

**Air Construction Permit Application
Global Tire Recycling of Sumter
County, Inc.**

Wildwood, Sumter County, Florida

April 1998

Prepared for:

Global Tire Recycling of Sumter County, Inc
1201 Industrial Drive
Wildwood, Florida 34785

ERM

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(850) 668-4552



ERM[®]

ERM's Commitment to Quality

Our Quality Policy

We will fully understand the requirements of our clients, our jobs, and the systems that support us.

We will conform to those requirements at all times.

Our Quality Goals

To serve you.

To serve you well.

To continually improve that service.

Our Quality Improvement Process

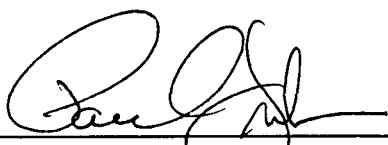
Train each employee.

Establish and implement requirements based on a preventative approach.

Maintain a standing Quality Improvement Team to ensure continuous improvement.

Empower Corrective Action Teams at both company-wide and local levels to correct and eliminate problems.

Continually strive to improve our client and supplier relationships.

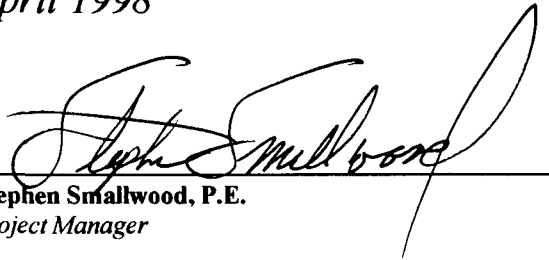


Paul Gruber, President

Air Construction Permit Application Global Tire Recycling of Sumter County, Inc.

Wildwood, Sumter County, Florida

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Stephen Smallwood, P.E.
Project Manager

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**Department of
Environmental Protection**

**DIVISION OF AIR RESOURCES MANAGEMENT
APPLICATION FOR AIR PERMIT - LONG FORM**

I. APPLICATION INFORMATION


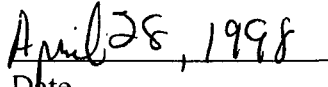
Identification of Facility Addressed in This Application

1. Facility Owner/Company Name : GLOBAL TIRE RECYCLING OF SUMTER CO. INC	
2. Site Name : Wildwood Crumb Rubber Plant	
3. Facility Identification Number : <i>1190028</i>	<input checked="" type="checkbox"/> Unknown
4. Facility Location : GLOBAL TIRE RECYCLING OF SUMTER COUNTY, INC. Wildwood Plant The Crumb Rubber Manufacturing Plant is located on lots 13 & 16 in the Willard Peebles Industrial Park in Wildwood, Florida. Wildwood is approximately 60 miles north of the Tampa Bay area on Interstate 75. Sumter County FDEP Southwest District Street Address or Other Locator : 1201 Industrial Drive City : Wildwood County : Sumter Zip Code : 34785-	
5. Relocatable Facility? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	6. Existing Permitted Facility? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

I. Part 1 - 1

DEP Form No. 62-210.900(1) - Form
Effective : 3-21-96

Owner/Authorized Representative or Responsible Official

1. Name and Title of Owner/Authorized Representative or Responsible Official : Name : Michael F. Kelley, Esq. Title : Vice President and General Counsel
2. Owner or Authorized Representative or Responsible Official Mailing Address : Organization/Firm : GLOBAL TIRE RECYCLING OF SUMTER CO, INC Street Address : 1201 Industrial Drive City : Wildwood State : FL Zip Code : 34785-____
3. Owner/Authorized Representative or Responsible Official Telephone Numbers : Telephone : (352)330-2213 Fax : (352)330-2214
4. Owner/Authorized Representative or Responsible Official Statement : <i>I, the undersigned, am the owner or authorized representative* of the non-Title V source addressed in this Application for Air Permit or the responsible official, as defined in Rule 62-210.200, F.A.C., of the Title V source addressed in this application, whichever is applicable. I hereby certify, based on information and belief formed after reasonable inquiry, that the statements made in this application are true, accurate and complete and that, to the best of my knowledge, any estimates of emissions reported in this application are based upon reasonable techniques for calculating emissions. The air pollutant emissions units and air pollution control equipment described in this application will be operated and maintained so as to comply with all applicable standards for control of air pollutant emissions found in the statutes of the State of Florida and rules of the Department of Environmental Protection and revisions thereof. I understand that a permit, if granted by the Department, cannot be transferred without authorization from the Department, and I will promptly notify the Department upon sale or legal transfer of any permitted emissions units.</i>  Signature  Date

* Attach letter of authorization if not currently on file.

Application Processing Fee

Check one :

Attached - Amount : \$250.00 Not Applicable.

Construction/Modification Information

1. Description of Proposed Project or Alterations :

Overview

At the Wildwood Plant, Global Tire Recycling (GTR) will recycle whole waste tires and tire chips into fine mesh sized crumb rubber for sale to asphalt blenders and manufactures of molded rubber products. The plant will use proven technology in an ambient temperature, closed loop system, which includes appropriate air pollution control measures to prevent the emission of significant amounts of particulate matter (PM10) or other air pollutants from the tire processing operation, the loadout of product, or other on-site activities.

GTR will not receive waste tires from the general public. The plant property is surrounded by a security fence. A guard will be on duty at all times. In accord with the Waste Tire Processing Permit, GTR will maintain records of the quantity of waste tires received at the site, stored at the site, and shipped from the site.

Throughput

By the end of the first year of operation, GTR expects to be processing tires and tire equivalents (tire chips) at a rate of 2 million whole passenger tire equivalents per year (approximately 20,000 tons of whole tire equivalents per year or 80 tons per day, 5 days per week, 50 weeks per year).

Crumb Rubber Milling Process

The process used to convert the waste tires to fine mesh crumb rubber is known as the Phoenix System. It involves six basic steps .

First the derimmed whole tires are passed through a Shredder which reduces the tire material to a more manageable size (2-4 inch chips). Next the tire chips are passed through two Cracker Mills, which further reduces the size of the tire chips and separates the fiber and metal tread and cord material from the tire rubber. Third, magnets are used to remove the metal. Fourth, air aspirated screening tables and gravity separators are used to separate fiber and foreign material (wood, paper, stones). These first four steps are called the 'front-end" of the process. It results in separating the metal, fiber, and foreign material from the tire rubber, and reducing the tire chip sized rubber chunks to debris free granular size rubber (1/8 to 3/8 inch diameter spheres). The oversized pieces of crushed tire chips are separated out in the screening process that follows

I. Part 5 - 1

each of the cracker mills (operated in series), recirculated and re-fed to the cracker mills as many times as needed to achieve the desired size of rubber beads (small pieces). This part of the process is designed to process tires at a rate that is greater than the "back-end" of the process (the three parallel operated fine grind mills) can process the granular rubber beads from the front-end into mesh sized crumb rubber. This will allow for front-end down time for maintenance and repairs, and an ample amount of sufficient clean granular rubber beads in storage to operate the fine grind mills on a nearly continuous basis during normal working hours.

The fifth step is the fine grinding of the clean granular rubber beads from the front-end operation to produce the desired mesh-sized crumb rubber product. As with the front-end cracker mill operation, an air aspirated screening table operation follows each of the fine grind mills. Oversized material is collected and re-fed to the fine grind mill as many times as needed to achieve the desired mesh size and product consistence. The sixth and last step is the bagging and/or bulk loadout (a screw conveyor-fed outside loadout hopper) , and shipping of the crumb rubber product to the customer.

Air Pollution Controls

Mesh size crumb rubber looks like coarse black sand. It handles well and is not dusty. The interior roads at the plant site and all public access roads are paved and will not be a significant source of particulate (dust) emissions. The whole tire shredder is a rotary shear type cutter. It does not generate significant amounts of particulate dust or visible emissions. The cracker mills and fine grind mills are enclosed operations. The only significant source of emissions (particulate dust -- there is no combustion or solvent use involved in the process) is the screening operation associated with the cracker mills and the fine grind mills. Each screen is hooded. Air flows up through the screens entraining any fine light fibers or particles which are pulled through the aspiration tube (suction) connected to the hood on each enclosed screen. The airflow from each aspiration tube is passed through a common baghouse before being discharged to the outside air through louvers on the baghouse, which will be located approximately 50 feet above ground level. Particulate emissions from the baghouse discharge louvers are expected to be less than one pound per hour with no visible emissions.

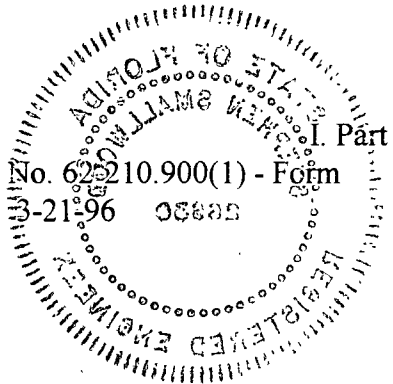
2. Projected or Actual Date of Commencement of Construction :	15-Jun-1998
3. Projected Date of Completion of Construction :	15-Jul-1998

I. Part 5 - 2

Professional Engineer Certification

1. Professional Engineer Name : Stephen Smallwood, P.E. Registration Number : 26 630 FL
2. Professional Engineer Mailing Address : Organization/Firm : ERM-South Street Address : 2964 Wellington Circle N #2b City : Tallahassee State : FL Zip Code : 32308-6885
3. Professional Engineer Telephone Numbers : Telephone : (850)668-4552 Fax : (850)668-6925

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Effective : 3-21-96



I. Part 5 - 3

GLOI TIRE RECYCLING OF SUMTER COUNTY, INC
A Crumb Rubber Manufacturing Plant
Wildwood, Sumter County, Florida
FDEP Southwest District

4. Professional Engineer Statement :

I, the undersigned, hereby certified, except as particularly noted herein, that :*

(1) To the best of my knowledge, there is reasonable assurance that the air pollutant emissions unit(s) and the air pollutant control equipment described in this Application for Air Permit, when properly operated and maintained, will comply with all applicable standards for control of air pollutant emissions found in the Florida Statutes and rules of the Department of Environmental Protection; and

(2) To the best of my knowledge, any emission estimates reported or relied on in this application are true, accurate, and complete and are either based upon reasonable techniques available for calculating emissions or, for emission estimates of hazardous air pollutants not regulated for an emissions unit addressed in this application, based solely upon the materials, information and calculations submitted with this application.

If the purpose of this application is to obtain a Title V source air operation permit (check here [] if so), I further certify that each emissions unit described in this Application for Air Permit, when properly operated and maintained, will comply with the applicable requirements identified in this application to which the unit is subject, except those emissions units for which a compliance schedule is submitted with this application.

If the purpose of this application is to obtain an air construction permit for one or more proposed new or modified emissions units (check here [X] if so), I further certify that the engineering features of each such emissions unit described in this application have been designed or examined by me or individuals under my direct supervision and found to be in conformity with sound engineering principles applicable to the control of emissions of the air pollutants characterized in this application.

If the purpose of this application is to obtain an initial air operation permit or operation permit revision for one or more newly constructed or modified emissions units (check here [] if so), I further certify that, with the exception of any changes detailed as part of this application, each such emissions has been constructed or modified in substantial accordance with the information given in the corresponding application for air construction permit and with all provisions contained in such permit.

Signature

Stephen Smallwood

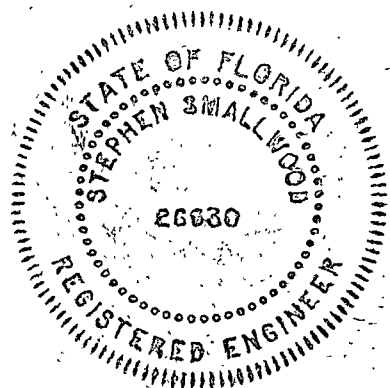
Date

27 April 1998

* Attach any exception to certification statement.

I. Part 6 - 1

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Application Contact

1. Name and Title of Application Contact :
Name : Michael F. Kelley, Esq. Title : Vice President and General Counsel
2. Application Contact Mailing Address :
Organization/Firm : GLOBAL TIRE RECYCLING OF SUMTER CO, <i>INC.</i> Street Address : 1201 Industrial Drive City : Wildwood State : FL Zip Code : 34785-
3. Application Contact Telephone Numbers :
Telephone : (352)330-2213 Fax : (352)330-2214

Application Comment

In February 1998, Global Tire Recycling filed a Waste Tire Processing Facility Permit Application with the FDEP Southwest District Office Waste Management Section in Tampa, FL. That application includes additional information on the site, the plant layout, the process, and the specific equipment to be used.

The plant technical information included in that application is incorporated in this application by reference as supporting technical information for this application. Contact Kim Ford in the District Waste Management Section to obtain information from that application which the District Air Resources Management Section may need to review as part of the review of this application.

Appendix A provides a copy of the cover page and the table of contents of the Waste Tire Processing Facility Permit Application.



**GLOBAL TIRE
RECYCLING, INC.**

Crumb Rubber For
The Asphalt And
Molded Products
Industries

419 S.W. 31 Road
Miami, FL 33129
Tel: 305-856-3390
Fax: 305-856-7482

Mr. Michael F. Kelley, Vice President
Global Tire Recycling of Sumter
County, Inc.
1201 Industrial Drive
Wildwood, FL 34785

Re: F.D.E.P. Air Quality Permit

Dear Mike:

This letter will serve as authorization for you to be the Responsible Person for Global Tire Recycling for all matters with respect to the F.D.E.P. Air Quality Permit application and on-going issues.

Sincerely,

R. Brian Fifer
Chairman & C.E.O.

modification of an emissions unit.

Operation permit to be revised :

Reason for revision :

Category II : All Air Operation Permit Applications Subject to Processing Under Rule 62-210.300(2)(b), F.A.C.

This Application for Air Permit is submitted to obtain :

- Initial air operation permit under Rule 62-210.300(2)(b), F.A.C., for an existing facility seeking classification as a synthetic non-Title V source.

Current operation/construction permit number(s) :

- Renewal air operation permit under Rule 62-210.300(2)(b), F.A.C., for a synthetic non-Title V source.

Operation permit to be renewed :

- Air operation permit revision for a synthetic non-Title V source.

Operation permit to be revised :

Reason for revision :

Category III : All Air Construction Permit Applications for All Facilities and Emissions Units

This Application for Air Permit is submitted to obtain :

- Air construction permit to construct or modify one or more emissions units within a facility (including any facility classified as a Title V source).

Current operation permit number(s), if any :

I. Part 4 - 2

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- Air construction permit to make federally enforceable an assumed restriction on the potential emissions of one or more existing, permitted emissions units.

Current operation permit number(s) :

- Air construction permit for one or more existing, but unpermitted, emissions units.

I. Part 4 - 3

Scope of Application

Emissions Unit ID	Description of Emissions Unit	Permit Type
1	Crumb Rubber Milling Plant	AC1F
2	Tires/Products Materials Handling	AC1F

I. Part 3 - 1

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Purpose of Application and Category

Category I: All Air Operation Permit Applications Subject to Processing Under Chapter 62-213, F.A.C.

This Application for Air Permit is submitted to obtain :

Initial air operation permit under Chapter 62-213, F.A.C., for an existing facility which is classified as a Title V source.

Initial air operation permit under Chapter 62-213, F.A.C., for a facility which, upon start up of one or more newly constructed or modified emissions units addressed in this application, would become classified as a Title V source.

Current construction permit number :

Air operation permit renewal under Chapter 62-213, F.A.C., for a Title V source.

Operation permit to be renewed :

Air operation permit revision for a Title V source to address one or more newly constructed or modified emissions units addressed in this application.

Current construction permit number :

Operation permit to be revised :

Air operation permit revision or administrative correction for a Title V source to address one or more proposed new or modified emissions units and to be processed concurrently with the air construction permit application.

Operation permit to be revised/corrected :

Air operation permit revision for a Title V source for reasons other than construction or

I. Part 4 - 1

II. FACILITY INFORMATION

A. GENERAL FACILITY INFORMATION

Facility, Location, and Type

1. Facility UTM Coordinates : Zone : 17 East (km) : 398.10 North (km) : 3192.40			
2. Facility Latitude/Longitude : Latitude (DD/MM/SS) : 28 53 45 Longitude (DD/MM/SS) : 82 3 30			
3. Governmental Facility Code : 0	4. Facility Status Code : C	5. Facility Major Group SIC Code : 30	6. Facility SIC(s) : 3011
7. Facility Comment : The facility consists of: (1) waste tire receiving, storage, and staging areas, (2) a rotary shear type tire shredder, (3) two cracker mills in series with air separation screens, (4) three fine grind mills in parallel with air separation screens, (5) intermediate and final product storage bins, and (6) final product bagging and bulk loadout bins. The air separation screens are controlled with a baghouse.			

Facility Contact

1. Name and Title of Facility Contact : Michael F. Kelley, Esq. Vice President and General Counsel	
2. Facility Contact Mailing Address : Organization/Firm : GLOBAL TIRE RECYCLING OF SUMTER CO, INC. Street Address : 1201 Industrial Drive City : Wildwood State : FL Zip Code : 34785-____	
3. Facility Contact Telephone Numbers : Telephone : (352)330-2213 Fax : (352)330-2214	

II. Part 1 - 1

Facility Regulatory Classifications

1. Small Business Stationary Source?	U
2. Title V Source?	N
3. Synthetic Non-Title V Source?	N
4. Major Source of Pollutants Other than Hazardous Air Pollutants (HAPs)?	N
5. Synthetic Minor Source of Pollutants Other than HAPs?	N
6. Major Source of Hazardous Air Pollutants (HAPs)?	N
7. Synthetic Minor Source of HAPs?	N
8. One or More Emissions Units Subject to NSPS?	N
9. One or More Emission Units Subject to NESHAP?	N
10. Title V Source by EPA Designation?	N
11. Facility Regulatory Classifications Comment :	
<p>The Global Tire Recycling plant in Wildwood, FL will be a small minor source of air pollution. Its emissions are subject only to the general emission limiting standard included in Chapter 62-296 FAC.</p>	

II. Part 2 - 1

B. FACILITY REGULATIONS

Rule Applicability Analysis

Process Description

The Phoenix System process reduces waste tire rubber to mesh size crumb rubber using cracker mills that do not generate enough friction heat to raise the rubber temperature above 375 degrees F. This allows the tire rubber to be recirculated and recrushed as many times as needed to achieve the desired product mesh size. The relatively low operating temperature of these mills also prevents any significant volatilization of the tire rubber, which prevents the generation and emission of objectional odors and hazardous air pollutants from the process.

Without air pollution control measures, the cracker mill and fine grind mill air separation screening tables would emit unconfined particulate matter. To prevent the emission of any significant amount of unconfined particulate matter, the air separation screens are equipped with hoods which are connected to a baghouse with suction tubes. The air that passes through the screens and through the suction tubes is filtered by the baghouse before the process air is vented to the outside air through a vent on the top of the baghouse.

Due to the nature of the feed material (tires and tire chips) and the nature of the product (mesh size crumb rubber beads) the storage and handling of the waste tire and the crumb rubber product does not generate a significant amount of unconfined particulate matter emissions. The interior roads at the plant site and all public access roads are paved and will not be a significant source of particulate (dust) emissions. The whole tire shredder is a rotary shear type cutter. It will not generate significant amounts of particulate dust or visible emissions.

Applicable Air Rules

The FDEP Air Division classifies the Phoenix System process as a Ground Tire Rubber(GTR) manufacturing plant. In a February 11, 1994, general air permitting policy memo entitled " Guidance on Using Ground Tire Rubber in Asphalt" the Division outlined how the generally applicable air emissions standards are to be applied to this type of facility to provide consistency under the current rules. A copy of that memo and the referenced rules are included at Appendix B.

The policy memo states that GTR manufacturing plants will need air construction and operation permits issued by the district or county air program offices. There is no county air program in Sumter County. The plant will be located in the FDEP Southwest District. The district office is located in Tampa.

The memo identifies the following rules as being applicable to the air permitting of this type of facility:

(1) Particulate matter emission standards shall be based on the unconfined emissions of particulate matter regulation (FAC Rule 17-296.310(3)), and PM RACT standard (FAC Rule 17-296.700) [applies only in

II. Part 3a - 1

B. FACILITY REGULATIONS

Rule Applicability Analysis

particulate nonattainment areas - Sumter County in not part of such an area, so the PM RACT rule does not apply to the Global Tire plant].

(2) If a filter (baghouse) is used to control emissions, the alternate procedures regulations (FAC Rule 17-297.620) apply.

(3) An objectional odor condition will be included the permits (FAC Rule 17-296.320).

(4) The air construction permit fee will be based on the calculated TPY PM emissions from the GTR facility.

(5) Visible emissions testing and an odor evaluation (test team's opinion on whether objectional odors are being emitted by the facility) shall be required annually. Particulate matter tests shall be required initially and upon renewal of the operating permit unless the 5% opacity standard in lieu of a particulate matter test is specified in the permits (FAC Rule 17-297.620).

(6) The same rules [(1) through (5) listed above] apply to pneumatically operated GTR transfer equipment. The memo notes that there is a low potential for PM and fugitive dust emissions from the handling of GTR in bags.

If there is a question on the policy, the reader is instructed to call Willard Hanks or Clair Fancy, Bureau of Air Regulation at 850/ 488-1344.

Application of Rules

The unconfined emissions of particulate matter rule (FAC Rule 17-296.310(3)) requires the owner/operator of a source of unconfined particulate matter emissions to take reasonable measures to prevent the emission of unconfined particulate. The specific measures to be taken at each affected plant are to be specified in the permits for that facility. The list of example reasonable measures included in the rule are not generally applicable to all facilities. At the Global Tire Recycling plant in Wildwood the only significant source of potentially unconfined particulate matter emissions is the operation of the air separation screens associated with the two cracker mills (in series) and the three fine grind mills (in parallel). These air separation screens are used to separate the small pieces and strands of crushed tire cord and tread fiber (fluff) from the mixture of crushed tire rubber bits and fluff. The reasonable measures to be taken are: (a) the enclosure of the process, (b) equipping each air separation screen with a hood connected to a suction (aspiration) tube, (c) connecting all suction tubes to a baghouse which filters to air separation screen process air before it is discharged to the outside air.

Since a baghouse is to be used to limit the emission of particulate matter from the process, the applicant requests the emissions from the baghouse be subject to the alternate 5% opacity standard (allowed by the alternate procedures rule (FAC Rule 17-297.620)) and an annual visible emissions test(EPA Method 9) in lieu of the initial and renewal of the operating permit particulate matter emissions test (EPA Method 5).

II. Part 3a - 2

B. FACILITY REGULATIONS

Rule Applicability Analysis

Since that memo was written, some of the air rules have been reformed.

The list of Applicable Rules on the following page provides the current citation for the rules referenced in the 1994 policy memo.

As noted in the process description above, the low temperature operation of the process prevents the generation of objectional odors.

Approximately 5% of the weight of a waste tire is cord and tread fiber. The maximum projected rate of processing whole passenger tire equivalents is 2 million per year (20,000 tpy). Five percent of that is 1000 tpy of fiber. All of the fiber is separated in the process and sent to the baghouse. The baghouse will be 99.9 % efficient in removing the fiber from the air stream before it is discharged to the outside air. Therefore approximately 1 tpy of cord fiber will be emitted from the baghouse. Some rubber dust and foreign matter (very small fragments of rock, dirt, wood, and paper) will also be pulled into the baghouse by the suction tubes. The amount of this type of material that generally enters the process with the waste tires is usually less than the weight of the tire cord, and a large amount of it is removed by the gravity separators. Therefore the maximum expected particulate matter emissions from the plant is less than 2 tpy.

B. FACILITY REGULATIONS

List of Applicable Regulations

Unconfined emissions of particulate matter (FAC Rule 62-296.320(4)(c))

Alternate procedures (FAC Rule 62-297.620)

Objectional odor (FAC Rule 62-296.320(2))

Visible Emissions Test (EPA Method 9)

II. Part 3b - 1

DEP Form No. 62-210.900(1) - Form
Effective : 3-21-96

C. FACILITY POLLUTANTS

Facility Pollutant Information

1. Pollutant Emitted	2. Pollutant Classification
PM10	B

II. Part 4 - 1

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D. FACILITY POLLUTANT DETAIL INFORMATION

Facility Pollutant Information

Pollutant 1

1. Pollutant Emitted :	PM10	
2. Requested Emissions Cap :	(lbs/hour)	(tons/year)
3. Basis for Emissions Cap Code :		
4. Facility Pollutant Comment :	No emissions cap is requested or needed for this facility. Estimated potential PM emissions are 2 tpy.	

II. Part 4b - 1

D. FACILITY SUPPLEMENTAL INFORMATION

Supplemental Requirements for All Applications

1. Area Map Showing Facility Location :	Appendix C
2. Facility Plot Plan :	Appendix D
3. Process Flow Diagram(s) :	Appendix E
4. Precautions to Prevent Emissions of Unconfined Particulate Matter :	In Application
5. Fugitive Emissions Identification :	In Application
6. Supplemental Information for Construction Permit Application :	NA

Additional Supplemental Requirements for Category I Applications Only

7. List of Proposed Exempt Activities :	NA
8. List of Equipment/Activities Regulated under Title VI :	NA
9. Alternative Methods of Operation :	NA
10. Alternative Modes of Operation (Emissions Trading) :	NA
11. Identification of Additional Applicable Requirements :	NA
12. Compliance Assurance Monitoring Plan :	NA
13. Risk Management Plan Verification :	NA
14. Compliance Report and Plan :	NA
15. Compliance Certification (Hard-copy Required) :	NA

III. EMISSIONS UNIT INFORMATION

A. TYPE OF EMISSIONS UNIT (Regulated and Unregulated Emissions Units)

Emissions Unit Information Section 1

Crumb Rubber Milling Plant

Type of Emissions Unit Addressed in This Section

1. Regulated or Unregulated Emissions Unit? Check one :

- [X] The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.
- [] The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

2. Single Process, Group of Processes, or Fugitive Only? Check one :

- [X] This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).
- [] This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.
- [] This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

III. Part 1 - 1

DEP Form No. 62-210.900(1) - Form
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Emissions Unit Information Section 1

**B. GENERAL EMISSIONS UNIT INFORMATION
(Regulated and Unregulated Emissions Units)**

Emissions Unit Description and Status

1. Description of Emissions Unit Addressed in This Section : Crumb Rubber Milling Plant		
2. Emissions Unit Identification Number : 1 [] No Corresponding ID [] Unknown		
3. Emissions Unit Status Code : C	4. Acid Rain Unit? [] Yes [X] No	5. Emissions Unit Major Group SIC Code : 30
6. Emissions Unit Comment : The tire milling emissions unit includes: (1) a rotary shear type tire shredder, (2) two cracker mills in series with air separation screens, (3) three fine grind mills in parallel with air separation screens, and (4) intermediate materials holding and recycling bins. The air separation screens are controlled with a baghouse. The tire shredder does not generate a significant amount of particulate emission. All of the mills are enclosed. The gravity separators and air separation screens are hooded and exhausted through a baghouse. The vent on the baghouse is the only emission point associated with the process. Because of the enclosure of the process and the nature of the raw material and the product, there are not significant fugitive emissions associated with the process.		

III. Part 2 - 1

**C. EMISSIONS UNIT DETAIL INFORMATION
(Regulated Emissions Units Only)**

Emissions Unit Information Section 1
Crumb Rubber Milling Plant

Emissions Unit Details

1. Initial Startup Date :	15-Jul-1998	
2. Long-term Reserve Shutdown Date :		
3. Package Unit :		
Manufacturer :		Model Number :
4. Generator Nameplate Rating :	MW	
5. Incinerator Information :		
Dwell Temperature :		Degrees Fahrenheit
Dwell Time :		Seconds
Incinerator Afterburner Temperature :		Degrees Fahrenheit

Emissions Unit Operating Capacity

1. Maximum Heat Input Rate :	mmBtu/hr	
2. Maximum Incinerator Rate :	lb/hr	tons/day
3. Maximum Process or Throughput Rate :	29000	lbs/hr
4. Maximum Production Rate :	6000	lbs/hr
5. Operating Capacity Comment :		
<p>Throughput Rate (Shredder): lbs/hr of whole passenger tire equivalents (WTEs).</p> <p>Production rate (3 fine grind mills) lbs/hr of mesh size crumb rubber.</p> <p>The maximum annual production rate of crumb rubber is limited by the production rate capacity of the 3 parallel fine grind mills. The maximum projected annual production rate is 16,000 ton of mesh size crumb rubber beads. That is based on operating the 3 fine grind mills at 90% capacity on an annual average basis, operating them 24 hours/day, 5 days/week, 50 weeks/year.</p>		

III. Part 4 - 1

Emissions Unit Information Section 1
Crumb Rubber Milling Plant

Emissions Unit Control Equipment 1

1. Description :	
Baghouse	
2. Control Device or Method Code :	18

III. Part 3 - 1

The tire shredder and cracker mills are intentionally designed with higher short term throughput rates to allow for greater maintenance and repair down time, while still being able to produce enough granular rubber feed to keep the fine grind mills running at near capacity nearly all of the time during normal working hours.

To produce 16,000 tons of mesh size crumb rubber, approximately 2 million waste passenger tire equivalents (WTEs) will be fed through the primary (first) cracker mill. That mill can process whole tires if the shredder is out-of-service, but at a reduced throughput rate.

Emissions Unit Operating Schedule

Requested Maximum Operating Schedule :

24 hours/day

5 days/week

50 weeks/year

6,000 hours/year

**D. EMISSIONS UNIT REGULATIONS
(Regulated Emissions Units Only)**

Emissions Unit Information Section 1
Crumb Rubber Milling Plant

Rule Applicability Analysis

See the Facility Rule Applicability Analysis in Part II of this Application.

III. Part 6a - 1

DEP Form No. 62-210.900(1) - Form
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Emissions Unit Information Section 1
Crumb Rubber Milling Plant

List of Applicable Regulations

See the Facility Rule Applicability Analysis in Part II of this Application.

III. Part 6b - 1

DEP Form No. 62-210.900(1) - Form
Effective : 3-21-96

E. EMISSION POINT (STACK/VENT) INFORMATION

Emissions Unit Information Section 1

Crumb Rubber Milling Plant

Emission Point Description and Type :

1. Identification of Point on Plot Plan or Flow Diagram :	B-1
2. Emission Point Type Code :	1
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking : (limit to 100 characters per point)	A horizontal vent on the side of the baghouse near the top of the baghouse structure.
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common :	This emission point vents the baghouse filtered process air from the enclosed gravity separators (vacuum destoners), and the hooded air separation screens associated with the cracker mills and the fine grind mills.
5. Discharge Type Code :	
6. Stack Height :	50 feet
7. Exit Diameter :	5.3 feet
8. Exit Temperature :	90 °F
9. Actual Volumetric Flow Rate :	39000 acfm
10. Percent Water Vapor :	3.00 %
11. Maximum Dry Standard Flow Rate :	36935 dscfm
12. Nonstack Emission Point Height :	feet
13. Emission Point UTM Coordinates :	
Zone :	East (km) : North (km) :
14. Emission Point Comment :	The emission point UTM coordinates are the same as for the facility. See Part II of this Application - Facility Information. The emission point cross-section is a square: 64" x 64".

III. Part 7a - 1

F. SEGMENT (PROCESS/FUEL) INFORMATION

Emissions Unit Information Section 1

Crumb Rubber Milling Plant

Segment Description and Rate : Segment 1

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) :	
Tire Shredder (Rotary Shear Type)	
2. Source Classification Code (SCC) :	
3. SCC Units : Tons Processed	
4. Maximum Hourly Rate : 14.50	5. Maximum Annual Rate : 20,000.00
6. Estimated Annual Activity Factor :	
7. Maximum Percent Sulfur :	8. Maximum Percent Ash :
9. Million Btu per SCC Unit :	
10. Segment Comment :	
Cuts whole tires into 2 to 4 inch sized chips.	

III. Part 8 - 1

F. SEGMENT (PROCESS/FUEL) INFORMATION

Emissions Unit Information Section 1

Crumb Rubber Milling Plant

Segment Description and Rate : Segment 2

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) : Primary Cracker Mill	
2. Source Classification Code (SCC) :	
3. SCC Units : Tons Processed	
4. Maximum Hourly Rate : 8.00	5. Maximum Annual Rate : 20,000.00
6. Estimated Annual Activity Factor :	
7. Maximum Percent Sulfur :	8. Maximum Percent Ash :
9. Million Btu per SCC Unit :	
10. Segment Comment : Reduces tire chips to pea sized material, separating the metal and fiber from the tire rubber,	

F. SEGMENT (PROCESS/FUEL) INFORMATION

Emissions Unit Information Section 1

Crumb Rubber Milling Plant

Segment Description and Rate : Segment 3

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) : Secondary Cracker Mill	
2. Source Classification Code (SCC) :	
3. SCC Units : Tons Processed	
4. Maximum Hourly Rate : 7.00	5. Maximum Annual Rate : 16,500.00
6. Estimated Annual Activity Factor :	
7. Maximum Percent Sulfur :	8. Maximum Percent Ash :
9. Million Btu per SCC Unit :	
10. Segment Comment : Reduces feed from the Primary Cracker Mill to granular size material removing the remaining amount of metal and fiber from the tire rubber.	

III. Part 8 - 3

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F. SEGMENT (PROCESS/FUEL) INFORMATION

Emissions Unit Information Section 1

Crumb Rubber Milling Plant

Segment Description and Rate : Segment 4

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) : Three Fine Grind Mills	
2. Source Classification Code (SCC) :	
3. SCC Units : Tons Processed	
4. Maximum Hourly Rate : 3.00	5. Maximum Annual Rate : 16,000.00
6. Estimated Annual Activity Factor :	
7. Maximum Percent Sulfur :	8. Maximum Percent Ash :
9. Million Btu per SCC Unit :	
10. Segment Comment : Receives clean granular sized tire rubber beads from the temporary holding bins following the Secondary Cracker Mill and reduces them to mesh sized crumb rubber product.	

III. Part 8 - 4

F. SEGMENT (PROCESS/FUEL) INFORMATION

Emissions Unit Information Section 1

Crumb Rubber Milling Plant

Segment Description and Rate : Segment 5

<p>1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) :</p> <p>Two Gravity Separators (destoners) & 12 Air Separation Screens (Fluff from rubber bits) equipped with a Baghouse</p>	
<p>2. Source Classification Code (SCC) :</p>	
<p>3. SCC Units : Tons Processed</p>	
<p>4. Maximum Hourly Rate : 8.00</p>	<p>5. Maximum Annual Rate : 20,000.00</p>
<p>6. Estimated Annual Activity Factor :</p>	
<p>7. Maximum Percent Sulfur :</p>	<p>8. Maximum Percent Ash :</p>
<p>9. Million Btu per SCC Unit :</p>	
<p>10. Segment Comment :</p> <p>Separates foreign material (stones, dirt, wood, paper, etc), fluff (tire cord material) and a small amount of rubber dust from the the tire rubber bits, granules, and mesh sized product.</p>	

III. Part 8 - 5

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G. EMISSIONS UNIT POLLUTANTS
(Regulated and Unregulated Emissions Units)

Emissions Unit Information Section 1
Crumb Rubber Milling Plant

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
1 - PM10	018		WP

III. Part 9a - 1

DEP Form No. 62-210.900(1) - Form
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**H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units Only - Emissions Limited Pollutants Only)**

Emissions Unit Information Section 1
Crumb Rubber Milling Plant

Pollutant Potential/Estimated Emissions : Pollutant 1

1. Pollutant Emitted: PM10			
2. Total Percent Efficiency of Control :	99.90	%	
3. Potential Emissions :	1.00	lb/hour	2.00 tons/year
4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
5. Range of Estimated Fugitive/Other Emissions: <div style="text-align: right;">to tons/year</div>			
6. Emissions Factor : Reference :			
7. Emissions Method Code : 2			
8. Calculations of Emissions : See the following Comments.			
9. Pollutant Potential/Estimated Emissions Comment : <p>Approximately 5% of the weight of a waste tire is cord and tread fiber. The maximum projected rate of processing whole passenger tire equivalents is 2 million per year (20,000 tpy). Five percent of that is 1000 tpy of fiber. All of the fiber is separated in the process and sent to the baghouse. The baghouse will be 99.9 % efficient in removing the fiber from the air stream before it is discharged to the outside air. Therefore approximately 1 tpy of cord fiber will be emitted from the baghouse. Some rubber dust and foreign matter (very small fragments of rock, dirt, wood, and paper) will also be pulled into the baghouse by the suction tubes. The amount of this type of material that generally enters the process with the waste tires is usually less than the weight of the tire cord, and a large amount of it is removed by the gravity separators. Therefore the maximum expected particulate matter emissions from the plant is less than 2 tpy.</p>			

III. Part 9b - 1

**I. VISIBLE EMISSIONS INFORMATION
(Regulated Emissions Units Only)**

Emissions Unit Information Section 1
Crumb Rubber Milling Plant

Visible Emissions Limitation : Visible Emissions Limitation 1

1. Visible Emissions Subtype :	5	
2. Basis for Allowable Opacity :	RULE	
3. Requested Allowable Opacity :		
	Normal Conditions :	5 %
	Exceptional Conditions :	40 %
	Maximum Period of Excess Opacity Allowed :	6 min/hour
4. Method of Compliance :		
	VE test (EPA Method 9 - 30 minute observation period)	
5. Visible Emissions Comment :		
	<p>The general excess emissions rule , 62-210.700 FAC, allows up to 2 hours of excess emissions due to a startup, shutdown, or malfunction. Due to the nature of the process, excess visible emissions will not be caused by a process startup or shutdown. The baghouse will be in operation whenever material is being processed. Should excess visible emissions occur as a result of a malfunction (equipment failure or torn filter bags, etc.) the process will be shut down after two hours if the problem can not be corrected within that time period (unless otherwise authorized by the FDEP), and will not be restarted until the problem is corrected. The baghouse filter bags will be inspected weekly on a routine basis and any time that visible emissions in excess of 10% are observed. Routine preventative maintenance will be preformed on the baghouse and the dust collection tubes and hoods as recommended by the equipment manufacture.</p>	

III. Part 10 - 1

DEP Form No. 62-210.900(1) - Form
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J. CONTINUOUS MONITOR INFORMATION
(Regulated Emissions Units Only)

Emissions Unit Information Section 1
Crumb Rubber Milling Plant

Continuous Monitoring System : Continuous Monitor 1

1. Parameter Code :	2. Pollutant :
3. CMS Requirement :	
4. Monitor Information : Manufacturer : Model Number : Serial Number :	
5. Installation Date :	
6. Performance Specification Test Date :	
7. Continuous Monitor Comment : Not Required	

**K. PREVENTION OF SIGNIFICANT DETERIORATION (PSD) INCREMENT
TRACKING INFORMATION**

Emissions Unit Information Section 1

Crumb Rubber Milling Plant

PSD Increment Consumption Determination

1. Increment Consuming for Particulate Matter or Sulfur Dioxide?

-] The emissions unit is undergoing PSD review as part of this application, or has undergone PSD review previously, for particulate matter or sulfur dioxide. If so, emissions unit consumes increment.
-] The facility addressed in this application is classified as an EPA major source pursuant to paragraph (c) of the definition of "major source of air pollution" in Chapter 62-213, F.A.C., and the emissions unit addressed in this section commenced (or will commence) construction after January 6, 1975. If so, baseline emissions are zero, and emissions unit consumes increment.
-] The facility addressed in this application is classified as an EPA major source, and the emissions unit began initial operation after January 6, 1975, but before December 27, 1977. If so, baseline emissions are zero, and emissions unit consumes increment. -
-] For any facility, the emissions unit began (or will begin) initial operation after December 27, 1977. If so, baseline emissions are zero, and emissions unit consumes increment.
-] None of the above apply. If so, the baseline emissions of the emissions unit are nonzero. In such case, additional analysis, beyond the scope of this application, is needed to determine whether changes in emissions have occurred (or will occur) after the baseline date that may consume or expand increment.

III. Part 12 - 1

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Effective : 3-21-96

2. Increment Consuming for Nitrogen Dioxide?

- [] The emissions unit addressed in this section is undergoing PSD review as part of this application, or has undergone PSD review previously, for nitrogen dioxide. If so, emissions unit consumes increment.
- [] The facility addressed in this application is classified as an EPA major source pursuant to paragraph (c) of the definition of "major source of air pollution" in Chapter 62-213, F.A.C., and the emissions unit addressed in this section commenced (or will commence) construction after February 8, 1988. If so, baseline emissions are zero, and emissions unit consumes increment.
- [] The facility addressed in this application is classified as an EPA major source, and the emissions unit began initial operation after February 8, 1988, but before March 28, 1988. If so, baseline emissions are zero, and emissions unit consumes increment.
- [] For any facility, the emissions unit began (or will begin) initial operation after March 28, 1988. If so, baseline emissions are zero, and emissions unit consumes increment.
- [] None of the above apply. If so, baseline emissions of the emissions unit are nonzero. In such case, additional analysis, beyond the scope of this application, is needed to determine whether changes in emissions have occurred (or will occur) after the baseline date that may consume or expand increment.

3. Increment Consuming/Expanding Code :			
PM :	C	SO2 :	NO2 :
4. Baseline Emissions :			
PM :	1.0000	lb/hour	2.0000 tons/year
SO2 :		lb/hour	tons/year
NO2 :			tons/year
5. PSD Comment :			
There are no sulfur dioxide or nitrogen dioxide emissions from this facility.			

L. EMISSIONS UNIT SUPPLEMENTAL INFORMATION

Emissions Unit Information Section 1

Crumb Rubber Milling Plant

Supplemental Requirements for All Applications

1. Process Flow Diagram :	NA
2. Fuel Analysis or Specification :	NA
3. Detailed Description of Control Equipment :	Appendix F
4. Description of Stack Sampling Facilities :	NA
5. Compliance Test Report :	NA
6. Procedures for Startup and Shutdown :	NA
7. Operation and Maintenance Plan :	NA
8. Supplemental Information for Construction Permit Application :	NA
9. Other Information Required by Rule or Statue :	NA

Additional Supplemental Requirements for Category I Applications Only

10. Alternative Methods of Operations :	NA
11. Alternative Modes of Operation (Emissions Trading) :	NA

III. Part 13 - 1

12. Identification of Additional Applicable Requirements :	NA
13. Compliance Assurance Monitoring Plan :	NA
14. Acid Rain Application (Hard-copy Required) :	
NA	Acid Rain Part - Phase II (Form No. 62-210.900(1)(a))
NA	Repowering Extension Plan (Form No. 62-210.900(1)(a)1.)
NA	New Unit Exemption (Form No. 62-210.900(1)(a)2.)
NA	Retired Unit Exemption (Form No. 62-210.900(1)(a)3.)

III. Part 13 - 2

III. EMISSIONS UNIT INFORMATION

A. TYPE OF EMISSIONS UNIT (Regulated and Unregulated Emissions Units)

Emissions Unit Information Section 2

Tires/Products Materials Handling

Type of Emissions Unit Addressed in This Section

1. Regulated or Unregulated Emissions Unit? Check one :

- The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.
- The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

2. Single Process, Group of Processes, or Fugitive Only? Check one :

- This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).
- This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.
- This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

III. Part 1 - 1

DEP Form No. 62-210.900(1) - Form
Effective : 3-21-96

Emissions Unit Information Section 2
Tires/Products Materials Handling

Emissions Unit Control Equipment 1

<p>1. Description :</p> <p>There is a very low potential for unconfined particulate matter emissions from the activities included in this EU. No specific control measures are needed.</p>
<p>2. Control Device or Method Code :</p>

F. SEGMENT (PROCESS/FUEL) INFORMATION

Emissions Unit Information Section 2

Tires/Products Materials Handling

Segment Description and Rate : Segment 1

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) :	
Waste Tire Receiving	
2. Source Classification Code (SCC) :	
3. SCC Units : Tons Processed	
4. Maximum Hourly Rate :	5. Maximum Annual Rate : 20,000.00
6. Estimated Annual Activity Factor :	
7. Maximum Percent Sulfur :	8. Maximum Percent Ash : -
9. Million Btu per SCC Unit :	
10. Segment Comment :	
<p>The roadways on the plant site are paved. Twelve outdoor trailers are used to store whole tires to be processed (1100-1200 tires each). Tire chips are temporarily held on a 50 foot x 50 foot pad, stacked 4-5 feet high. Inside the milling building, a 50 foot x 50 foot x 15 foot pyramid shaped whole tire pile is maintained from which whole tires can be feed directly to the Shredder or Primary Cracker Mill. One thousand whole tire equivalents can be held in the live floor hopper awaiting processing.</p>	

III. Part 8 - 1

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Effective : 3-21-96

F. SEGMENT (PROCESS/FUEL) INFORMATION

Emissions Unit Information Section 2

Tires/Products Materials Handling

Segment Description and Rate : Segment 2

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) : Crumb Rubber Product Loadout	
2. Source Classification Code (SCC) :	
3. SCC Units : Tons Transferred Or Handled	
4. Maximum Hourly Rate :	5. Maximum Annual Rate : 16,000.00
6. Estimated Annual Activity Factor :	
7. Maximum Percent Sulfur :	8. Maximum Percent Ash :
9. Million Btu per SCC Unit :	
10. Segment Comment : From the product storage bins following the fine grind mills, crumb rubber product will be bagged and some placed in an outside five compartment storage bin which will be used for bulk loading of customer trucks.	

III. Part 8 - 2

**G. EMISSIONS UNIT POLLUTANTS
(Regulated and Unregulated Emissions Units)**

Emissions Unit Information Section 2
Tires/Products Materials Handling

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
1 - PM			NS

III. Part 9a - 1

DEP Form No. 62-210.900(1) - Form
Effective : 3-21-96

**K. PREVENTION OF SIGNIFICANT DETERIORATION (PSD) INCREMENT
TRACKING INFORMATION**

Emissions Unit Information Section 2

Tires/Products Materials Handling

PSD Increment Consumption Determination

1. Increment Consuming for Particulate Matter or Sulfur Dioxide?

- The emissions unit is undergoing PSD review as part of this application, or has undergone PSD review previously, for particulate matter or sulfur dioxide. If so, emissions unit consumes increment.
- The facility addressed in this application is classified as an EPA major source pursuant to paragraph (c) of the definition of "major source of air pollution" in Chapter 62-213, F.A.C., and the emissions unit addressed in this section commenced (or will commence) construction after January 6, 1975. If so, baseline emissions are zero, and emissions unit consumes increment.
- The facility addressed in this application is classified as an EPA major source, and the emissions unit began initial operation after January 6, 1975, but before December 27, 1977. If so, baseline emissions are zero, and emissions unit consumes increment.
- For any facility, the emissions unit began (or will begin) initial operation after December 27, 1977. If so, baseline emissions are zero, and emissions unit consumes increment.
- None of the above apply. If so, the baseline emissions of the emissions unit are nonzero. In such case, additional analysis, beyond the scope of this application, is needed to determine whether changes in emissions have occurred (or will occur) after the baseline date that may consume or expand increment.

III. Part 12 - 1

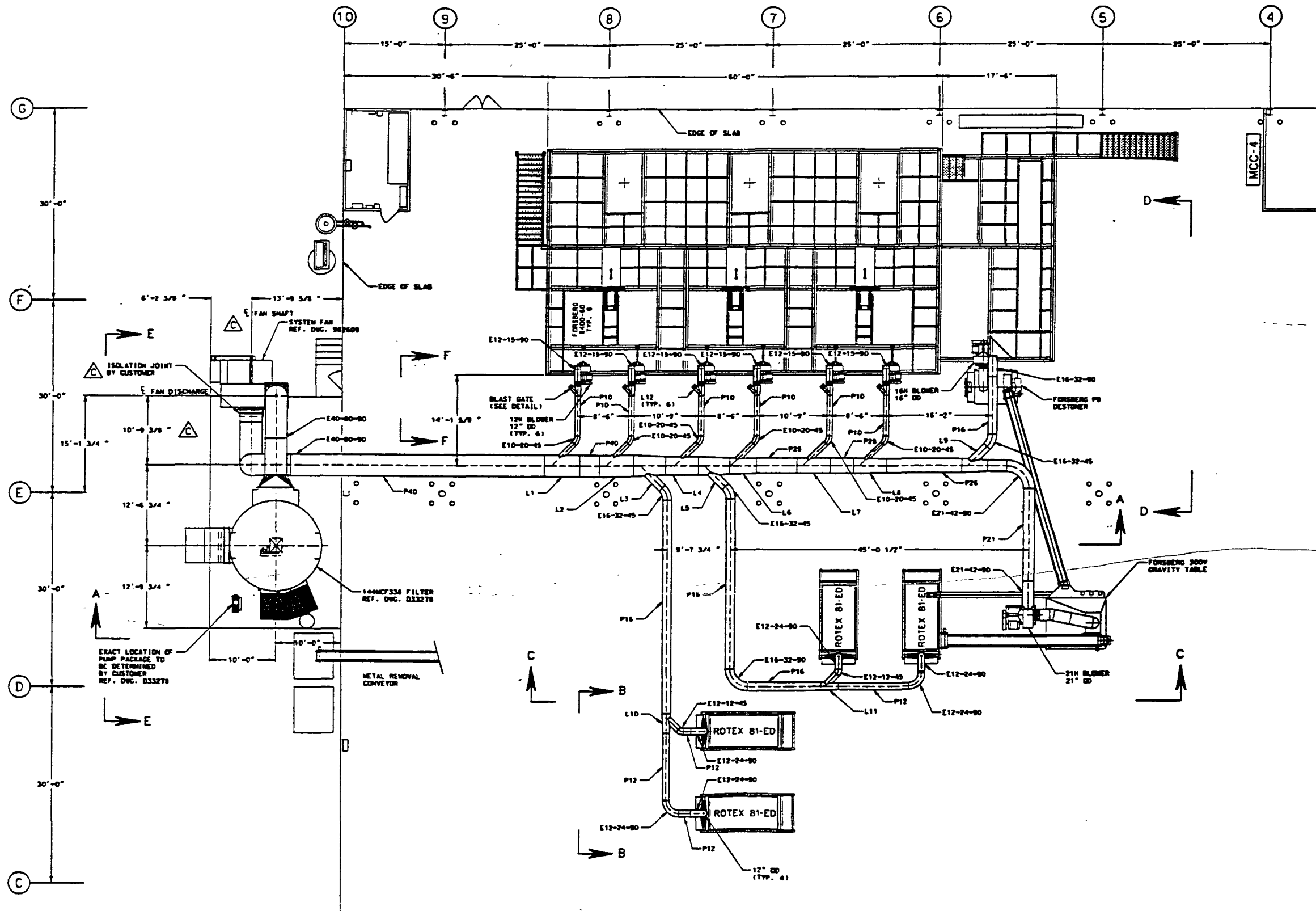
DEP Form No. 62-210.900(1) - Form
Effective : 3-21-96

2. Increment Consuming for Nitrogen Dioxide?

-] The emissions unit addressed in this section is undergoing PSD review as part of this application, or has undergone PSD review previously, for nitrogen dioxide. If so, emissions unit consumes increment.
-] The facility addressed in this application is classified as an EPA major source pursuant to paragraph (c) of the definition of "major source of air pollution" in Chapter 62-213, F.A.C., and the emissions unit addressed in this section commenced (or will commence) construction after February 8, 1988. If so, baseline emissions are zero, and emissions unit consumes increment.
-] The facility addressed in this application is classified as an EPA major source, and the emissions unit began initial operation after February 8, 1988, but before March 28, 1988. If so, baseline emissions are zero, and emissions unit consumes increment.
-] For any facility, the emissions unit began (or will begin) initial operation after March 28, 1988. If so, baseline emissions are zero, and emissions unit consumes increment.
-] None of the above apply. If so, baseline emissions of the emissions unit are nonzero. In such case, additional analysis, beyond the scope of this application, is needed to determine whether changes in emissions have occurred (or will occur) after the baseline date that may consume or expand increment.

3. Increment Consuming/Expanding Code :		
PM :	SO2 :	NO2 :
4. Baseline Emissions :		
PM :	lb/hour	tons/year
SO2 :	lb/hour	tons/year
NO2 :		tons/year
5. PSD Comment :		
No significant emissions		

SENT 4-13-98



NOTE:
FOR SECTIONAL VIEWS SEE
DWGS. 9845511, 9845512 & 9845513

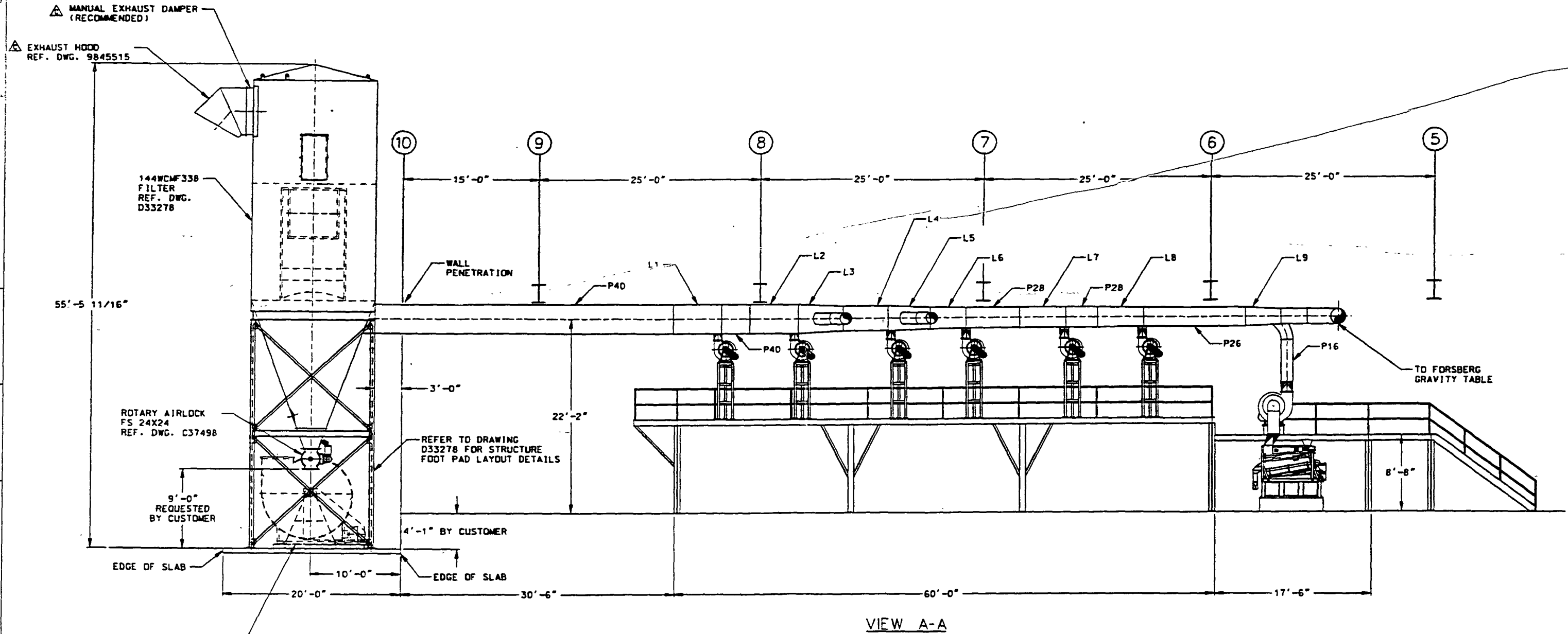
CERTIFIED
MAC EQUIPMENT, INC.
BY: *Steve Holloman* DATE: *03/26/98*

MAC EQUIPMENT, INC. 10747 AMBASSADOR DRIVE KANSAS CITY, MO. 64153 (816) 897-8300		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONS DECIMALS 3/16" & UP ±0.005" 3/32" & UP ±0.002" OTHER ±0.010"	
C	FAN LAYOUT AND ASSOCIATED DIMENSIONS	MEC	12/26/98
E	ISSUED FOR APPROVAL	MEC	12/06/98
A	ORIGINAL RELEASE	MEC	12/13/98
REV.	DESCRIPTION	BY	DATE CK'D DATE
			1/8"=1'-0"



THIS DRAWING IS THE PROPERTY OF MAC EQUIPMENT, INC. AND SHOULD NOT BE REPRODUCED, PUBLISHED OR DISCLOSED TO OTHERS WITHOUT APPROVAL AND SHALL NOT BE USED IN ANY WAY, EXCEPT AS REFERENCED TO MAC EQUIPMENT, INC. DRAWING NUMBER:
**PLAN VIEW
ASPIRATION SYSTEM
GLOBAL TIRE RECYCLING
WILDWOOD, FLORIDA**
DWG NO. 98-455-7C | 9845510C

SENT 4-13-98



VIEW A-A

CERTIFIED
 MAC EQUIPMENT, INC.
 BY Steve McKeown DATE 03/26/98

REV	DESCRIPTION	BY	DATE	CHK'D	DATE
C	REV. FAN LAYOUT/ADDED EXHST HOOD&DMPR	MEC	13/26/98		
E	ISSUED FOR APPROVAL	MEC	13/26/98		
A	ORIGINAL RELEASE	MEC	12/13/98		

MAC EQUIPMENT, INC.
 10747 AMBASSADOR DRIVE
 RANSAS CITY, MO. 64153
 (816) 891-8100

UNLESS OTHERWISE SPECIFIED
 DIMENSIONS ARE IN INCHES
 TOLERANCES
 FINISHES
 SPECIAL FINISHES
 SEE ALL SHEETS FOR NOTES
 PROJECT: 1

SCALE: 3/16"=1'-0"

PROJECTS

SECTIONAL VIEWS
 ASPIRATION SYSTEM
 GLOBAL TIRE RECYCLING
 WILDWOOD, FLORIDA

DATE: 198-455-7G DRAWING NO: 9845511C

TIRE GRINDING VENTILATION SYSTEM FOR MAC/SATURN GLOBAL TIRE PROJECT

SENT 4-13-98

MAC PROJECT # 98-455-7G

DRAWING LIST

9845510 PLAN VIEW
9845511 SECTIONAL VIEW
9845512 SECTIONAL VIEW
9845513 SECTIONAL VIEW
9845514 FABRICATION DETAILS
9845515 FABRICATION DETAILS
D33278 FILTER
C37498 AIRLOCK
982609 FAN

SYSTEM PARAMETERS

AIR VOLUME: 41,000 CFM @ -12" W.G.
TOTAL CLOTH AREA: 4,901 SQ. FT.
A/C RATIO: 8.5 TO 1
NO. BAGS: 388
MIN. DESIGN DUCT VELOCITY: 4,000 FPM
TEMPERATURE: AMBIENT (MAX 250° F)
DUST: RUBBER AND TIRE CORDAGE FINES
VENTING: BUCKET ELEVATORS, SHAKERS, GRINDERS, AND DESTONERS

FIELD NOTES:

- DUCT CONSTRUCTION DETAILS FOR ALL TRANSITIONS AND ELBOWS ARE SHOWN ON THE MATERIALS TABLE. STRAIGHTS ARE INDICATED AS TOTAL AMOUNT LENGTH. NOTE: CONTINGENCY IS NOT INCLUDED IN THE LISTED TOTAL LENGTHS.
- USE SILICONE SEALER CAULK BETWEEN ALL BOLTED FLANGE CONNECTIONS TO PROVIDE AN AIRTIGHT SEAL.
- ALL DUCT PENETRATIONS THROUGH THE BUILDING WALLS WILL BE FLASHED AS REQUIRED FOR WEATHERPROOFING.
- ANCHOR BLOWER PACKAGES AND PLUMB 1 1/2" NPT PIPE FROM BLOWER OUTLET TO THE MCF 2 1/2" NPT CONNECTOR SUPPLIED ON THE BAGHOUSE SIDEWALL.
- DUCT RUNS TO BE SUPPORTED BY INSTALLATION CONTRACTOR MINIMUM OF EVERY 10 FEET AND AS REQUIRED. HANGERS AND SUPPORTS SUPPLIED BY CONTRACTOR.
- SUPPORT DUCTWORK IN A MANNER TO PLACE NO LOAD ON CONNECTING EQUIPMENT OR HOODS.
- FAN TO BE ANCHORED DIRECTLY TO CONCRETE PAD.
- ALL STRAIGHT DUCT RUNS TO BE FABRICATED WITH ONE FLANGE LOOSE OR TACK WELDED FOR TRIM FIT AND SEAL WELDING IN FIELD.
- BLAST GATES TO BE INSTALLED AT ALL PICK UP HOODS TO CONTROL AIR FLOW.
- SEE MAC EQUIPMENT DRAWING NO. D33278 FOR DUST COLLECTOR AND BLOWER PACKAGE ANCHOR BOLT PATTERNS.

CONSTRUCTION/FABRICATION NOTES:

- ALL DUCTWORK, FLANGES, HANGERS, SUPPORTS, BRACING AND BOLT PATTERNS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST EDITION OF THE "SHEET METAL AND AIR CONDITIONING NATIONAL ASSOCIATION, INC." MANUAL OF "ROUND INDUSTRIAL DUCT CONSTRUCTION STANDARDS" UNLESS OTHERWISE SPECIFIED.
- ALL DUCTWORK CONSTRUCTION SHALL BE ROUND FLANGED DUCTWORK DESIGNED IN ACCORDANCE WITH THE "SMACNA" CLASS 2 MATERIAL AND REINFORCING SCHEDULES FOR STEEL DUCTS.
- CENTERLINE RADIUS FOR ELBOWS TO BE 2 TIMES THE DIAMETER (LONG RADIUS) UNLESS OTHERWISE SPECIFIED.
- ALL ELBOW FLANGES TO MATCH UP WITH CONNECTING DUCT DETAIL.
- CLEAN OUT DOORS ARE TO BE PROVIDED FOR EVERY 10 FOOT OF STRAIGHT DUCT RUN OR NEAR EACH DUCT JUNCTION IN HORIZONTAL DUCT SECTIONS. SEE CLEAN OUT DOOR.
- MANUAL BLAST GATES MUST BE PROVIDED AT EACH HOOD OR PICK-UP LOCATION.
- DUCT MATERIAL AND REINFORCEMENT SCHEDULES:

10" DIA. - 20 GAUGE STEEL - L. 1x1x1/8 @ 10' SPACING
12" DIA. - 20 GAUGE STEEL - L. 1x1x1/8 @ 7' SPACING
16" DIA. - 18 GAUGE STEEL - L. 1x1x1/8 @ 9' SPACING
21" DIA. - 16 GAUGE STEEL - L. 1x1x1/8 @ 9' SPACING
26" DIA. - 16 GAUGE STEEL - L. 1 1/4x1 1/4x3/16 @ 7' SPACING
28" DIA. - 16 GAUGE STEEL - L. 1 1/4x1 1/4x3/16 @ 6' SPACING
40" DIA. - 14 GAUGE STEEL - L. 1 1/4x1 1/4x3/16 @ 4' SPACING
ELBOWS - 14 GAUGE STEEL
TRANSITIONS - 14 GAUGE STEEL

- ALL DUCTWORK SHALL BE PRIME PAINTED AS PROTECTION AGAINST CORROSION.

MATERIALS TABLE		
ITEM NO.	QTY./LENGTH	DESCRIPTION
P10	40'-0"	10" STEEL DUCT
P12	72'-0"	12" STEEL DUCT
P16	86'-0"	16" STEEL DUCT
P21	21'-0"	21" STEEL DUCT
P26	13'-0"	26" STEEL DUCT
P28	11'-0"	28" STEEL DUCT
P40	71'-0"	40" STEEL DUCT
E10-20-45	6	10" DUCT, 20" C.L. RAD., 45° ELBOW
E12-12-45	2	12" DUCT, 12" C.L. RAD., 45° ELBOW
E12-15-90	6	12" DUCT, 15" C.L. RAD., 90° ELBOW
E12-24-90	6	12" DUCT, 24" C.L. RAD., 90° ELBOW
E16-32-45	3	16" DUCT, 32" C.L. RAD., 45° ELBOW
E16-32-90	2	16" DUCT, 32" C.L. RAD., 90° ELBOW
E21-42-90	2	21" DUCT, 42" C.L. RAD., 90° ELBOW
E40-80-90	3	40" DUCT, 80" C.L. RAD., 90° ELBOW
L1	1	40"x 40"x 10" LATERAL 5'-5"/LENGTH
L2	1	40"x 40"x 10" LATERAL 5'-5"/LENGTH
L3	1	40"x 34"x 16" LATERAL 5'-0"/LENGTH
L4	1	34"x 34"x 10" LATERAL 5'-0"/LENGTH
L5	2	34"x 30"x 16" LATERAL 4'-9 1/8"/LENGTH
L6	1	30"x 28"x 10" LATERAL 4'-1"/LENGTH
L7	1	28"x 28"x 10" LATERAL 5'-0"/LENGTH
L8	1	28"x 26"x 10" LATERAL 5'-0"/LENGTH
L9	1	26"x 21"x 16" LATERAL 3'-11 9/16"/LENGTH
L10	1	16"x 12"x 12" LATERAL 3'-0"/LENGTH
L11	1	16"x 12"x 12" LATERAL 2'-8"/LENGTH
L12	6	12"x 10"x 08" LATERAL 1'-6"/LENGTH
BLAST GATES	6	8" DIA./SEE PLAN/SECTION VIEWS FOR LOCATION
BLAST GATES	10	12" DIA./SEE PLAN/SECTION VIEWS FOR LOCATION
TRANS 1	1	FAN EXHAUST TRANSITION
TRANS 2	1	FILTER INLET TRANSITION
TRANS 3	1	FAN INLET TRANSITION
EXHST HOOD	1	FILTER EXHAUST HOOD
ISOLTN JOINT	1	FAN INLET ISOLATION JOINT
EXHST DAMPER	1	FILTER EXHAUST DAMPER

REV.	DESCRIPTION	BY	DATE	CR'D	DATE
B	ISSUED FOR CONSTRUCTION	MEC	12/26/98		
A	ORIGINAL RELEASE	MEC	2/13/98		

MAC EQUIPMENT, INC.
8747 AMBASSADOR DRIVE
KANSAS CITY, MO. 64114
(816) 891-8300



PROJECTS

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TIRE GRINDING VENTILATION SYSTEM
GLOBAL TIRE RECYCLING
WILDWOOD, FLORIDA

98-455-7G COVER PAGE

Appendix A

*Waste Tire Processing Facility
Permit Application - Table of
Contents*

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

WASTE TIRE PROCESSING PERMIT APPLICATION

February 1998

Submitted on Behalf of

Global Tire Recycling of Sumter County, Inc.

**MICHAEL F. KELLEY, ESQ.
155 SOUTH MIAMI AVENUE/PENTHOUSE
MIAMI, FLORIDA 33130
(305) 358-4522**

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ATTACHMENTS

1. ATTACHMENT A

- Aerial Photo
- City of Wildwood and Sumter County Zoning Documents
- Building Permit issued by City of Wildwood

2. ATTACHMENT B

- Project Drawings (18 sheets in mailing tube)

3. ATTACHMENT C - (CONFIDENTIAL TRADE SECRET)

- System Layout Drawing

4. ATTACHMENT D

- Site Plan (5 sheets)

5. ATTACHMENT E

- Surveyor's Wetlands, Water Bodies and Well Certification
- Florida DEP Storm Water Runoff Permit and Application

6. ATTACHMENT F

- Emergency Preparedness Manual

7. ATTACHMENT G - (CONFIDENTIAL TRADE SECRET)

- Letters of Intent
- Offering Memorandum

8. ATTACHMENT H - (CONFIDENTIAL TRADE SECRET)

- Process Description

9. ATTACHMENT I - (CONFIDENTIAL TRADE SECRET)

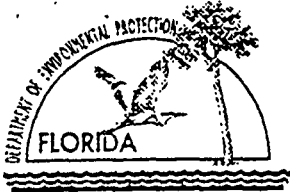
- Production Equipment Book with Equipment List Index/Horsepower, Electrical Specs and Capacities/Manning Table

10. **ATTACHMENT J**

- Warranty Deed

11. **ATTACHMENT K**

- Chemical Information



Department of Environmental Protection

DEP Form # 62-701.900(23) Waste Tire Processing Facility Form Title Permit Application Effective Date 12/23/96 DEP Application No. (Filled in by DEP)

Waste Tire Processing Facility Permit Application

Permit No. Renewal [] Modification [] Existing unpermitted facility [] Proposed new facility [x]

Part I-General Information:

136808-01

A. Applicant Information:

- 1. Applicant Name: GLOBAL TIRE RECYCLING OF SUMTER COUNTY, INC.
2. Applicant Street Address: 1201 INDUSTRIAL ROAD
3. City: WILDWOOD County: SUMTER Zip: 34785
4. Applicant Mailing Address: GLOBAL TIRE RECYCLING, INC., 419 S.W. 31st ROAD
5. City: MIAMI County: DADE Zip: 33129
6. Contact person: R. BRIAN FIFER, Pres. & CEO Phone: (305) 856-3390
7. Have any enforcement actions been taken by the Department against the applicant relating to the operation of any solid waste management facility in this state? Yes [] No [x]

B. Facility Information:

- 1. Facility Name: GLOBAL TIRE RECYCLING OF SUMTER COUNTY, INC.
2. Facility Street Address (Main Entrance): 1201 INDUSTRIAL ROAD
3. City: WILDWOOD County: SUMTER Zip: 34785
4. Facility Mailing Address: same as street address
5. City: State: Zip:
6. Contact Person: MICHAEL F. KELLEY Phone: ()

Facility Location Coordinates

- 7. Section: 7 Township: 19S Range: 23E
8. Latitude: 28°53'45" Longitude: 82°03'30"
9. Anticipated date for starting construction: November 1997 and for completion of construction: April 1998
10. Anticipated date for receipt of tires: May 1998 and for start of processing: May 1998

Mail completed form to appropriate district office listed below

Table with 5 columns: Northwest District, Northeast District, Central District, Southwest District, South District, Southeast District. Each column lists an address and phone number.

Appendix B

*FDEP Air Permitting Policy
Memo - Ground Tire Rubber
Manufacturing Plants*

Florida Department of
Environmental Protection

Memorandum

DARM-PER/GEN-07

TO: John Ruddell, Director
Division of Waste Management

District Air Program Administrators
County Air Program Administrators
Bureau of Air Regulation Engineers

FROM: Howard L. Rhodes, Director *HLR*
Division of Air Resources Management

DATE: February 11, 1994

SUBJECT: Guidance on Using Ground Tire Rubber in Asphalt

Section 336.044(3), Florida Statutes, requires the addition of ground tire rubber (GTR) to the asphalt cement used for state road construction. This will require some asphalt plants to use a GTR/asphalt mix instead of asphalt cement alone to make asphalt concrete. In this process, GTR will be mixed with hot asphalt cement at approximately a 5 to 20 percent by weight ratio, depending on the paving specifications. Then the asphalt cement/GTR mix will be blended with the hot dried aggregate at the asphalt plant in a ratio of approximately 7.2 percent mix and 92.8 percent aggregate to produce asphalt concrete. The maximum amount of GTR in the total mixture (asphalt concrete) will be approximately 1 percent. It is estimated that a minimum of 9,500 tons of GTR will be used in asphalt concrete in Florida in 1994. In carrying out this program, the following activities could be involved:

1. **Manufacture of GTR from tires.** During this process, tires are ground to a powder, -20, -40 or -80 mesh. This is approximately 830, 350 and 175 microns in diameter, respectively. The grinding of the tires could be a source of particulate matter (PM), fugitive dust, and odor emissions.

2. **Handling of GTR (transportation, loading/unloading, and storage) and mixing GTR with asphalt cement.** Some of these operations could occur at the GTR manufacturing plant, the bulk terminal where asphalt cement is received prior to distribution to the hot-mix asphalt plants, and at the hot-mix asphalt plant. Stationary and mobile equipment may be used to mix the GTR with the asphalt cement. Although some GTR may be transferred pneumatically (moving GTR in an air stream), most of the GTR is expected to be shipped in 50 and 1,500 pound bags. Handling operations will typically involve pouring GTR from 50 pound bags into a hopper and then conveying and mixing the material with the hot asphalt cement. Due to the size of the GTR, -20 to -80 mesh or approximately 830 to

Memorandum
February 11, 1994
Page Two

175 microns in diameter, minimal dust should be generated. As tire rubber volatilizes at about 475°F (and emits potentially hazardous organic compounds and objectionable odors), the temperature of the asphalt cement and aggregate should always be less than 375°F. There is a low potential for PM and fugitive dust emissions from the handling of GTR in bags along with a low potential for odor emissions from the mixing of GTR with hot asphalt cement below 375°F.

3. Blending of the GTR/asphalt cement with dried aggregate at the hot-mix asphalt plant. The GTR/asphalt mix is handled by the same equipment and procedures that is used to handle asphalt cement. There is a minimal potential for the PM, fugitive dust, and odor emissions to change when the GTR/asphalt mix is included in the process.

4. Application of the GTR/asphalt concrete to the road. The GTR/asphalt concrete is applied to the road in the same manner as asphalt concrete. There is a potential for a slight change in odors when the GTR/asphalt concrete is used. Data submitted by DOT indicated that emissions will not be a problem (see August 20, 1991, letter from Clair Fancy to Murphy, DOT).

For consistency under our current regulations, the air permitting activity should be handled as follows:

1. GTR manufacturing plants will need air construction and operation permits issued by the district or county air program offices. Particulate matter and fugitive emissions along with objectionable odors shall be addressed in the permits. Particulate matter emission standards shall be based on the unconfined emissions of particulate matter regulation (F.A.C. Rule 17-296.310 (3)), PM RACT standard (F.A.C. Rule 17-296.700), or the alternate procedures regulations (F.A.C. Rule 17-297.620) if a filter is used to control emissions - whichever regulation is applicable. Also, an objectionable odor condition (F.A.C. Rule 17-296.320) shall be included in the permits. The construction permitting fee will be based on the calculated TPY PM emissions from the GTR facility. Visible emission testing and an odor evaluation (test team's opinion on whether objectionable odors are being emitted by the facility) shall be required annually. Particulate matter tests shall be required initially and upon renewal of the operating permit unless the 5 percent opacity standard in lieu of a particulate matter test is specified in the permits (F.A.C. Rule 17-297.620).

2. Manually operated GTR transfer/mixing facilities (both stationary and mobile). When used in conjunction with an asphalt terminal or hot-mix asphalt plant, these will not require air construction and operation permits.

Memorandum
February 11, 1994
Page Three

3. Pneumatically operated GTR transfer equipment (both stationary and mobile) will need air permits. Particulate matter and fugitive emissions along with objectionable odors shall be addressed in the permits. Particulate matter emission standards shall be based on the unconfined emissions of particulate matter regulation (F.A.C. Rule 17-296.310 (3)), PM RACT standard (F.A.C. Rule 17-296.700), or the alternate procedures regulations (F.A.C. Rule 17-297.620) if a filter is used to control emissions - whichever regulation is applicable. Also, an objectionable odor condition (F.A.C. Rule 17-296.320) shall be included in the permits. The construction permitting fee will be based on the calculated TPY PM emissions from the GTR transfer/mixing facility. Visible emission testing and an odor evaluation (test team's opinion on whether objectionable odors are being emitted from the facility) shall be required annually. Particulate matter tests shall be required initially and upon renewal of the operating permit unless the 5 percent opacity standard in lieu of a particulate matter test is specified in the permits (F.A.C. Rule 17-297.620).

4. The hot-mix asphalt plant permit need not be amended or modified to allow the use of GTR/asphalt mix. Facility testing requirements should not change because of the use of GTR/asphalt mix in the plant.

5. Application of GTR/asphalt concrete to a road. An air permit is not required for this operation.

If you have any questions, please call Clair Fancy or Willard Hanks, Bureau of Air Regulation, at 904/488-1344 or SUNCOM 278-1344.

HLR/CF/wh

4/18/98

Title: FL / Title 62 · Chapter 62-210 · 62-210.700
Section: 62-210.700 Excess Emissions
Date: November 23, 1994
Subject Terms: air | emission | stationary source | operating | startup | shutdown | visible emission | opacity | particulate matter | prohibition | equipment | notification | reporting | fossil fuel | steam generator | boiler | standard

62-210.700. Excess Emissions.

(1) Excess emissions resulting from startup, shutdown or malfunction of any emissions unit shall be permitted providing (1) best operational practices to minimize emissions are adhered to and (2) the duration of excess emissions shall be minimized but in no case exceed two hours in any 24 hour period unless specifically authorized by the Department for longer duration.

(2) Excess emissions from existing fossil fuel steam generators resulting from startup or shutdown shall be permitted provided that best operational practices to minimize emissions are adhered to and the duration of excess emissions shall be minimized.

(3) Excess emissions from existing fossil fuel steam generators resulting from boiler cleaning (soot blowing) and load change shall be permitted provided the duration of such excess emissions shall not exceed 3 hours in any 24-hour period and visible emissions shall not exceed Number 3 of the Ringelmann Chart (60 percent opacity), and providing (1) best operational practices to minimize emissions are adhered to and (2) the duration of excess emissions shall be minimized. A load change occurs when the operational capacity of a unit is in the 10 percent to 100 percent capacity range, other than startup or shutdown, which exceeds 10 percent of the unit's rated capacity and which occurs at a rate of 0.5 percent per minute or more. Visible emissions above 60 percent opacity shall be allowed for not more than 4, six (6)-minute periods, during the 3-hour period of excess emissions allowed by this subparagraph, for boiler cleaning and load changes, at units which have installed and are operating, or have committed to install or operate, continuous opacity monitors. Particulate matter emissions shall not exceed an average of 0.3 lbs. per million BTU heat input during the 3-hour period of excess emissions allowed by this subparagraph.

(4) Excess emissions which are caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure which may reasonably be prevented during startup, shutdown, or malfunction shall be prohibited.

(5) Considering operational variations in types of industrial equipment operations affected by this rule, the Department may adjust maximum and minimum factors to provide reasonable and practical regulatory controls consistent with the public interest.

(6) In case of excess emissions resulting from malfunctions, each owner or operator shall notify the

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Department or the appropriate Local Program in accordance with Rule 62-4.130, F.A.C. A full written report on the malfunctions shall be submitted in a quarterly report, if requested by the Department.

Specific Authority: 403.061, F.S.

Law Implemented: 403.021, 403.031, 403.061, 403.087 F.S.

History: Formerly 17-2.250, 17-210.700, Amended 11-23-94.

4/18/98

Title: FL / Title 62 · Chapter 62-296 · 62-296.320
Section: 62-296.320 General Pollutant Emission Limiting Standards
Date: March 13, 1996
Subject Terms: air | emission | stationary source | VOC | odor | standard | compliance | particulate matter | testing | visible emission

62-296.320. General Pollutant Emission Limiting Standards.

(1) Volatile organic compounds emissions or organic solvents emissions.

(a) No person shall store, pump, handle, process, load, unload or use in any process or installation, volatile organic compounds or organic solvents without applying known and existing vapor emission control devices or systems deemed necessary and ordered by the Department.

(2) Objectionable Odor Prohibited -- No person shall cause, suffer, allow or permit the discharge of air pollutants which cause or contribute to an objectionable odor.

(3) Industrial, Commercial, and Municipal Open Burning Prohibited. Open burning in connection with industrial, commercial, or municipal operations is prohibited, except when:

(a) Open burning is determined by the Department to be the only feasible method of operation and is authorized by an air permit issued pursuant to Chapter 62-210 or 62-213, F.A.C.; or

(b) An emergency exists which requires immediate action to protect human health and safety; or

(c) A county or municipality would use a portable air curtain incinerator to burn yard trash generated by a hurricane, tornado, fire or other disaster and the air curtain incinerator would otherwise be operated in accordance with the permitting exemption criteria of Rule 62-210.300(3), F.A.C.

(4) General Particulate Emission Limiting Standards. The following emission limiting standards shall apply to emissions units of particulate matter not subject to a particulate emission limit or opacity limit set forth in or established elsewhere in this chapter.

(a) Process Weight Table.

1. Applicability. The emission limitations set forth in Rule 62-296.320(4)(a)2., F.A.C., below, shall apply to any emissions unit which processes raw materials to produce a finished product through a chemical or physical change, except emissions units which:

a. Burn fuel to produce heat or power by indirect heating where the products of combustion do not come in contact with the process materials.

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b. Burn refuse.

c. Salvage materials by burning.

2. Particulate Matter Emissions Standard -- No person shall cause, let, permit, suffer or allow the emission of particulate matter through a stack or vent, from any emissions unit subject to this rule in total quantities in excess of the amount shown in Table 296.320-1. Interpolation of the data in Table 296.320-1 for the process weight rates up to 30 tons per hour shall be accomplished by use of the equation: $E = 3.59P[0.62]$, where P is less than or equal to 30 tons per hour. Interpolation and extrapolation of the data for process weight rates in excess of 30 tons per hour shall be accomplished by use of the equation: $E = 17.31P[0.16]$, where P is greater than 30 tons per hour. In both equations: E = emissions in pounds per hour and P = process weight in tons per hour.

Table 296.320-1. Process Weight Table.

Process Rate (Tons Per Hour)	Emission Rate (Pounds Per Hour)
.025	0.36
.050	0.56
.250	1.52
.50	2.34
2.50	6.34
5	9.74
10	14.97
30	29.57
40	31.23
60	33.33
80	34.90
100	36.17
200	40.41
500	46.79

3. Particulate Matter Emissions Test Method and procedures. All particulate matter emissions tests performed pursuant to the requirements of this rule shall comply with the following provisions.

a. Emissions units incorporating a scrubber for control of particulate matter shall use the following test methods.

(i) Citrus Plants. The test method for particulate emissions shall be EPA Method 5, incorporated and adopted by reference in Chapter 62-297, F.A.C. An acetone wash shall be used. The minimum sample volume shall be 32 dry standard cubic feet.

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(ii) All Others. The test method for particulate emissions shall be EPA Method 5, incorporated and adopted by reference in Chapter 62-297, F.A.C. An acetone wash shall be used.

b. Emissions units incorporating dry controls for control of particulate matter shall use the following test methods.

(i) Phosphate Processing. The test method for particulate emissions shall be EPA Method 5, incorporated and adopted by reference in Chapter 62-297, F.A.C. An acetone wash shall be used. The minimum sample volume shall be 30 dry standard cubic feet.

(ii) All Others. The test method for particulate emissions shall be EPA Method 17, with an acetone wash and an average stack temperature below 275 degrees Fahrenheit, or EPA Method 5 with an acetone wash. These test methods are incorporated and adopted by reference in Chapter 62-297, F.A.C.

c. Test procedures shall meet all applicable requirements of Chapter 62-297, F.A.C.

(b) General Visible Emissions Standard.

1. No person shall cause, let, permit, suffer or allow to be discharged into the atmosphere the emissions of air pollutants from any activity, the density of which is equal to or greater than that designated as Number 1 on the Ringelmann Chart (20 percent opacity).

2. Notwithstanding Rule 62-296.320(4)(b)1., F.A.C., above, the owner or operator of an emissions unit subject to the general visible emission standard may request the Department to establish a higher visible emissions standard for that emissions unit. The owner or operator may request that a visible emissions standard be established at that level at which the emissions unit will be able, as indicated by compliance tests, to meet the opacity standard at all times during which the emissions unit is meeting the applicable particulate matter standard. The Department shall establish such a standard, through the permitting process, if it finds that:

a. The emissions unit was in compliance with the applicable particulate emission standard while a compliance test was being conducted but failed to comply with the general visible emissions standard during the test;

b. The emissions unit and associated air pollution control equipment were operated and maintained in a manner to minimize the opacity emissions during the compliance test; and

c. The emissions unit and associated air pollution control equipment were incapable of being adjusted or operated in such a manner as to meet the opacity standard.

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3. If the presence of uncombined water is the only reason for failure to meet visible emission standards given in this rule, such failure shall not be a violation of this rule.

4. All visible emissions tests performed pursuant to the requirements of this rule shall comply with the following provisions.

a. The test method for visible emissions shall be EPA Method 9, incorporated and adopted by reference in Chapter 62-297, F.A.C.

b. Test procedures shall meet all applicable requirements of Chapter 62-297, F.A.C.

(c) Unconfined Emissions of Particulate Matter.

1. No person shall cause, let, permit, suffer or allow the emissions of unconfined particulate matter from any activity, including vehicular movement; transportation of materials; construction, alteration, demolition or wrecking; or industrially related activities such as loading, unloading, storing or handling; without taking reasonable precautions to prevent such emissions.

2. Any permit issued to a facility with emissions of unconfined particulate matter shall specify the reasonable precautions to be taken by that facility to control the emissions of unconfined particulate matter.

3. Reasonable precautions include the following:

a. Paving and maintenance of roads, parking areas and yards.

b. Application of water or chemicals to control emissions from such activities as demolition of buildings, grading roads, construction, and land clearing.

c. Application of asphalt, water, oil, chemicals or other dust suppressants to unpaved roads, yards, open stock piles and similar activities.

d. Removal of particulate matter from roads and other paved areas under the control of the owner or operator of the facility to prevent reentrainment, and from buildings or work areas to prevent particulate from becoming airborne.

e. Landscaping or planting of vegetation.

f. Use of hoods, fans, filters, and similar equipment to contain, capture and/or vent particulate matter.

g. Confining abrasive blasting where possible.

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h. Enclosure or covering of conveyor systems.

4. In determining what constitutes reasonable precautions for a particular facility, the Department shall consider the cost of the control technique or work practice, the environmental impacts of the technique or practice, and the degree of reduction of emissions expected from a particular technique or practice.

Specific Authority: 403.061, F.S.

Law Implemented: 403.021, 403.031, 403.061, 403.087, F.S.

History: Formerly 17-2.620, 17-296.320, Amended 1-1-96, 3-13-96.

4/18/98

Title: FL / Title 62 · Chapter 62-297 · 62-297.620
Section: 62-297.620 Exceptions and Approval of Alternate Procedures and Requirements
Date: November 23, 1994
Subject Terms: air | emission | stationary source | monitoring | exemption | alternative emission standard | particulate matter | visible emission | administrative

62-297.620. Exceptions and Approval of Alternate Procedures and Requirements.

- (1) The owner or operator of any emissions unit subject to the provisions of this chapter may request in writing a determination by the Secretary or his/her designee that any requirement of this chapter (except for any continuous monitoring requirements) relating to emissions test procedures, methodology, equipment, or test facilities shall not apply to such emissions unit, and shall request approval of an alternate procedure or requirements.
- (2) The request shall set forth the following information, at a minimum:
 - (a) Specific emissions unit and permit number, if any, for which exception is requested.
 - (b) The specific provision(s) of this chapter from which an exception is sought.
 - (c) The basis for the exception, including but not limited to any hardship which would result from compliance with the provisions of this chapter.
 - (d) The alternate procedure(s) or requirement(s) for which approval is sought and a demonstration that such alternate procedure(s) or requirement(s) shall be adequate to demonstrate compliance with applicable emission limiting standards contained in the rules of the Department or any permit issued pursuant to those rules.
- (3) The Secretary or his/her designee shall specify by order each alternate procedure or requirement approved for an individual emissions unit source in accordance with this section or shall issue an order denying the request for such approval. The Department's order shall be final agency action, reviewable in accordance with Section 120.57, Florida Statutes.
- (4) In the case of an emissions unit which has the potential to emit less than 100 tons per year of particulate matter and is equipped with a baghouse, the Secretary or the appropriate Director of District Management may waive any particulate matter compliance test requirements for such emissions unit specified in any otherwise applicable rule, and specify an alternative standard of 5% opacity. The waiver of compliance test requirements for a particulate emissions unit equipped with a baghouse, and the substitution of the visible emissions standard, shall be specified in the permit issued

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to the emissions unit. If the Department has reason to believe that the particulate weight emission standard applicable to such an emissions unit is not being met, it shall require that compliance be demonstrated by the test method specified in the applicable rule.

Specific Authority: 403.061, F.S.

Law Implemented: 403.021, 403.031, 403.061, 403.087, F.S.

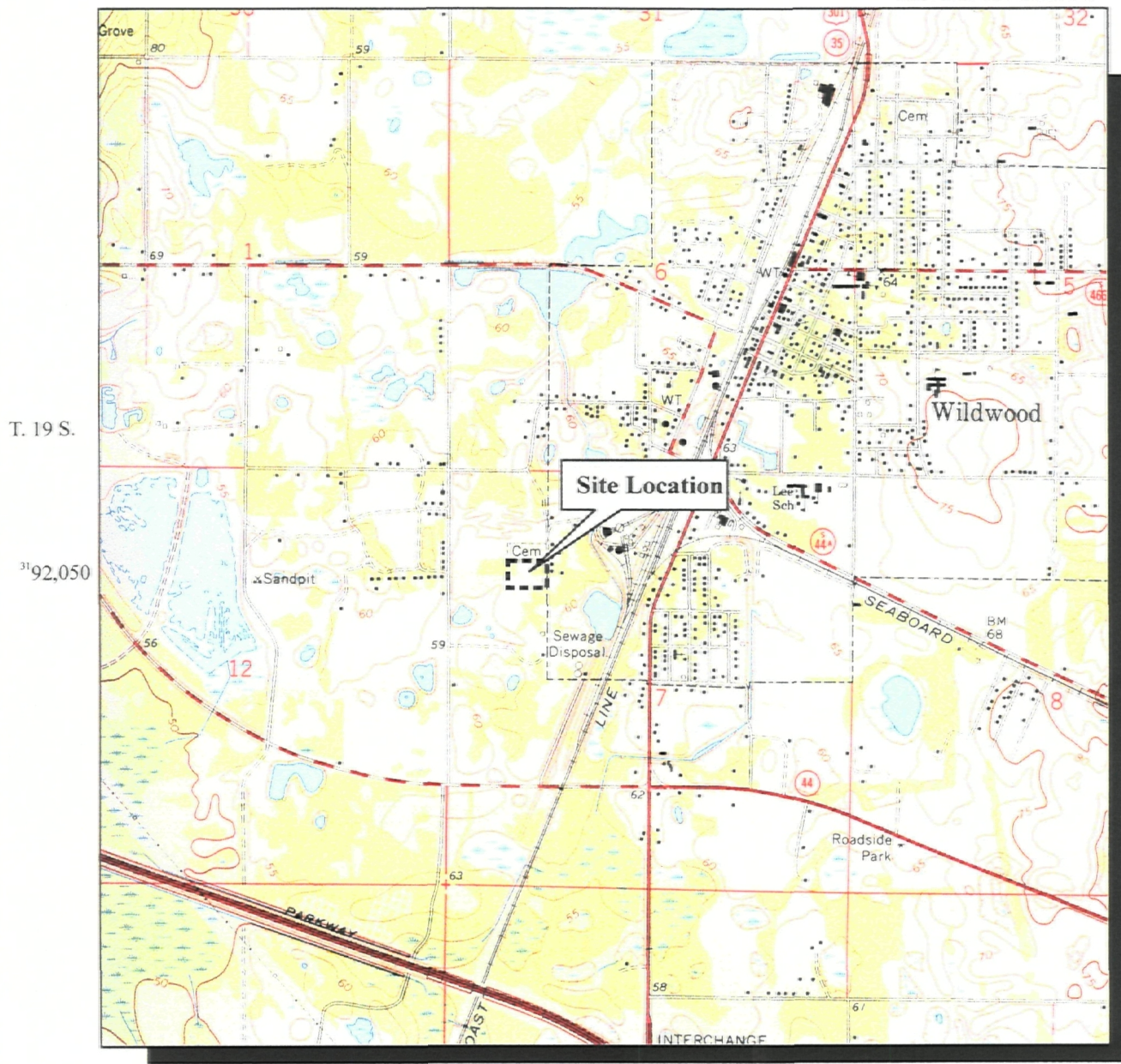
History: Formerly 17-2.700(3), Amended 6-11-93, Formerly 17-297.620, Amended 11-23-94.

Appendix C

*Area Map Showing Facility
Location*

Figure 1
 Site Location Map
 Global Tire Recycling, Inc.
 Wildwood, Sumter County, Florida

OXFORD & WILDWOOD QUADRANGLES
 FLORIDA-SUMTER CO.
 7.5 MINUTE SERIES (TOPOGRAPHIC)
 PHOTOREVISED 1966 & 1967



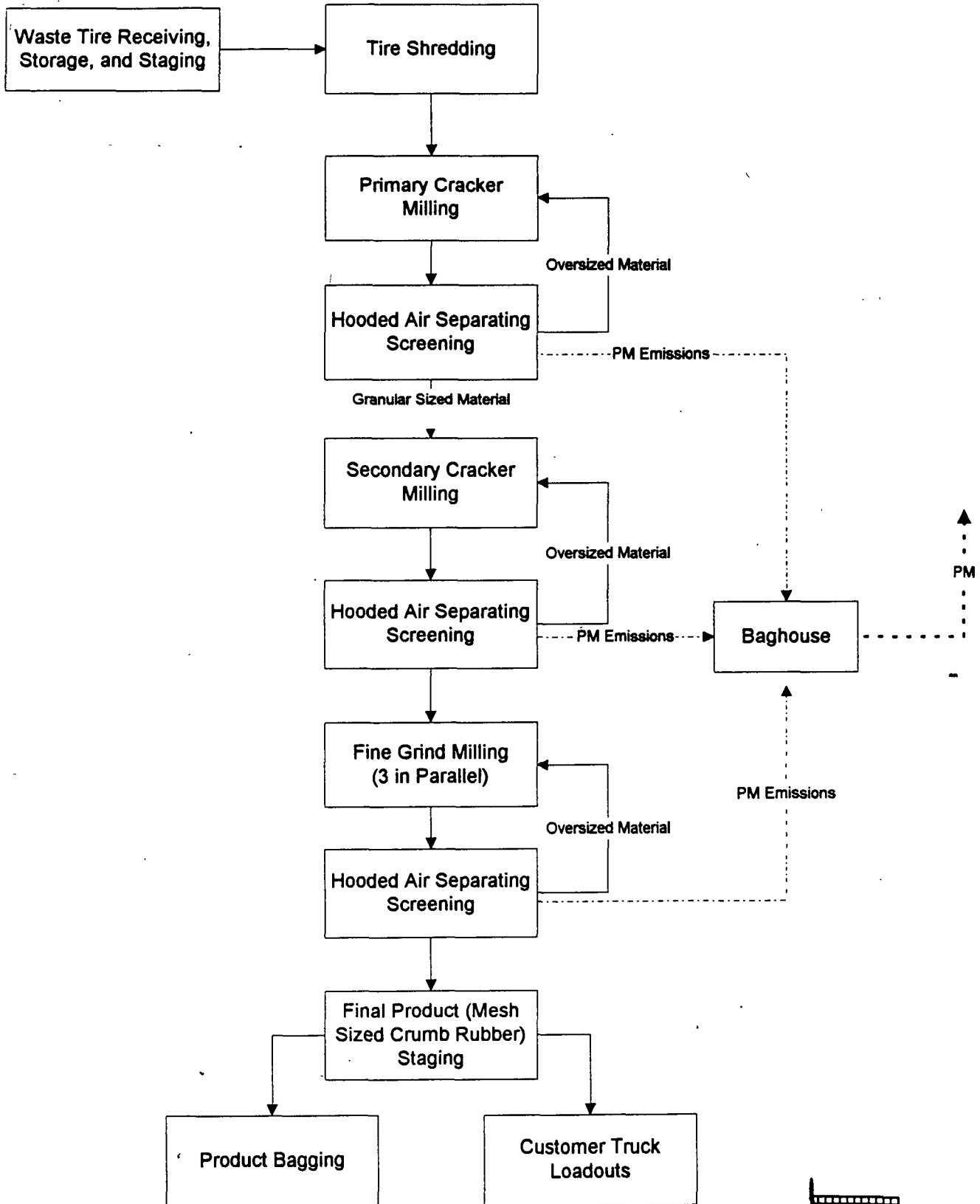
Appendix D

Facility Plot Plan

Appendix E

Process Flow Diagram

**Schematic Process Flow Diagram
Global Tire Recycling of Sumter County, Inc.
Wildwood, Florida**



Appendix F

*Description of Control Equipment
(Baghouse)*

EQUIPMENT INFORMATION

FOR

GLOBAL TIRE

Bag House

(B-1)

EQUIPMENT INFORMATION

Name of Item: Bag House (B-1)

- 1) **Quantity:** One
Model: 144WMCF338 welded MCF filter
H.P.: 5 HP

- 2) **Manufacturer:** MAC Environmental
Address: 623 McWay Drive West
City/State/Zip: High Point, NC 27263

Contact Person: Larry Walker **Telephone:** 817-558-4146

- 3) **Cost: FOB Plant:** \$135,250.00 **Freight:**

- 4) **Net Weight:** 29,300 lbs. **Height:** **Width:** 14' **Depth:** 14'

- 5) **Capacity:** 39,000 ACFM at 20" +/- SP

- 6) **Dealer:** MAC/Saturn
Address: 201 East Shady Grove Road
City/State/Zip: Grand Prairie, TX 75050

Contact Person: John Crowley **Telephone:** 972-790-7800

- 7) **Order Date for** **Delivery:**

- 8) **Pay to:** MAC/Saturn
Address: See above
City/State/Zip:

- 9) **Recommended Spare Parts and Prices List:** See Attachment 1

- 10) **Maintenance Schedule/Downtime Associated with Scheduled Maintenance:** See Attachment 2

- 11) **Referrals List:** See Attachment 3

- 12) **Brochure/Company Profile:** See Attachment 4

- 13) **Blueprint/Drawing:** See Attachment 5

- 14) **Miscellaneous:** Price includes MAC model FS 24x24 heavy duty fabricated rotary airlock and Airtech model 445-85 class 4 fan.

SPARE PARTS

FOR

Equipment: Bag House

Manufactured by: MAC Environmental

RE: MAC Job #: 98-455*7G

Listed below is a recommended stocking level of spare parts for our equipment listed below. I need to stress that the parts and prices listed are **ESTIMATES ONLY**. This quote is being done as a customer courtesy for MAC Saturn, so that you may comply with your regulatory agencies. At the time of this quote job 98-455*7G has **NOT BEEN ENGINEERED**. All parts, prices & quantities are subject to change. A revised quote will be sent at a later date.

Item 1: 144MCF338 filter

338	Bags	\$10.70 each
338	Cages	\$19.35 each
1	Gear reducer	\$1418.00
1	SF cplg, 1 1/4"	\$29.00
1	SF cplg., 1 3/8"	\$29.00
1	SF cplg. Sleeve	\$30.00
1	Btm. Bearing	\$146.00
1	Top Bearing	\$69.00
1	Inlet tee assy.	\$270.00
1	Inlet tee shaft	\$94.00
1	Main diaph.	\$339.00
1	Diaph. Spring	\$49.00
1	Valve head assy.	\$315.00
1	Index sens. Sprkt.	\$84.00
1	Sec. Diaph. Kit	\$144.00
1	Alt-valve kit	\$65.00

Item 2: MCF pump kit

1	Blower (bare)	\$989.00
1	Intake filter elem.	\$65.00
1	Pressure gauge	\$65.00
1	Press. Relief vlv.	\$235.00
1	Press. Switch	\$170.00

Item 3: FS 24x24 airlock

2	Bearings	\$102.50
6	Blade tips	\$179.00

Most items are stock in our Kansas City Missouri warehouse. Lead times may be up to 4 weeks on some items if they need to be manufactured. All prices are FOB ship[ping] point and do not include shipping, tax, insurance or any duties. Terms are NET 30 from date of invoice (shipment).

MAINTENANCE ITEMS

For MCF Filter: (See Maintenance pages 1 - 12 att'd)

<u>Description</u>	<u>Frequency</u>	<u>Estimated Downtime</u>
1) Check filter bags for excessive wear.	3 mos	1 hr
2) Check for evidence of moisture or dust buildup inside the filter.	6 mos	1 hr
3) Check oil in all gear motors.	6 mos	1 hr
4) Check belt tension on all V-belt drives.	6 mos	30 min.
5) Lubricate pump.	6 mos	15 min
6) Lubricate pump bearings.	9 weeks	15 min
7) Lubricate gear boxes (internal).	6 mos	1 hr
8) Bearings	1 yr	2-3 hrs
9) Adjust Index Sensor Timing	As needed, depending on filter pressure differential(2 hr req'd)	
10) Replace large diaphragm	As needed, typically every 6mo to 2 yrs (15 min req'd)	
11) Replace all filter bags	As needed, depending on operating conditions and press. differential (1-3 days req'd)	

For FS Airlock:

1) Grease flange bearings	1000 hrs	10 min
2) Inspect wiper blades	Whenever baghouse is down, or at least every 60 days (1 hr req'd)	
3) Replace wiper blades	As needed, depending on wear (2-3 hrs req'd)	
4) Check tension of drive chain	200 hrs	15 min
5) Inspect sprockets, chain, base structure, drive guard, brackets	30 days	30 min

IMPORTANT NOTES:

- A) All figures listed above are based on 8 hrs per day of operation, at ambient operating temperatures. Longer operation or higher temperatures will mean more frequent maintenance. Adhere to lubrication schedules in the final O and M manuals.
- B) The items and figures listed are estimates only. Actual time required will be dependent upon number and skill of personnel involved, working conditions, proper tool availability, amount of time for lockout / tag-out procedures and confined space entry procedures.
- C) The maintenance items listed above constitute a preliminary list, and it is not to be considered complete. Refer to the actual Operation and Maintenance Manuals that will be shipped with the final equipment. See Weekly list, pg 6-1, no downtime req'd.
- D) Fan information is not available at this time, as size of fan required is still unknown.

REFERRALS

FOR

Equipment: Bag House

Manufactured by: MAC Environmental

Enviro Tire
Lillington, NC
Phone: 910-893-4581
Contact: Simon Herman

Edron Phase II Furniture
Medley, FL
Phone: 305-863-0300
Contact: Brian Blair

O'Hair Shutters
Lubbock, TX
Phone: 806-765-5791
Contact: George Tucker



MAC Environmental.

DATA SHEET

800-821-2476

Las Vegas City • Houston • Las Vegas • High Point • Salt Lake City

You're in Good Company with MAC

Architects & Engineers

- Bechtel Construction, Inc.
- Bernard & Burke
- Black & Veatch
- Brown & Root
- John Brown
- Davy Dravo
- Fluor Daniel
- Ford Bacon Davis
- M.K. Furgeson
- M.W. Kellogg
- Lockwood Greene
- B.L. Montague Co., Inc.
- River Consulting
- Roberts & Schaefer Co.
- Rust International
- Sargent & Lundy
- Stone & Webster
- Sunfield Engineering

Chemical & Plastics

- 3M
- Amoco
- BFGoodrich
- Dow Chemical U.S.A.
- E.I. Dupont de Nemours & Co Inc.
- Hercules
- Himont USA
- Hoechst Celanese
- Monsanto Company
- Occidental Chemical Co.
- Pfizer, Inc.
- Quantum Chemical Corp.
- Tennessee Eastman Co.
- Union Carbide
- Upjohn Co.
- Vekaplast USA Inc.

Feed & Grain

- ADM
- Ag Processing Inc
- Bunge Corporation
- Cargill, Inc.
- Central Soya
- Colgate-Palmolive Co.
- ConAgra, Inc.
- Gold Kist Inc.
- The Iams Company
- Kal Kan
- Perdue Farms Inc.
- Purina Mills, Inc.
- A.E. Staley
- Tyson Foods, Inc.

Food

- Anheuser-Busch Co.
- Central California Almond Growers Assn.
- ConAgra, Inc.
- DCA Food Industries, Inc.
- Dawn Food Products, Inc.
- General Foods Corp.
- General Mills Corp.
- Golden Grain Co.
- Hershey Foods Corp.
- Kellogg's
- M & M Mars
- Malt-O-Meal Co.
- Morton International, Inc.
- Nabisco Foods Company
- National Starch & Chemical Corp.
- Nestle Food Corporation
- The Pillsbury Company
- Procter & Gamble Co.
- The Quaker Oats Co.
- Ralston Purina Company

Mining & Utilities

- American Electric Power
- Kennecott Copper
- Newmont Gold
- Northern States Power Co.
- Thunder Basin Coal
- U.S. Gypsum
- Wisconsin Power & Light Co.

Woodworking/Forest Products

- Andersen Windows
- Drexel Heritage Furnishings, Inc.
- Georgia-Pacific
- Henredon Furniture Industries, Inc.
- Karel Co.
- Leggett & Platt, Inc.
- Louisiana-Pacific Corp.
- Masonite Corporation
- McMillan-Blodell
- Pella/Rolscreen Co.
- Quaker Furniture
- Steelcase, Inc.
- Thomasville Furniture Industries, Inc.
- Westvaco Corporation
- Weyerhaeuser Company
- Woodcraft, Inc.

Other

- Abington, Inc.
- American Stone Mix, Inc.
- Bauermeister, Inc.
- Blue Circle Cement
- Engelhard Kaolin Corp.
- W. R. Grace
- The Heil Co.
- Manville Corporation
- Mid-West Conveyor Co.
- Tamko



**Maximum Bag
Cleaning with
Minimum Energy
Consumption
and Maintenance**

INDUSTRIAL DUST FILTRATION FOR TOUGH INDUSTRIAL APPLICATIONS



**Medium-Pressure
Controlled-Fire
Dust Filters
combine
superior cleaning
performance
with major
energy savings.**

**Unequaled efficiency
Engineered for
demanding applications**

- Grain milling
- Composite board manufacturing
- Process dust collection
- Chemical processing
- Food processing
- Mining
- Metals processing
- General woodworking
- Coal transfer

Easy maintenance

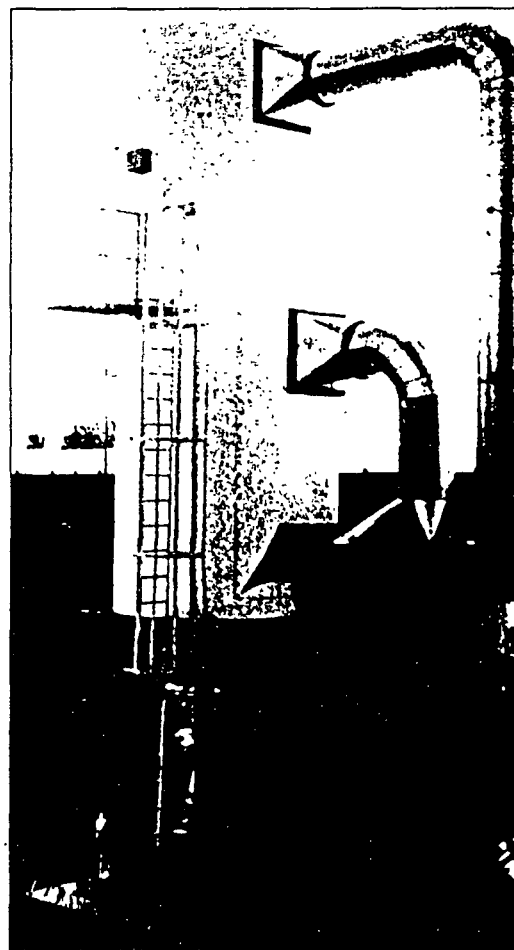
No plant air required

The MAC Medium-Pressure Controlled-Fire Dust Filter (MCF) is the most efficient and versatile bag filter made. It's built to handle heavy dust loads and comes in sizes and configurations to fit most industrial air quality applications - from milling to mining. Capacities range to over 250,000 CFM. Over a dozen filter media options are available, designed for operating temperatures up to 500°F.

You cannot buy a self-cleaning dust collector that uses less energy. MCF's patented Controlled-Fire cleaning system runs on medium-pressure air (only 7-9 psig) and requires less horsepower than any other bag filter in the industry. You save on operating costs and don't have to tap into plant air. Yet the MCF offers you high collecting efficiency and unmatched bag cleaning in all low-maintenance models - with over 23,000 square feet in total filter area.

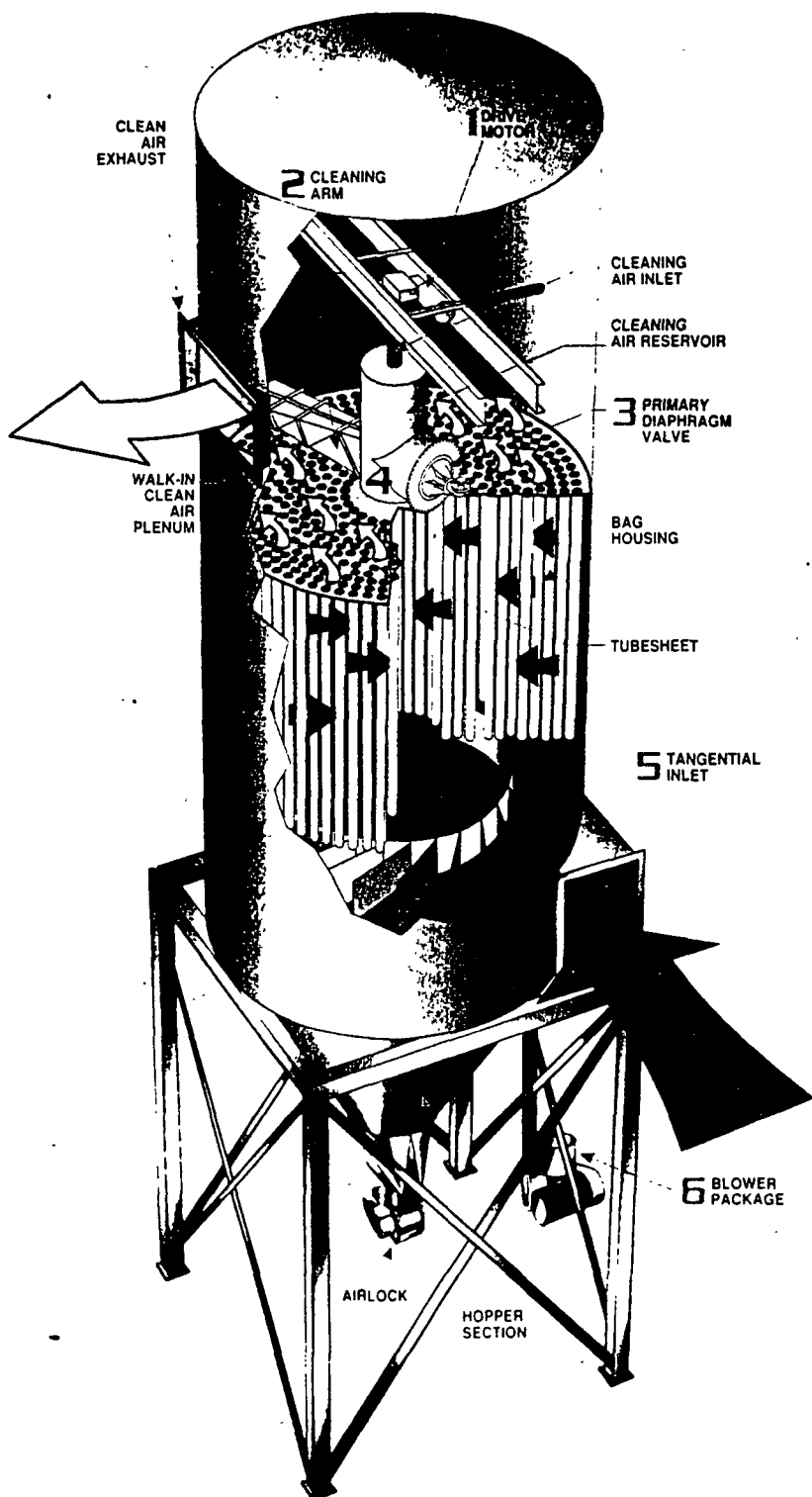
Let MAC engineers solve your dust collection problems. We can do an on-site analysis and even send in a complete design-build team for turnkey installation.

Metal grinding and polishing filtration at a metal components manufacturer showing high-entry inlet.

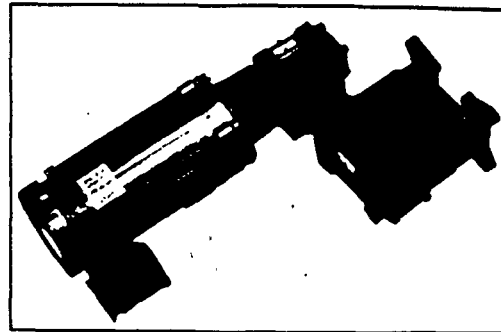


The MCF

it is



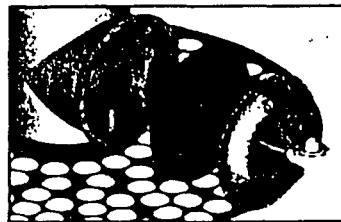
it works



1 Main Drive uses rugged electric motor
The Main Drive Assembly represents the only electronic component used inside the filter housing. Except for this motor and the external air blower package, the MCF is pneumatically operated for added safety and reliability.

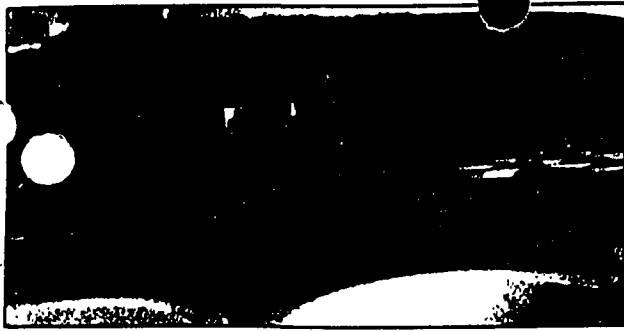


2 Cleaning Arm directs air flow
When the cleaning arm and bag segments are correctly aligned, air nozzles fire directly into the bags. So there's no wasted air. No bleed. None of the wasted energy you pay for on every cycle with conventional random-fire and reverse-air systems. MAC invented and patented this Never-Miss™ Controlled-Fire System to maximize cleaning efficiency.

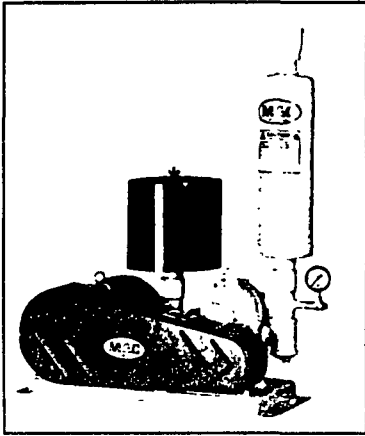


3 Diaphragm Valving Assemblies minimize recovery time

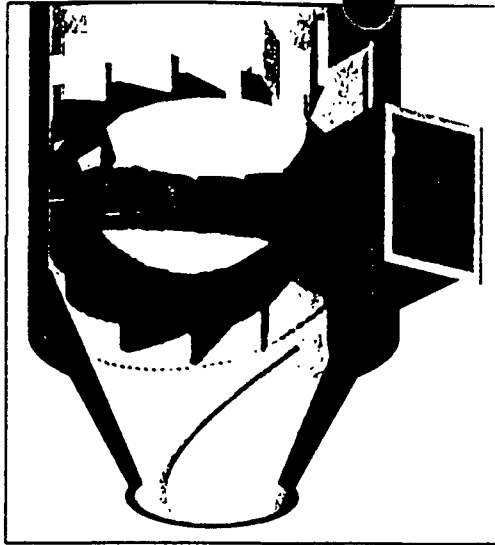
Primary and Secondary Valves are located close to the air reservoir and cleaning arm to maintain cleaning pressure. These two valves do the work of ten to thirty diaphragm valves and solenoids on conventional pulse-jet filters.



Index Assembly ensures reliable cleaning
 The MCF Position-Sensing Index Assembly and Cleaning Control are ruggedly built to keep nozzles properly positioned and air pulses correctly timed for optimum media cleaning. The timing sprocket is laser cut and self-aligning. The Sensing Assembly and Control are direct-drive, mechanically linked components. They have no chains or belts to break, wear out, or go out of adjustment — no electronic circuits to fail. We've designed them to operate reliably for years in abrasive and corrosive environments — with virtually no maintenance.



Medium-Pressure Blower Package saves energy
 The positive displacement pump uses a liquid-filled pressure gauge for precise control and powers cleaning with 7-9 psig air for economical operation and longer bag life. Medium-pressure air virtually eliminates cold weather freeze-ups that cause higher-pressure pulse-jets and other filters to fail.



Tangential inlet controls heavy dust loads
 Vortex Breakers built into the MCF housing even out the distribution of particulate-laden air coming from the tangential inlet for improved collection. Competing collectors with involute inlets use up to 3 times more energy. The Vortex Breakers also create an area at the center of the housing where the air has no upward velocity and where dust particles cleaned from the bags can flow downward. A Spiral Ridge Plate traps centrifuged particles and drives them into the hopper.

Optional High-Entry Inlet controls light dusts
 High-Entry Inlet minimizes turbulence and upflow problems associated with light dusts — like starch and fine silicates.



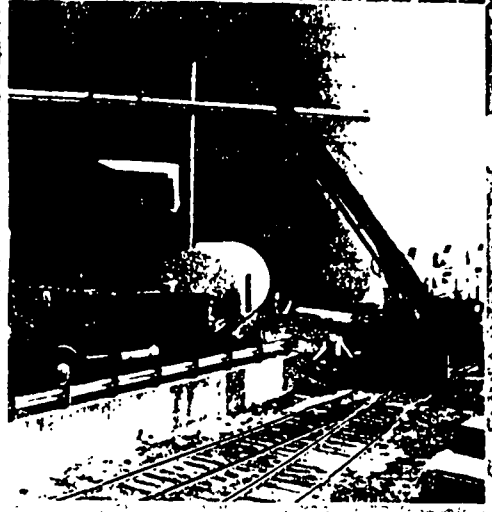
MCF Specifications

- Rugged all-steel construction 10-gauge or heavier
- Factory assembled ladder, safety cage and service door
- Well-ventilated equipment with lifting lugs
- Castrol and hinged service door measures 60" x 32" for easy access
- Direct-drive rotating surge tank, diaphragm valves, and distribution arm powered by an explosion-proof (NEMA 9) motor
- Pneumatically controlled firing mechanism discharges air directly over filter bags
- Topside cage and snap-band bag removal **No tools required**
- 90-degree hopper with 40" diameter flange
- Self-contained positive displacement pump package supplies all required air
- Aluminum Explosion Vents **Standard**

MCF Options

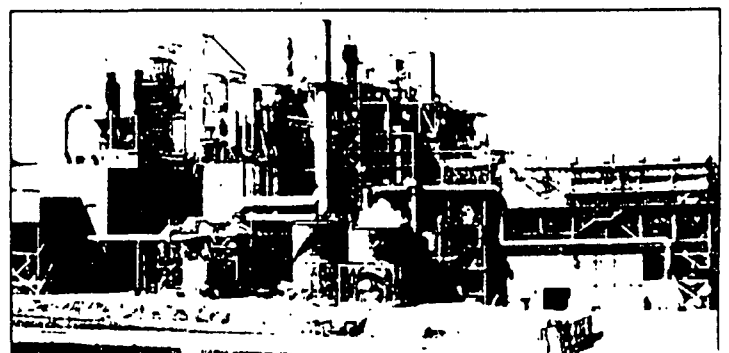
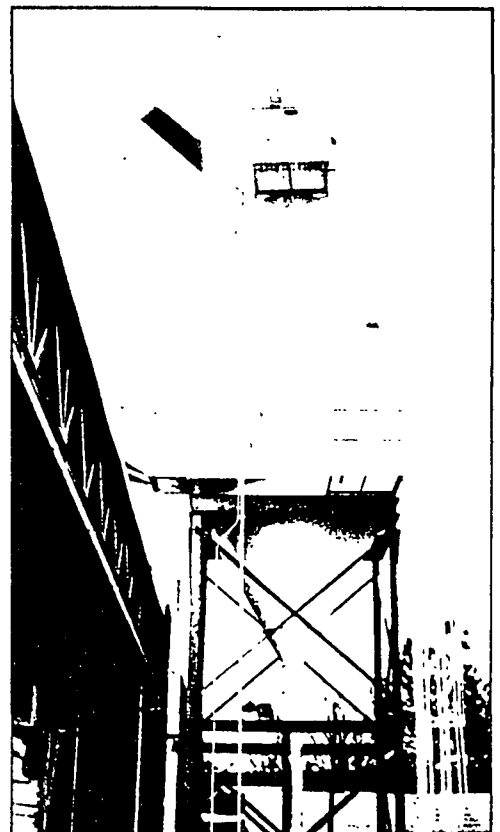
- Rotary Airlock **Select from 6 models and sizes of rotary airlocks** depending on the application and pollutants collected
- Top Bottom Discharge **This option is recommended for applications where the rotating airlock can aid in handling difficult to discharge materials.**
- Flanged and Bolted Construction **These construction options are used for installations where there may not be adequate space to erect an all-welded unit.**
- Over a Dozen Filter Media **Choose from conventional bag and cage and washable POLIPLLET™ Pleated Filters.**
- 304 or 316 stainless steel construction
- Sand-blast finish for high-temperature applications.
- Accessories **Baghouse Wizard™ Sprinkler taps, broken bag detector, level probes, hopper access ports, structural supports.**
- Explosion Rupture Panels **This option complies with NFPA68 guidelines.**

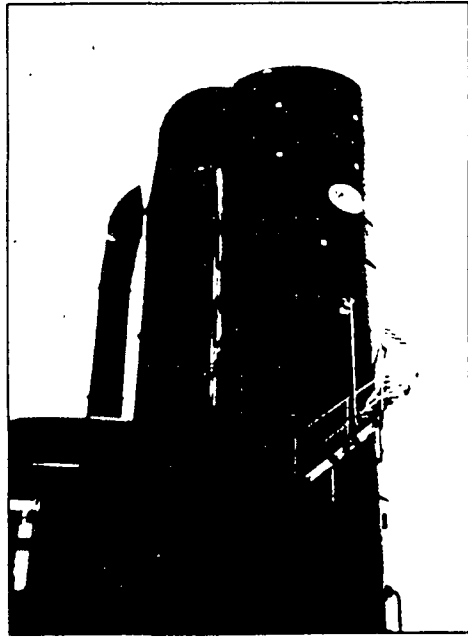
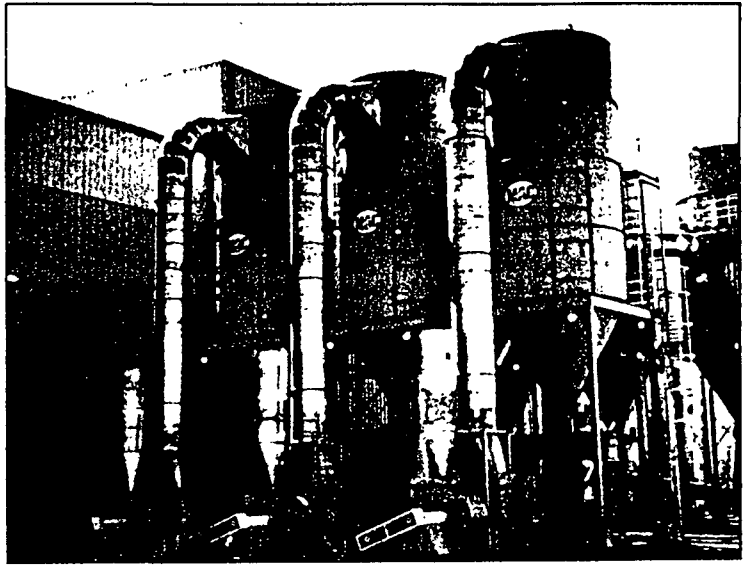
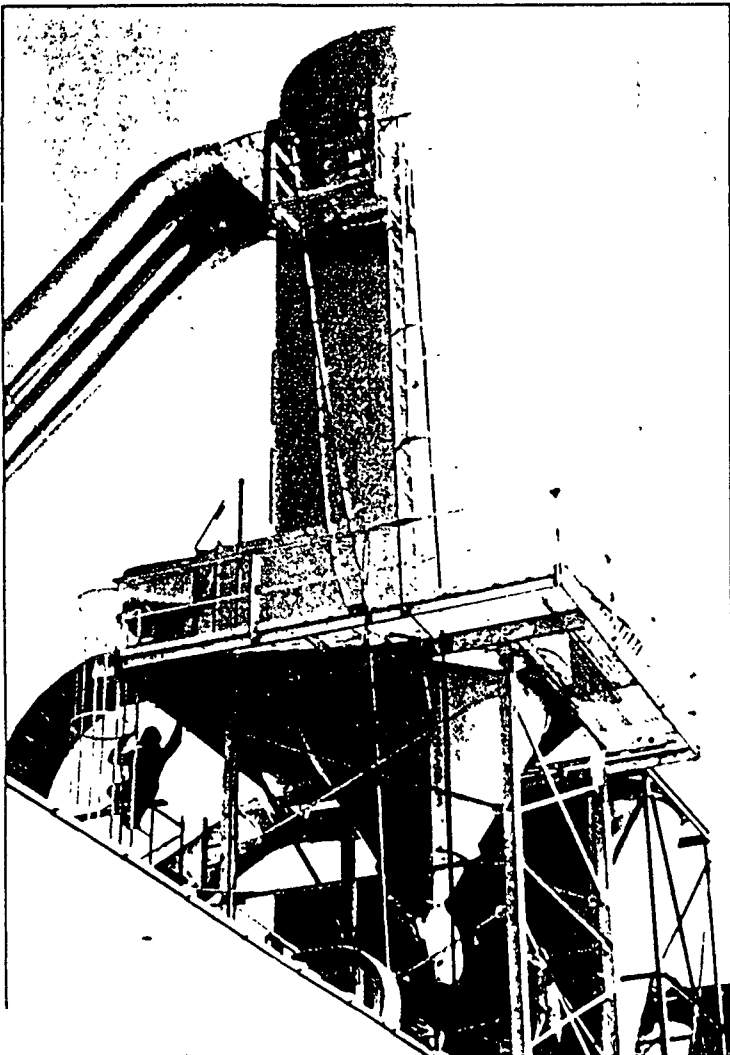
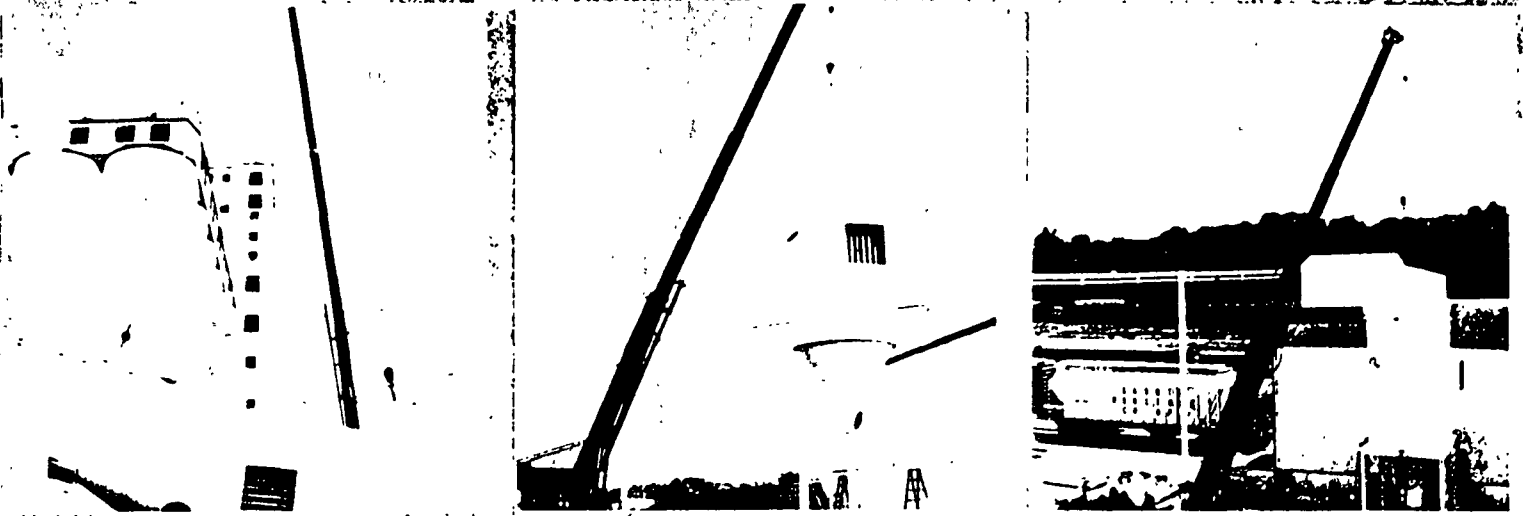
Engineered for easy installation
SECTIONAL • FLANGED • FULLY WELDED



Installation at a fertilizer plant.

Installation at a fertilizer plant, showing dust collecting and separating one stream from another.





Structure at a furniture plant in Virginia.

Fugitive coal dust collection
in a coal-fired utility company.

MAC Test Center

Get a detailed air quality analysis. Let MAC engineers find the most cost-effective solution to your dust collection problem. At our state-of-the-art Test Center, they



analyze particle characteristics and distribution to design the optimal filtration system for each application. You're invited to watch our Particle Emissions Test machine in action and see for yourself how MAC can meet your air quality goals.

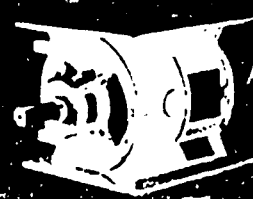


MAC Service Center

Maintain top performance. Call on our Service Center representatives when you need spare parts, filter media, or accessories.

In-stock items are shipped within 24 hours from our centrally located warehouse in Kansas City, Missouri.

Select filter media matched to your application. We stock filter bags in nine fabrics to handle a variety of particulate characteristics and to withstand operating temperatures up to 500°F. Our POLIPLERT™ line of pleated, washable polyester filter elements provides filtration superior to conventional media.



Order MAC Airlocks. We offer a complete line of

Heavy Duty, High Efficiency, No Shear, and Fabricated Airlocks - plus a matching line of MAC Airlock Accessories.

Monitor filtration.

Ask about our Baghouse Wizard™ and Dust Emission

Monitors. They automate trouble-shooting baghouse problems. Using MAC's Wizard, our process control engineers can build you a complete filtration control system.



Environmental.

PLANT LOCATIONS

SALES OFFICES

800-821-2476





MAC Environmental

Attachment 5

DATA SHEET

800-821-2476

ansas City

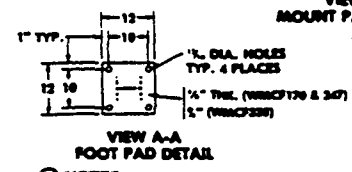
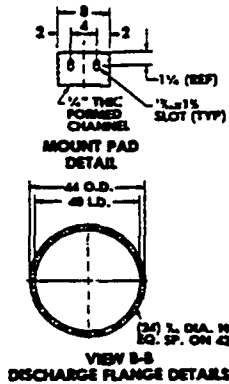
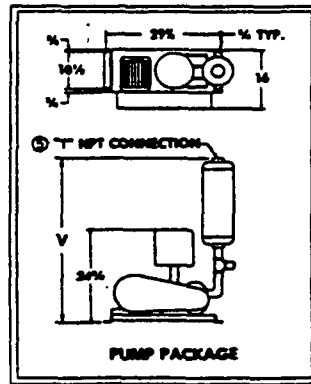
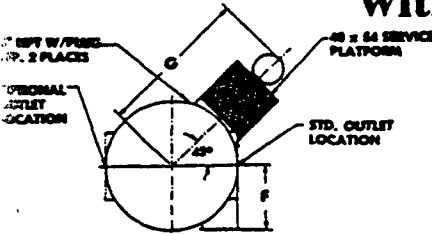
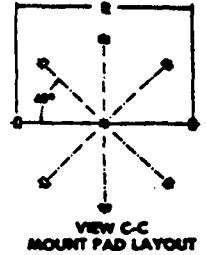
Houston

Las Vegas

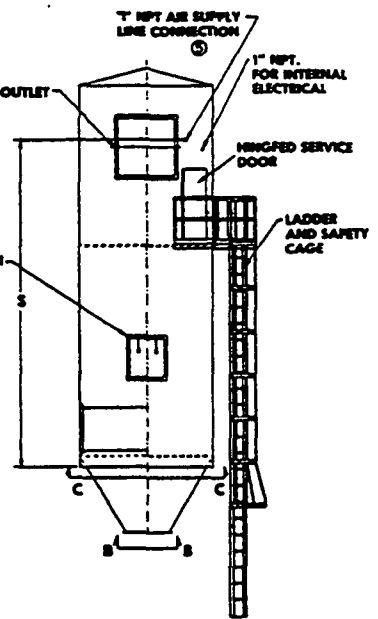
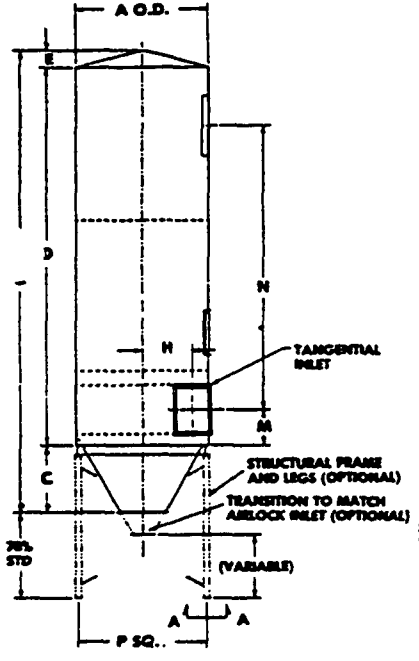
High Point

Sabett

WIDE BAG SPACING WMCF* FILTER with Low Pressure Tangential Inlet (Plain Discharge)

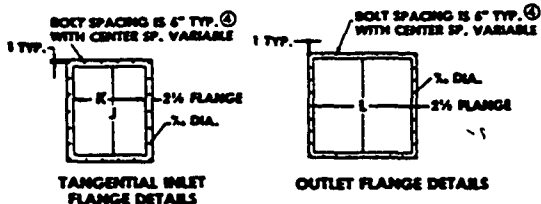


- All dimensions are in inches
- 10 gal. C.S. construction - WMCFM170 & 247
- 7 gal. C.S. construction - WMCF338
- Std. number of explosion vents provide a 30:1 volume to vent ratio
- If center space equals more than 8" there will be a bolt hole on the centerline
- Customer to provide supply line from pump pkg. outlet to connection on filter.



STANDARD SPECIFICATIONS FOR MAC WMCF PUMP PACKAGE

- Materials of Construction**
- Carbon steel horizontal base
 - Full welded exterior base assembly
- Major Components**
- Positive displacement blower
 - Horizontal blower frame assembly
 - Adjustable motor base
 - TEFC Motor 230/460/3/1800
 - Air intake filter
 - V-belt drive
 - Belt guard
 - Pressure relief valve at 10 PSI
 - Outlet silencer
 - Necessary hardware
 - Pressure gauge 0-15 PSI and shut off valve
- Paint**
- Standard cleaning and metal preparation
 - Interior and exterior primed with one coat of gray primer
 - Exterior to have one finish coat
- Color to be specified:**
- Standard color is MAC Blue
 - Alternate standard color is MAC White

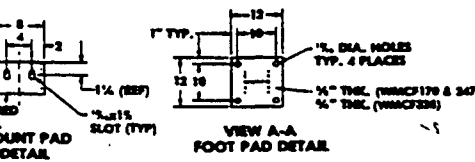
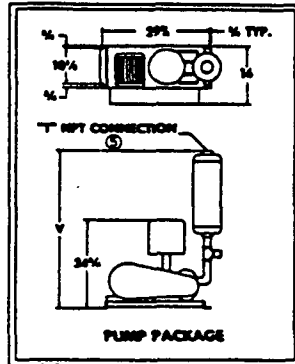
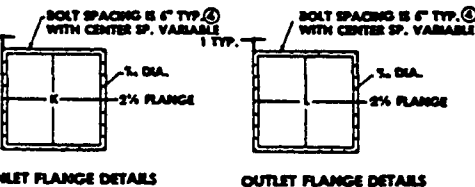
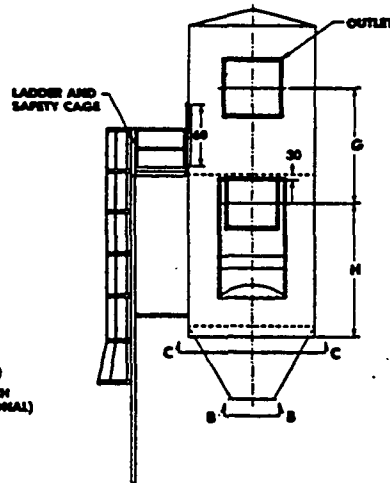
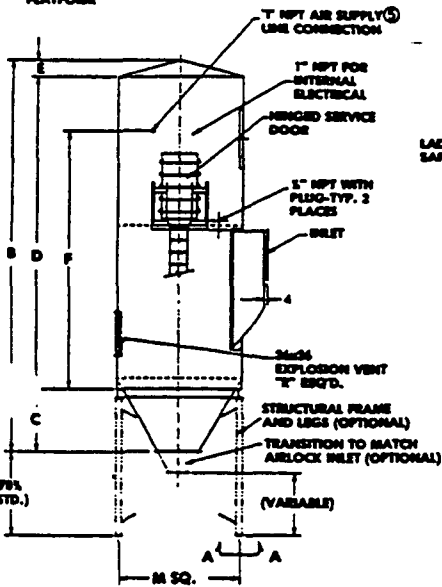
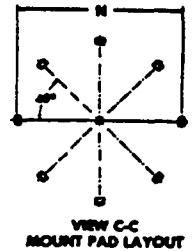
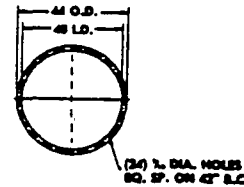
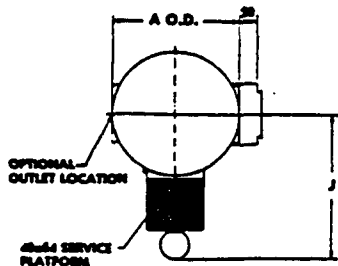


MODEL	SQ. FT. CLOTH	A	B	C	D	E	F	G	H	J	K	L	M	N	P	R	S	T	U	V	BLOWER H.P.	WT/ LBS
96WMCF170	1649	120	339 1/4	59 1/8	264 1/2	16	60	149 1/4	45	40	30	38	32	201	114 1/2	117 1/2	249 1/8	1 1/2	5	41 1/8	3	11250
120WMCF170	2057	120	291 1/4	59 3/8	316 1/2	16	60	149 1/4	43	44	34	42	34	249	114 1/2	117 1/2	277 1/8	1 1/2	5	41 1/8	3	12070
144WMCF170	2465	120	444 1/4	59 3/8	369 1/2	16	60	149 1/4	42	49	36	46	36 1/2	297 1/2	114 1/2	117 1/2	306 1/8	1 1/2	6	41 1/8	3	12995
96WMCF247	2395	144	370 1/4	80	271 1/2	19 1/2	72	161 1/4	54	47	36	45	35 1/2	201	138 1/2	141 1/2	250 1/8	2	7	40 1/2	3	14140
120WMCF247	2988	144	477 1/4	80	325 1/2	19 1/2	72	161 1/4	52	53	40	50	38 1/2	249 1/2	138 1/2	141 1/2	306 1/8	2	8	40 1/2	5	15085
144WMCF247	3581	144	477 1/4	80	378	19 1/2	72	161 1/4	50 1/2	58	43	55	41	297 1/2	138 1/2	141 1/2	335 1/8	2	9	40 1/2	5	16340
96WMCF338	3278	168	402 1/4	100 1/8	279 1/2	22 1/8	84	173 1/4	63	55	42	53	39 1/2	201	162	165 1/2	258 1/8	2 1/2	10	41 1/8	5	17910
120WMCF338	4089	168	457 1/4	100 1/8	334 1/2	22 1/8	84	173 1/4	61	62	46	59	43	249 1/2	162	165 1/2	315 1/8	2 1/2	11	41 1/8	5	19020
144WMCF338	4901	168	511 1/4	100 1/8	388 1/2	22 1/8	84	173 1/4	58 1/2	68	51	64	46	298	162	165 1/2	345 1/8	2 1/2	13	41 1/8	5	20500

*Patent No. 4,655,799

Information on this page subject to change without notice.

WIDE BAG SPACING WMCF* FILTER with High Entry Inlet (Plain Discharge)



STANDARD SPECIFICATIONS FOR MAC WMCF FILTER

Materials of Construction
Carbon steel construction, 10, 7 ga. per Mfr. Drawing
Full welded exterior, skip welded interior
One piece, all welded construction
Filter media - 16 oz. singed polyester

Major Components

Walk-in plenum
Gear drive rotating surge tank, diaphragm valve, and distribution arm, with a 1 HP explosion proof (NEMA 9) motor
Pneumatically controlled firing mechanism which activates the diaphragm valves
Service door, 60" tall x 32" wide, gasketed and hinged to left side
Bolt on high entry inlet with bag protector baffles
Standard number of explosion vents sized at 30:1 volume to vent ratio; bolt on frame assembly vents
Snap band top bag removal, 16 oz. polyester singed bags
Top removal rigid wire galvanized bag cage
60° hopper with 40" diameter flange
40" transition to match airlock inlet (optional)
Pressure differential gauge kit
Lifting lugs (4 ea.) on top plenum
Ladder, safety cage
Service platform with guardrail

Paint

Standard cleaning and metal preparation
Interior and exterior primed with one coat of gray primer
Exterior to have one finish coat

Color to be specified:

Standard color is MAC Blue
Alternate standard color is MAC White

NOTES:

- All dimensions are in inches
- 10 ga. C.S. construction - WMCF170 & 247
7 ga. C.S. construction - WMCF338
- Std. number of explosion vents provide a 35:1 volume to vent ratio
- If center space equals more than 8" there will be a bolt hole on the centerline
- Customer to provide supply line from pump pkg. outlet to connection on filter

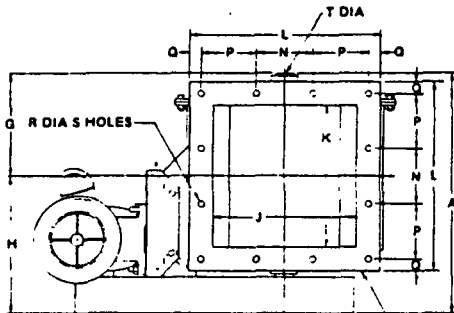
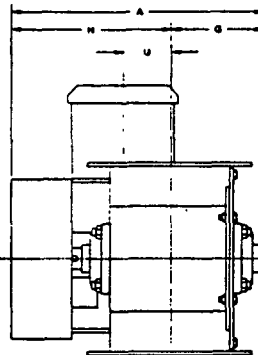
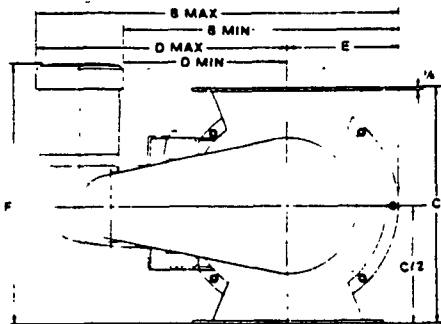
MODEL	SQ. FT. CLOTH	A	B	C	D	E	F	G	H	J	K	L	M	N	R	T	V	BLOWER H.P.	WT/LBS
96WMCF170	1649	120	301 ¹ / ₁₆	59 ⁷ / ₁₆	226	16	211 ¹ / ₁₆	89 ¹ / ₁₆	105	149 ⁹ / ₁₆	38	38	114 ³ / ₁₆	117 ¹ / ₁₆	4	1 ¹ / ₂		3	8795
120WMCF170	2057	120	349 ⁷ / ₁₆	59 ⁷ / ₁₆	274	16	235 ¹ / ₁₆	113 ¹ / ₁₆	127	149 ⁹ / ₁₆	42	42	114 ³ / ₁₆	117 ¹ / ₁₆	4	1 ¹ / ₂	41 ¹ / ₁₆	3	9515
144WMCF170	2465	120	397 ⁷ / ₁₆	59 ⁷ / ₁₆	322	16	259 ¹ / ₁₆	137 ¹ / ₁₆	149	149 ⁹ / ₁₆	46	46	114 ³ / ₁₆	117 ¹ / ₁₆	5	1 ¹ / ₂		3	10255
96WMCF247	2395	144	328 ¹ / ₁₆	80	229	19 ¹ / ₁₆	207 ⁷ / ₁₆	89 ¹ / ₁₆	104 ¹ / ₁₆	161 ³ / ₁₆	45	45	138 ³ / ₁₆	141 ¹ / ₁₆	6	2		3	11440
120WMCF247	2988	144	373 ¹ / ₁₆	80	274	19 ¹ / ₁₆	255 ⁷ / ₁₆	113 ¹ / ₁₆	123	161 ³ / ₁₆	50	50	138 ³ / ₁₆	141 ¹ / ₁₆	6	2	42 ¹ / ₁₆	5	12230
144WMCF247	3581	144	421 ¹ / ₁₆	80	322	19 ¹ / ₁₆	279 ⁷ / ₁₆	137 ¹ / ₁₆	144 ¹ / ₁₆	161 ³ / ₁₆	55	55	138 ³ / ₁₆	141 ¹ / ₁₆	7	2		5	13140
96WMCF338	3278	168	370 ⁷ / ₁₆	100 ⁷ / ₁₆	247	22 ⁷ / ₁₆	225 ⁷ / ₁₆	89 ¹ / ₁₆	118 ¹ / ₁₆	173 ³ / ₁₆	53	53	162	165 ¹ / ₁₆	7	2 ¹ / ₂		5	15285
120WMCF338	4089	168	415 ⁷ / ₁₆	100 ⁷ / ₁₆	338	22 ⁷ / ₁₆	273 ⁷ / ₁₆	113 ¹ / ₁₆	136 ¹ / ₁₆	173 ³ / ₁₆	59	59	162	165 ¹ / ₁₆	8	2 ¹ / ₂	42 ¹ / ₁₆	5	16190
144WMCF338	4901	168	461 ⁷ / ₁₆	100 ⁷ / ₁₆	338	22 ⁷ / ₁₆	295 ⁷ / ₁₆	137 ¹ / ₁₆	156	173 ³ / ₁₆	64	64	162	165 ¹ / ₁₆	10	2 ¹ / ₂		5	17160

MAG Environmental

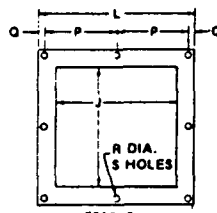
Highway 75 S. • Box 205 • Sabetha, KS 66534 • (913) 284-2191 • 800-223-2191 • Fax 913-284-3565
 10741 Ambassador Drive • Kansas City, MO 64153 • (816) 891-9300 • 800-821-2476 • Fax 816-891-8978
 623 McWay Dr. West • High Point, NC 27263 • (910) 434-3802 • 800-882-0622 • Fax 910-434-3803
 6655 W. Sahara • Las Vegas, NV 89102 • (702) 221-1910 • 800-442-0622 • Fax 702-221-8044

Effective 7-17-91
 Supersedes 3-15-90

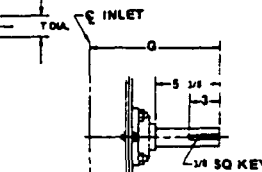
HEAVY DUTY FABRICATED AIRLOCKS with Square Inlet



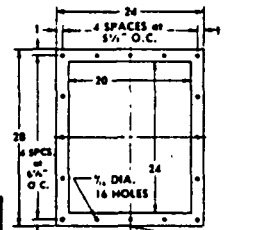
FLANGE PATTERN FOR
 FS16x12 & FS20x15



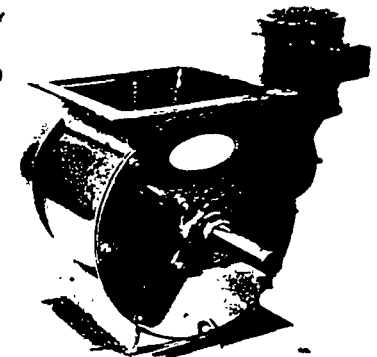
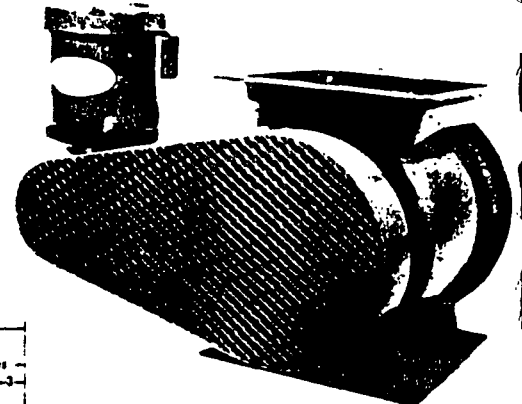
FS10x8
 FS12x10
 FLANGE PATTERN



OPTIONAL
 EXTENDED SHAFT (FS12x10)



FS24x24
 FLANGE PATTERN



	FS10x8	FS12x10	FS16x12	FS20x15	FS24x24
A	16 ³ / ₈	18 ³ / ₈ / 24	20 ³ / ₈	24 ³ / ₈	33 ³ / ₈
B MIN	16 ¹⁵ / ₁₆	19 ³ / ₈	23 ³ / ₈	27 ³ / ₁₆	31 ³ / ₈
B MAX	25 ³ / ₁₆	27 ³ / ₈	31 ³ / ₈	35 ³ / ₁₆	39 ³ / ₈
C	13	16	20	24	28
D MIN	10 ¹³ / ₁₆	11 ⁷ / ₈	13 ³ / ₈	15 ¹³ / ₁₆	18 ⁷ / ₈
D MAX	19 ¹ / ₁₆	20 ¹ / ₈	22 ¹ / ₈	24 ¹ / ₁₆	26 ³ / ₈
E	6 ¹ / ₈	7 ¹ / ₂	9 ¹ / ₂	11 ¹ / ₂	13 ¹ / ₂
F	26 ³ / ₈	27 ³ / ₈	29 ³ / ₈	31 ³ / ₈	33 ³ / ₈
G	6 ¹ / ₄	7 / 12 ³ / ₈	8 ¹ / ₄	10 ¹ / ₄	14 ³ / ₄
H	10 ³ / ₈	11 ³ / ₈	12 ³ / ₈	14 ³ / ₈	19 ³ / ₈
J	8	10	12	15	20
K	8	10	12	15	24
L	11	13	16	19	24
N	—	—	4 ³ / ₈	6	—
P	4 ³ / ₈	6	4 ¹¹ / ₁₆	5 ¹ / ₂	—
Q	3 ¹ / ₈	1 ¹ / ₂	1	1	1
R	7 ¹ / ₁₆	7 ¹ / ₁₆	7 ¹ / ₁₆	9 ¹ / ₁₆	9 ¹ / ₁₆
S	8	8	12	12	16
T	1 ¹ / ₁₆	1 ¹ / ₁₆	1 ¹ / ₁₆	1 ¹³ / ₁₆	1 ¹⁵ / ₁₆
U	3 ¹ / ₈	4 ¹ / ₈ / 3 ³ / ₈	4 ³ / ₈	6 ¹ / ₄	9 ¹ / ₂
HP	1	1 / 1 ¹ / ₂	1 ¹ / ₂	2	3
Weight (LBS)	125	160	225	325	510
Capacity CFR	.34	.62	1.32	2.60	6.00

Contact factory for more dimensional information on units larger than FS24x24.
 FS30x30 and larger airlocks are not dimensionally interchangeable with HD30x30
 and larger airlocks.

STANDARD SPECIFICATIONS FOR MAC FABRICATED AIRLOCKS MODELS FS10x8, FS12x10, FS16x12, FS20x15, FS24x24, FS30x30, FS36x36, FS36x42, FS42x42, FS48x48, FR16x12 (see back), FR20x16 (see back)

Materials of Construction

Fabricated carbon steel housing
 Carbon steel end plates
 Carbon steel, urethane sandwich rotor

Major Components

Fabricated non-machined, carbon steel housing
 Fabricated carbon steel end plates with 4-bolt flange bearings
 8-vane, carbon steel graphite filled, urethane flex tip sandwich rotor construction
 Rotation (as viewed from drive end):

Clockwise for Models FS30x30, FS36x36, FS36x42, FS42x42 & FS48x48
 Counter-clockwise for all other models

Paint

Standard cleaning and metal preparation
 Exterior primed with one coat of gray primer
 Exterior to have one finish coat

Color to be specified:

Standard color is MAC Blue
 Alternate standard color is MAC White

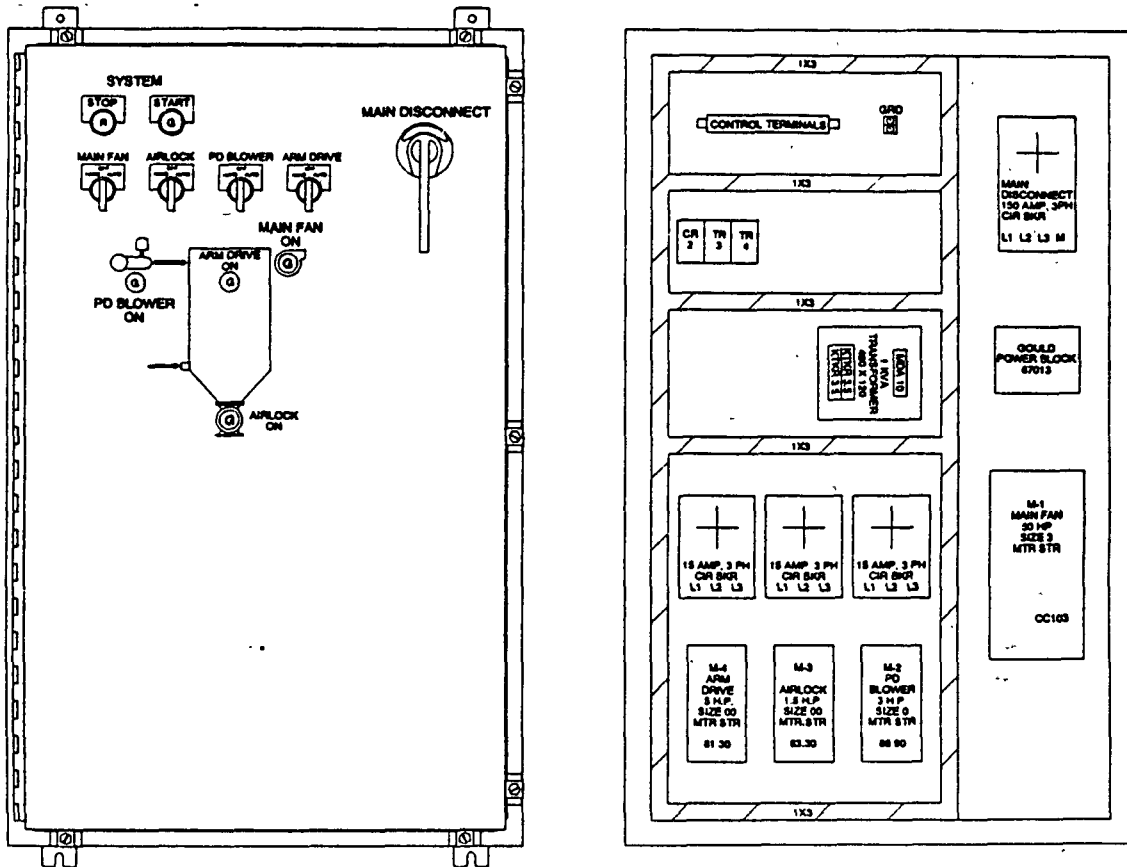
NOTE: Maximum operating temperature is 220 degrees F.

FS10x8 thru FS24x24, FR16x12 & FR20x16 have right angle drives
 FS30x30 and larger have shaft drive only

NOTES:

- All dimensions are in inches
- Gearmotors are 230/460 volt 3 phase 60 HZ TEFC standard, explosion proof optional
- 18 RPM is standard, except FS24x24 is 24 RPM
- Housing and flanges are 1/2" HRCS
- Rotor is 8 vane wiper style
- Bearings are sealed selfaligning 4 bolt flange units with single row ball bearing; lubrication is by pressure fitting through hole in outer race
- Rotation is CCW from drive end
- Optional extended shaft with slave drive only

MCF CONTROL PANELS (Typical)



The MCF Control Panel is designed to make the tasks of installation, and operation of the MCF filter simpler, faster, and more efficient. The MCF Control Panel helps reduce equipment damage and helps eliminate safety hazards by interlocking, through the controls, the motors and equipment that make up the system. These interlocks along with various time delays built into the control system allow the MCF filter to start up, shut down, and operate in a safe and efficient manner.

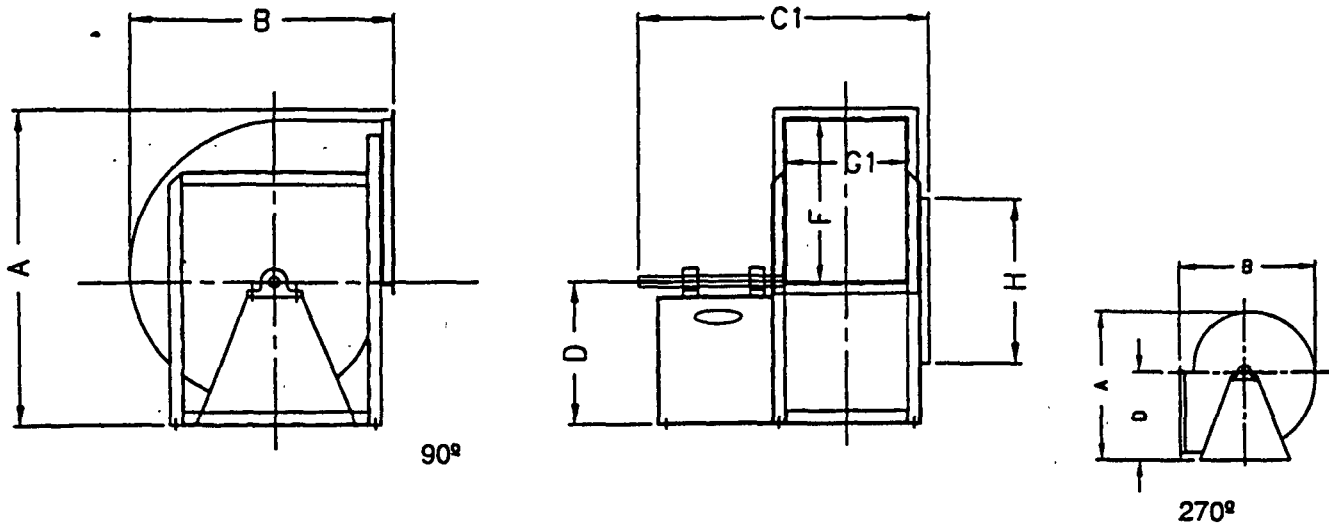
In order for the MCF filter to operate properly, without plugging up, the motors should be started in the following sequence: 1) airlock, 2) distribution arm, 3) P.D. pump, 4) main air fan. Shut down of the system should be in reverse order with a lengthy time delay between shut down of the main air fan and the rest of the equipment. If a motor fault occurs the equipment behind it should also stop.

The MCF Control Panel is designed to start up and shut down the system per the above sequence. The sequence is initiated by simply pushing the Start push-button. Once started the motors remain energized until either a motor fault occurs or the Stop push-button is pressed. Motor run indication is shown via pilot lights strategically placed within the panels' painted graphic face. Hand/Off/Auto control is provided for each motor to assist in maintenance and start-up situations. The power portion of the control panel features a main panel discount, thermal magnetic circuit breakers, across the line full voltage motor starters, and a control circuit transformer which supplies control voltage to the panel.

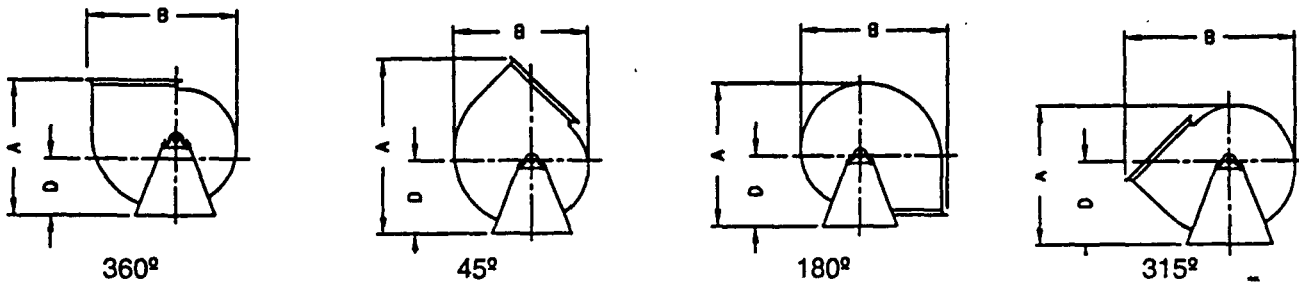
DIMENSIONAL DATA

Sizes 182 - 730 BISW

Arrangements 1 and 9



Angular Discharge Dimensions, (viewed from drive side)



SIZE	A						B			
	45	90	180	270	315	360	90	180	270	315
182	46	38	34	40	38	36	34	34	37	43
200	50	42	37	43	42	39	37	37	40	47
245	60	50	44	52	50	46	45	44	48	56
270	64	54	48	56	54	50	49	48	53	61
330	79	67	57	67	65	61	59	57	64	73
365	87	74	62	74	71	66	65	62	70	80
445	103	89	75	88	85	78	78	75	85	97
490	113	97	82	96	93	85	86	82	93	106
600	138	117	98	118	112	102	104	98	113	127
730	164	141	118	140	135	122	125	118	137	154

PROCESS CONTROLS SECTION

1 ea. Control Panel complete with:

NEMA 12 enclosure

Painted finish

Painted graphic face

Numbered control terminal strip for field wiring connections

Control logic for proper sequence of operation utilizing relays and timers

NEMA 12 indicating lights for:

1 ea. Main fan run

1 ea. Arm drive run

1 ea. PD blower run

1 ea. Airlock run

1 ea. Screw Conveyor Drive Run

NEMA 12 control operators for:

1 ea. Filter stop (PB)

1 ea. Filter start (PB)

1 ea. Main fan hand-off-auto (SW)

1 ea. Arm drive hand-off-auto (SW)

1 ea. PD blower hand-off-auto (SW)

1 ea. Airlock hand-off-auto (SW)

1 ea. Alarm silence (PB)

1 ea. Screw drive hand-off-auto (SW)

Requires 120 VAC/60HZ/1PH service

NOTE: Control Panels do not include motor starters.