No NESHAP? No PSD? No OFFSET POLICY? No

**WHAT IS THE BAT DETERMINATION, AND WHAT IS THE BASIS FOR THE DETERMINATION?**

BAT will require compliance with AP-42 emission factors, and compliance with the applicable regulations. Table 3.3-1, dated 10/96 has values of NO<sub>x</sub> - 0.031 lb/bhp-hr, CO - 0.00668 lb/bhp-hr, PM - 0.0022 lb/bhp-hr, SO<sub>2</sub> - 0.00205 lb/bhp-hr, VOC - 0.0025 lb/bhp-hr. The permittee will be required to burn fuel containing a maximum of 0.5% sulfur by weight. Opacity will be restricted to SIP levels of 20%.

IS THIS SOURCE SUBJECT TO THE AIR TOXICS POLICY? No

OPTIONAL: WHAT IS THE CAPITAL COST OF CONTROL EQUIPMENT? \$ n/a

**TOXIC AIR CONTAMINANTS**

Ohio EPA's air toxics policy applies to contaminants for which the American Conference of Governmental Industrial Hygienists (ACGIH) has a listed threshold limit value.

AIR TOXICS MODELING PERFORMED\*? \_\_\_\_\_ YES \_\_\_\_\_ NO

IDENTIFY THE AIR CONTAMINANTS: \_\_\_\_\_

**NEW SOURCE REVIEW FORM B**

PTI Number: 04-01228 Facility ID: 0448011703

FACILITY NAME Environmental Rubber Recycling Inc

FACILITY DESCRIPTION Tire shredder with a 325 hp diesel engine CITY/TWP Toledo

**Ohio EPA Permit to Install Information Form** Please describe below any documentation which is being submitted with this recommendation (must be sent the same day). Electronic items should be submitted with the e-mail transmitting the PTI terms, and in software that CO can utilize. If mailing any hard copy, this section must be printed as a cover page. All items must be clearly labeled indicating the PTI name and number. Submit **hard copy items to Pam McGraner**, AQM&P, DAPC, Central Office, and electronic files to **airpti@epa.state.oh.us**

Please fill out the following. If the checkbox does not work, replace it with an 'X'

	<u>Electronic</u>	<u>Additional information File Name Convention (your PTI # plus this letter)</u>	<u>Hard Copy</u>	<u>None</u>
<u>Calculations (required)</u>	<input type="checkbox"/>	0000000c.wpd	<input type="checkbox"/>	
<u>Modeling form/results</u>	<input checked="" type="checkbox"/>	0401228s.wpd	<input type="checkbox"/>	<input type="checkbox"/>
<u>PTI Application (complete or partial)*</u>	<input type="checkbox"/>	0000000a.wpd	<input type="checkbox"/>	<input type="checkbox"/>
<u>BAT Study</u>	<input type="checkbox"/>	0000000b.wpd	<input type="checkbox"/>	<input type="checkbox"/>
<u>Other/misc.</u>	<input type="checkbox"/>	0000000t.wpd	<input type="checkbox"/>	<input type="checkbox"/>

\* Mandatory for netting, PSD, nonattainment NSR, 112(g), 21-07(G)(9)(g) and 21-09(U)(2)(f) - 2 complete copies.

Please complete (see comment bubble to the left for additional instructions):

**NSR Discussion**

Please complete for these type permits (For PSD/NSR Permit, place mouse over this text):

**Synthetic Minor Determination and/or**  **Netting Determination**  
Permit To Install **ENTER PTI NUMBER HERE**

- A. Source Description
- B. Facility Emissions and Attainment Status
- C. Source Emissions
- D. Conclusion

PLEASE PROVIDE ADDITIONAL NOTES OR COMMENTS AS NECESSARY:

Source Description

This PTI is for a 325 hp diesel fueled engine powering a rubber tire shredder to be located at the Stickney West Industrial Park at 4401-4425 Creekside Avenue in Toledo, Ohio. This equipment will operate as a portable source. The unit will shred used tires to be used on site to line the construction and demolition debris landfill being built. This landfill previously was issued PTI 04-1171. The material handling portion of the operation (load in and conveying of whole tires along with conveying and load out of shreds) will be considered de minimis due to the size of the whole tires being fed in and the size of the shreds (approximately 2"). In discussions with Ohio EPA CDO and equipment manufacturer, the shredder will also be classified as de minimis. The only emission point will be the diesel engine exhaust.

Applicable Regulations

**NEW SOURCE REVIEW FORM B**

PTI Number: 04-01228

Facility ID: 0448011703

FACILITY NAME Environmental Rubber Recycling Inc

FACILITY DESCRIPTION Tire shredder with a 325 hp diesel engine CITY/TWP Toledo

	OAC 3745-31-05(A)(3)	Best Available Technology
PM	OAC 3745-17-07(A)(1)	20% opacity, as a 6-minutes average from the engine
	OAC 3745-17-11(B)(5)	0.31 lb PM/MMBtu input
SO <sub>2</sub>	OAC 3745-18-06(B)	Exempt: < 10 MMBtu per hour capacity
VOC	OAC 3745-21-07(B)	Best Available Technology
CO	OAC 3745-21-08(B)	Best Available Technology
NO <sub>x</sub>	OAC 3745-23-06(B)	Best Available Technology

**B.A.T. Determination**

BAT for the 325 hp internal combustion engine will require compliance with AP-42 emission factors and compliance with the applicable regulations. For uncontrolled diesel industrial engines, AP-42 Table 3.3-1 dated 10/96 gives emission factors of:

NO<sub>x</sub> - 0.031 lb/hp-hr

CO - 0.00668 lb/hp-hr

PM - 0.0022 lb/hp-hr

SO<sub>2</sub> - 0.00205 lb/hp-hr

VOC - 0.0025 lb/hp-hr

The accepted BAT for visible emissions in the Toledo area is 20% .

**Permit Allowable Emissions**

For the 325 bhp/hr engine, using the AP-42 emission factors and assuming 8760 hours of operation for the year, the potential to emit is as shown:

Pollutant	Emission factor (lb/bhp-hr)	PTE (lb/hr)	PTE (TPY)
NO <sub>x</sub>	0.031	10.1	44.2
CO	0.00668	2.2	9.6
PM	0.0022	0.72	3.2
SO <sub>2</sub>	0.00205	0.67	2.9
VOC	0.0025	0.81	3.5

**Actual Emissions**

The actual emissions for the 325 bhp/hr engine are based on worst case scenario emissions:

Pollutant	PTE (lb/hr)	PTE (TPY)
NO <sub>x</sub>	9.1	39.9
CO	1.7	7.4
PM	0.27	1.2
SO <sub>2</sub>	use < 0.5% sulfur in the fuel	2.6
VOC	0.43	1.9

**Air Toxics**

No listed air toxics exceeds the one ton per year trigger rate.

**Other Applicable Regulations**

**NEW SOURCE REVIEW FORM B**

PTI Number: 04-01228 Facility ID: 0448011703

FACILITY NAME Environmental Rubber Recycling Inc

FACILITY DESCRIPTION Tire shredder with a 325 hp diesel engine CITY/TWP Toledo

NSPS, PSD, CEM, NESHAPs and Emission Offsets do not apply.

**Air Modeling**

The NOx emissions from the engine are above the significant level of 25 TPY. Modeling was performed in SCREEN3 and the results are attached in a separate document (0401228s.wpd). A restriction will be placed in the permit so the stack height is at least 20 feet from ground level.

With the above restriction, SCREEN3 model gives a maximum 1-hour concentration for NOx of 149.7 ug/m<sup>3</sup>. According to Engineering Guide #69, this output is multiplied by 0.08 to obtain an annual concentration of 11.98 ug/m<sup>3</sup>. The goal is to be less than one half the PSD increment of 25 ug/m<sup>3</sup> for NOx. Therefore,  $0.5 * 25 \text{ ug/m}^3 = 12.5 \text{ ug/m}^3$ . The output from SCREEN3 times 0.08 equals 11.97 ug/m<sup>3</sup> which is less than 12.5 ug/m<sup>3</sup>, therefore the modeling passes.

Please complete:

**SUMMARY (for informational purposes only)**  
**TOTAL PERMIT TO INSTALL ALLOWABLE EMISSIONS**

<u>Pollutant</u>	<u>Tons Per Year</u>
NOx	44.2
CO	9.6
PM	3.2
SO <sub>2</sub>	2.9
VOC	3.5

**NEW SOURCE REVIEW FORM B**

PTI Number: 04-01228

Facility ID: 0448011703

FACILITY NAME Environmental Rubber Recycling Inc

FACILITY DESCRIPTION Tire shredder with a 325 hp diesel engine CITY/TWP Toledo