

**AIR POLLUTION  
PREVENTION PLAN**

**Southern Recycling  
Pensacola, Florida**

**9/23/08**

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## **I. Introduction**

This Air Pollution Prevention Plan (APPP) is for the operation of an automobile shredder mill and plant-wide fugitive emissions from Southern Recycling, located at 1000 South Myrick Street, Escambia County; UTM Coordinates: Zone 16,475.80 km East and 3363.40 km North; Latitude: 30° 24' 15" and Longitude: 87° 155' 05" West. Southern Recycling operates under Standard Industrial Classification (SIC) 5093 Scrap and Waste Recycling.

The APPP describes this facility and its operations; identifies potential sources of air pollution; recommends appropriate best management practices (BMP's) and pollution control measures to reduce emissions of air pollutants; provides guidelines for employee training and annual compliance evaluation inspections. The APPP must be retained on site and made available to U.S. EPA, state or local officials upon request.

## II. Pollution Prevention Team

Marc Jaffe is responsible for development and implementation of this APPP.

Marc Jaffe can be reached at:

Southern Recycling  
1000 South Myrick St.  
Pensacola, Florida 32505  
Telephone: (850) 432-0977  
Fax: (850) 433-4814

Other individuals who are responsible for implementing the APPP include:

Name	Responsibility
<u>Mill Operator</u>	<u>Monitor facility for fugitive emissions</u>
<u>James Heal</u>	<u>Operations Manager</u>
<u>George Jorge</u>	<u>Shredder Supervisor</u>
<u>Tony Schultz/ Paul Martin</u>	<u>Environmental/ Safety Director</u>

Designated Pollution Prevention Team members will conduct annual compliance evaluation inspections; determine the effectiveness of this plan; assess the need for additional pollution control measures and ensure that the terms and conditions of the Air Operation Permit are complied with. Team members will schedule the Visible Emissions Test before the end of June to allow for any unforeseen mechanical problems that may prevent the test from being completed by the deadline. Team members will also be responsible for keeping APPP records available for Department inspection.

Visible Emissions Test can be arranged with Barbara Svinglin at Pensacola P.O.C., Inc. (850) 456-4406.

### **III. General facility Information**

Name of Facility: Southern Recycling

Facility Address: 1000 South Myrick St.  
Pensacola, Florida 32505

Facility Contact: Marc Jaffe  
General Manager  
(850) 432-0977

Regulatory Agency: State of Florida  
Department of Environmental Protection

Air Operation Permit: 0330121-004-AO

Emissions Unit ID No: 001- Auto Shredder Mill Solid Waste System  
Wet Scrubber and Cyclones No. 1 and No. 2

002- Plant-wide Fugitive Emissions

### **Facility Description**

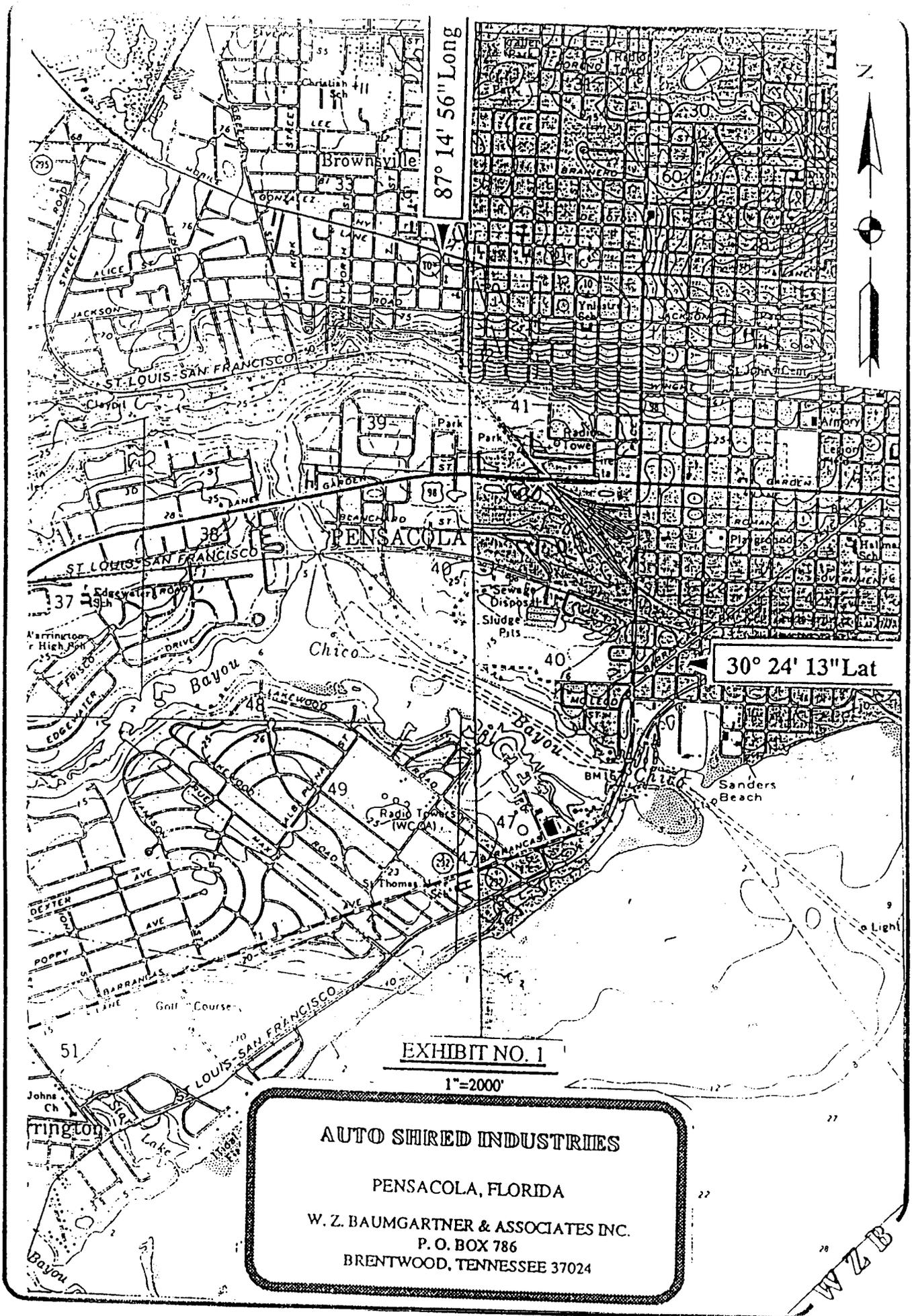
This facility consists of a scrap yard where automobiles and other large ferrous-metal objects are run through a shredder mill for size reduction and sorting. The auto shredder mill is powered by two new electric motors, which replaced the older diesel engines in 1995. The mill is designed to shred scrap autos and other similar scrap at the rate of 44.1 gross tons of shredded steel per scheduled operating hour. Shredded scrap discharged from the mill is initially separated with a light fraction pneumatically conveyed to No. 1 cyclone. The heavy fraction is conveyed to a zigzag where the heavy metal pieces fall by gravity to a conveyer belt while the lighter non-metallic pieces are pneumatically conveyed to No. 2 cyclone. Particulate emissions from both cyclone conveying air streams are controlled by a wet scrubber manufactured by Newell, serial No. 75. Solids discharged from the bottom of the two cyclones are routed to the trommel and eddy current systems. In addition to the wet scrubber and cyclones, a damp shredding system has been installed at the mill to further reduce potential particulate emissions. The damp shredding system injects finely atomized water into the shredder mill. Most of the injected water is turned into steam, which captures nearly all of the dust knocked loose by the shredding action. The dust and light material as well as the shredded material exits the mill through the bottom in a damp state. Spray systems and metal covers are installed over some of the conveyers to protect the contents, especially the lighter fluff, from wind action. The trommel system is essentially a rotary drum screen. The eddy current system uses induced magnetic fields to separate non-ferrous metals, such as stainless steel, zinc, aluminum and copper from the fluff, plastic and dirt. Residual matter is transported off site for disposal at a Class I or II permitted landfill.

## **Site Map**

The site map for Southern Recycling is shown on the following page. The site map shows the following information (where applicable):

- 0. Facility boundaries
- 0. Permitted emission sources
- 0. Potential fugitive emissions sources
- 0. Shredder mill
- 0. Conveyor system
- 0. Buildings and equipment
- 0. Loading/unloading areas
- 0. Scrap processing areas
- 0. Scrap storage areas
- 0. Barge loading areas
- 0. Roads and parking
- 0. Surface water bodies
- 0. Sprinklers
- 0. Restricted areas
- 0. Green areas
- 0. Paved and Asphalt areas
- 0. Unpaved areas





87° 14' 56" Long

30° 24' 13" Lat

**EXHIBIT NO. 1**

1"=2000'

**AUTO SHRED INDUSTRIES**

PENSACOLA, FLORIDA

W. Z. BAUMGARTNER & ASSOCIATES INC.

P. O. BOX 786

BRENTWOOD, TENNESSEE 37024



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W Z B

#### IV. Assessment of Potential Pollution Sources

A summary of the potential sources of air pollution and the BMP's used to control them are presented in Table 1.

**TABLE 1**  
**Potential Sources**

Potential Source	Potential Pollutants	Management Practices
1. Newell Mill	Particulate Matter	Operation of a damp shredding system Recyclable materials control program Infeed control and monitoring Employee training and monitoring
2. Emissions Unit ID No. 001 (Wet Scrubber)	Particulate Matter	Operation of wet scrubber and high efficiency cyclones #1 and #2 Preventative maintenance on wet scrubber and cyclones #1 and #2
3. Shredder conveyor system	Particulate Matter	Operation of mist sprayers, covers and wind baffles. Employee training and monitoring
4. Shredded steel stockpile	Particulate Matter	Load shredded material directly into a barge to reduce handling and fugitive emissions (depends on barge availability and sales) Prepared material sprayer Employee training and monitoring
5. Shredded steel barge loading conveyor	Particulate Matter	Portable prepared material sprayer Operation of wind baffles, sprayers and a partial drop chute Employee training and monitoring
6. Automobile Shredder Residue	Particulate Matter	Daily hauling Temporary storage in a box or bin

7. Emissions Unit ID No. 002 Plant-wide fugitive emissions	Particulate Matter	Post APPP Procedures In an appropriate location Employee training and monitoring Operation of material sprayers Sprinkler system Loading conveyer covers and wind baffles Green areas
8. Paved/ Asphalt roads and parking areas	Particulate Matter	Employee training and monitoring Regular sweeping of roads and parking areas
9. Unpaved Roads and storage areas	Particulate Matter	Employee training and monitoring Sprinkler systems Restricted access to unused areas
10. Ferrous Stockpile	Particulate Matter	Spray towers Employee training and monitoring Minimize drop height
11. Ferrous Barge Loading	Particulate Matter	Load material directly into a barge to reduce handling and fugitive emissions (depends on barge availability and sales) Minimize crane drop height Barge loading sprayer
12. Materials Handling Equipment	Particulate Matter	Minimize drop height Prepared material sprayer Drive on paved roads

13. Noise	Noise	<p>Noise baffles around Eddy Current</p> <p>When operationally possible, auto hulks are not shredded before 9:00 AM.</p>
14. General Pollutant Emissions Limiting Standard	Objectionable odor	<p>No operations at this facility will cause or permit the discharge of objectionable odors</p>
15. Explosions	Explosions	<p>Damp shredding system drastically reduces the severity of explosions inside of the mill</p> <p>Notify DEP when explosions occur</p> <p>Record the number of explosions on the monthly shredder report</p> <p>Record downtime caused by explosions on monthly shredder report</p>

V. Recyclable Control Program

**Supplier Notification**

Materials not accepted at the facility include:

- Lead acid batteries
- Nickel cadmium batteries
- Microwave ovens
- Fluorescent lights
- Hazardous waste
- Radioactive materials
- Fuel tanks
- CFC's
- Mercury switches

Materials accepted only under certain conditions include:

Material  
Closed Vessels

Condition Accepted  
When opened and cleaned.

Suppliers are notified of our recyclable control program by: Account Executives and Management.

## **I. Operational Improvements**

1. Replaced scrubber with higher efficiency model in 1991.
2. Replaced the # 2 cyclone with a higher efficiency model in 1995.
3. Replaced the diesel engines with electric motors in 1996.
4. Changed operating procedures to include the use of an underwater magnet to retrieve lost material.
5. Removed the shear and attached conveyor systems in 1999.
6. Changed operating procedures to apply water to roadways and parking areas with a water spray truck in 1999.
7. Changed operating procedures so that crane operators minimize the drop height of all material.
8. Attached covers and wind baffles to conveyers in 2001.
9. Added water spray nozzles to conveyers in 2001.
10. Installed portable water spray pump to wet prepared scrap material in 2001.
11. Installed stationary spray towers to wet prepared scrap material in 2002.
12. Installed water outlets along the length of the bulkhead so the portable sprayer can be moved to cover both the shredder and ferrous barge loading operations in 2002.
13. Installed a noise baffle on the Eddy Current System in 2002.
14. Added additional wind baffles to conveyor system in 2002.
15. Replaced catch pan with belt sweep.
16. Added a wind baffle and partial chute to barge loading conveyor in 2002.
17. Replaced the #1 cyclone with a newer more efficient model in 2002.
18. Changed operational procedures to prohibit the shredding of automobiles before 9:00 AM when operationally possible in 2002.
19. Changed operational procedures to limit the spillage of prepared scrap metal during barge loading operations in 2002.
20. Replaced powered broom with a street sweeper in 2002.
21. Asphalt was used to pave two interior roads, the non ferrous customer unloading area and the equipment storage area in 2002.
22. Access to the unused portions of the facility was restricted by barricades in 2002.
23. Added the damp shredding system in 2002 to reduce particulate going into the air system, control particulate from around the mill and to drastically reduce the possibility of explosions inside of the mill.
24. Replaced belt sweep with a belt scraper.

## **VII. Employee Training**

APPP training is provided on an initial and annual basis to the following employees:

- Shredder Personnel
- Maintenance Personnel
- Non-Ferrous Personnel
- Administration

The following topics are addressed in the annual training programs:

- Air Operation Permit requirements
- APPP objectives
- Pollution Prevention Team
- Potential sources of air pollution
- Best Management Practices
- Site Compliance Evaluation Program

### **Training Guide**

Permit requirements:

Objectionable odors are prohibited.

Visible emissions from emissions unit ID # 001 shall not exceed an average of 10% opacity over the highest 24 consecutive readings on the Visible Emissions Test under normal operating conditions.

The permittee shall not cause or allow to be discharged the emissions of air pollutants from any activity that would be greater than 20 % opacity. 20% opacity means smoke or dust that would block out 20 % of the background using EPA Method 9.

The permittee must take reasonable precautions to prevent emissions of unconfined particulate matter (dust). Water mist sprayers shall be used on conveyor systems, roads and parking areas will be monitored and cleaned and cranes will minimize material drop height to help control fugitive dust.

The permittee must conduct annual visible emissions test by the end of October.

The permittee must develop and implement and Air Pollution Prevention Plan.

## Air Pollution Prevention Plan objectives:

- To develop a Pollution Prevention Team
- To identify potential sources of air pollution at the Auto Shred facility
- To describe the Best Management Practices that will minimize or eliminate potential sources of air pollution at the Auto Shred facility
- To develop a site compliance evaluation program, employee training program and a record keeping and reporting program that will comply with the terms and conditions of the air permit

## Pollution Prevention Team

The Pollution Prevention Team is responsible for developing, implementing, maintaining and revising the plan. The Pollution Prevention Team consists of:

Paul Martin and Tony Schultz, Environmental and Safety Directors  
Marc Jaffe, James Heal, George Jorge, Mill Operator, Auto Shred Recycling

## Potential Sources of Air Pollution

Emissions point 001, the wet scrubber on the mill.

Emissions point 002, fugitive emissions.

Fugitive emissions consist of:

Roads and parking lots

Barge loading conveyers

Crane loading operations

## Best Management Practices:

### Operational Controls

Implement a recyclable control program

Use water sprayers on the conveyor system and re-feed

Use water sprayers on the shredded stock pile

Load prepared material directly into barge when barge is available

Use wind baffles and covers on the conveyor system

Operate damp shredding system

Operate spray towers on prepared ferrous stock piles

Operate portable sprayer when loading barges

Minimize material drop height from cranes

Operate sweeping system on a regular basis

Paved roadways, storage and parking areas.

Monitor facility for fugitive emissions

Report explosions to DEP

Log in the explosions on the shredder report

Good house keeping

Sweep and clean accessible paved areas and roadways

Use a water truck on roadways and unpaved areas

#### Preventative Maintenance

Maintain shredder cyclones and wet scrubber systems

Maintain closed loop water system

Maintain water sprayers on conveyer

Maintain water truck and sweeper

Weekly checklist on the wet scrubber system

Monthly checklist on the wet scrubber, damp shredding system, #1 cyclone and #2 cyclone

#### Site Compliance Evaluation Program

Conduct annual Air Pollution Prevention Plan inspection

Conduct annual employee training

Conduct annual visible emissions test

## **VII. Compliance Evaluation Inspections**

Compliance Evaluations Inspections are conducted at least once per year. These evaluations confirm the accuracy of the description of potential pollution sources presented in this APPP, determine the effectiveness of this APPP, and assess compliance with the terms of the Air Operation Permit. Members of the Pollution Prevention Team or a qualified designee conduct the evaluations. Compliance Evaluation Inspections consist of the following elements:

- Modify or update the APPP to reflect current conditions
- Visually inspect and evaluate the potential pollution sources at the facility
- Evaluate the BMP's to determine whether they are adequate and have been properly implemented
- Inspect structural air quality control measures to ensure they are working properly

A Comprehensive Site Compliance Evaluation Report is prepared following each evaluation. The APPP shall be revised as needed within one month of the inspection report. Any changes made to the plan must be implemented within twelve weeks of the inspection report.

Weekly

# WET SCRUBBER SYSTEM PREVENTATIVE MAINTENANCE CHECKLIST

Date: \_\_\_\_\_

Technician: \_\_\_\_\_

## WEEKLY PROCEDURES:

## RESULTS

## ACTION TAKEN

Check pump and fan motor for unusual vibration, noise or heat

\_\_\_\_\_

\_\_\_\_\_

Inspect system for leaks, verify water flow

\_\_\_\_\_

\_\_\_\_\_

Check system dampers for proper operation

\_\_\_\_\_

\_\_\_\_\_

## MONTHLY PROCEDURES:

## RESULTS

## ACTION TAKEN

Inspect spray system

\_\_\_\_\_

\_\_\_\_\_

Check condition of fan bearings, belts and seals

\_\_\_\_\_

\_\_\_\_\_

Inspect fan impeller and blades for solids buildup and erosion

\_\_\_\_\_

\_\_\_\_\_

Check piping for erosion or plugging

\_\_\_\_\_

\_\_\_\_\_

Inspect ductwork, fan and structural supports for deterioration/ damage

\_\_\_\_\_

\_\_\_\_\_

**COMMENTS:** \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

# DAMP SHREDDING SYSTEM PREVENTATIVE MAINTENANCE CHECKLIST

Date: \_\_\_\_\_

Technician: \_\_\_\_\_

## MONTHLY PROCEDURES:

## RESULT

## ACTION TAKEN

Check air flow pressure

\_\_\_\_\_

\_\_\_\_\_

Check hoses and pipes for leaks

\_\_\_\_\_

\_\_\_\_\_

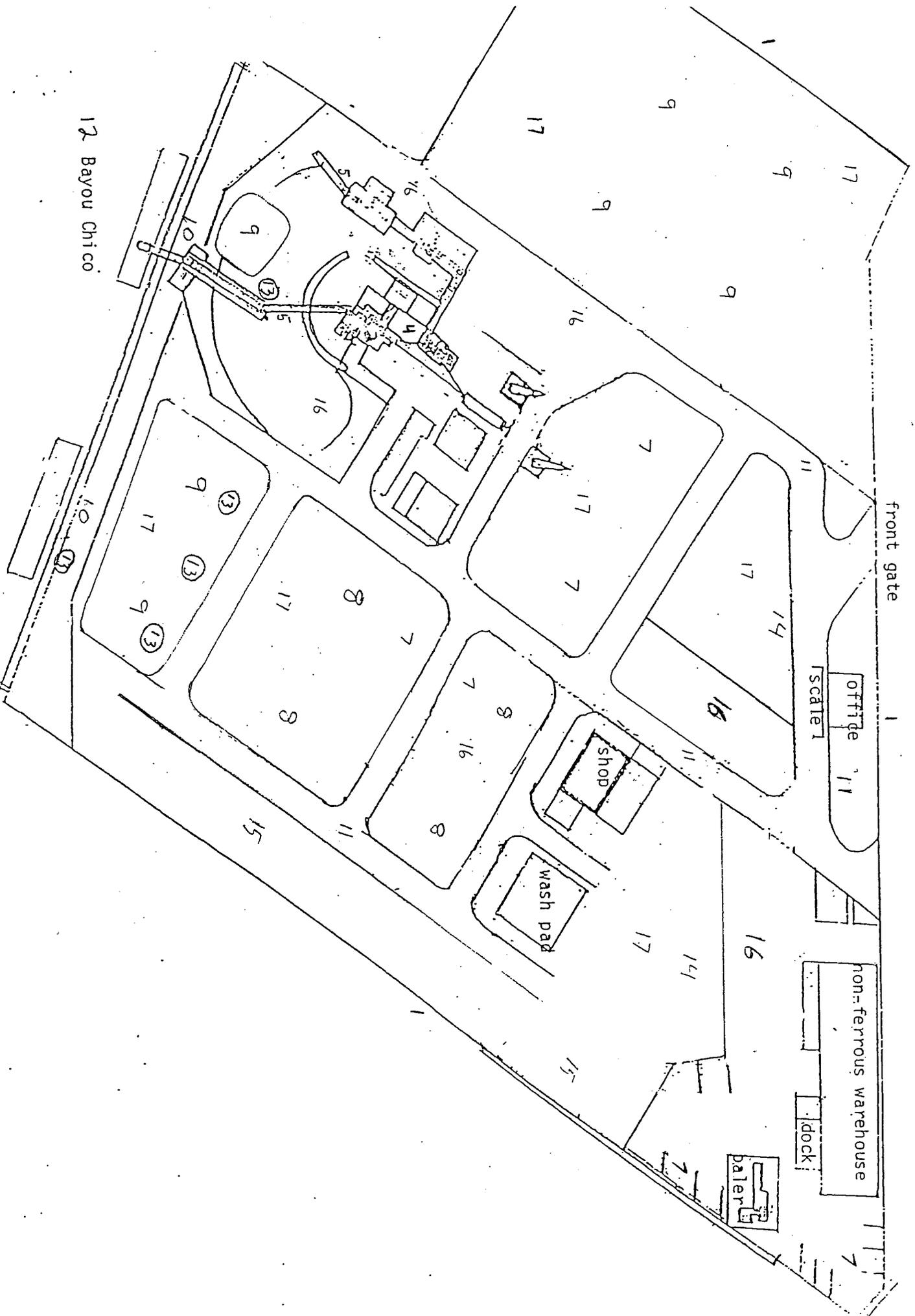
Check spray nozzles for plugging

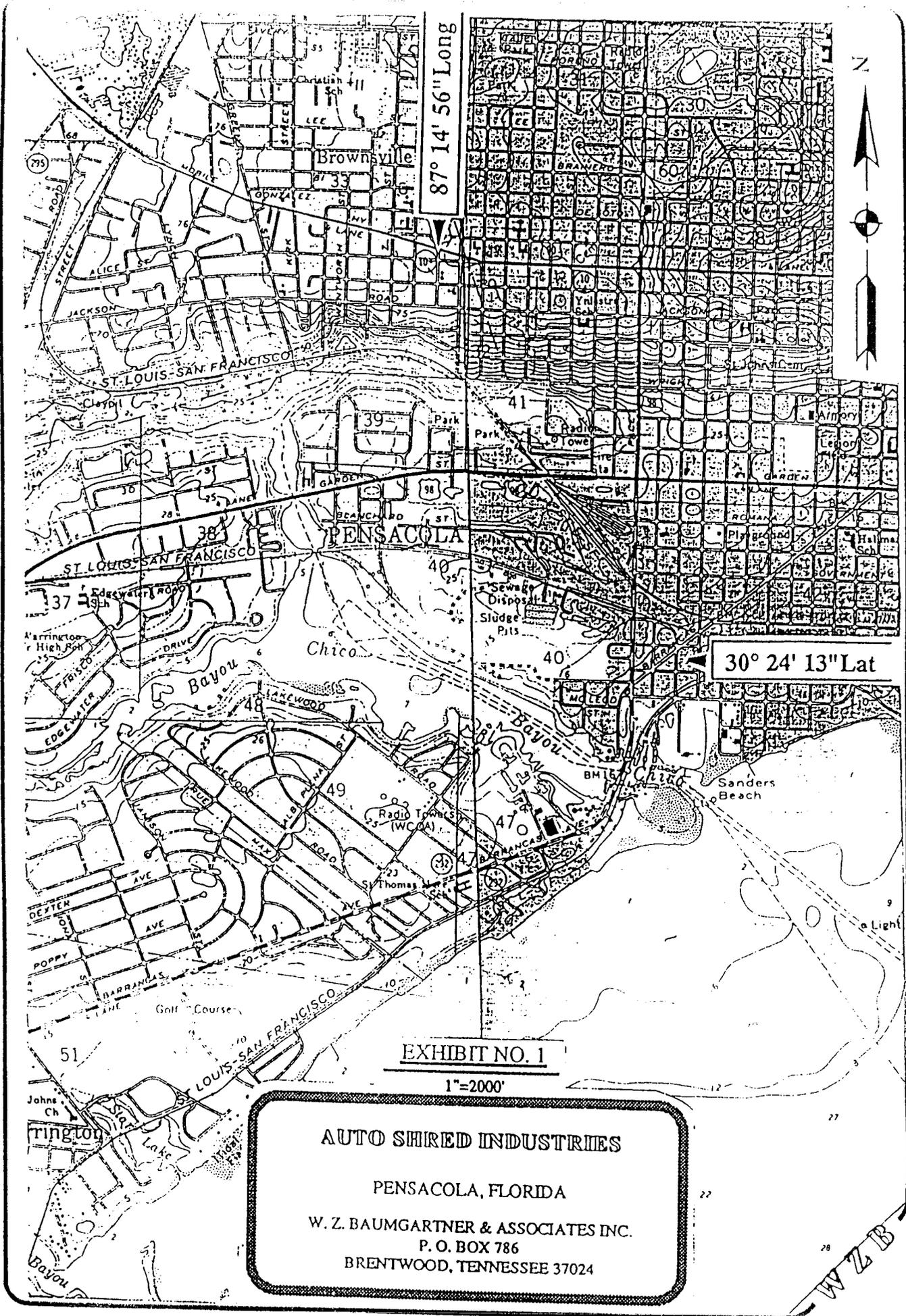
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**Comments:** \_\_\_\_\_  
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\_\_\_\_\_

12 Bayou Chico





87° 14' 56" Long

30° 24' 13" Lat

EXHIBIT NO. 1

1"=2000'

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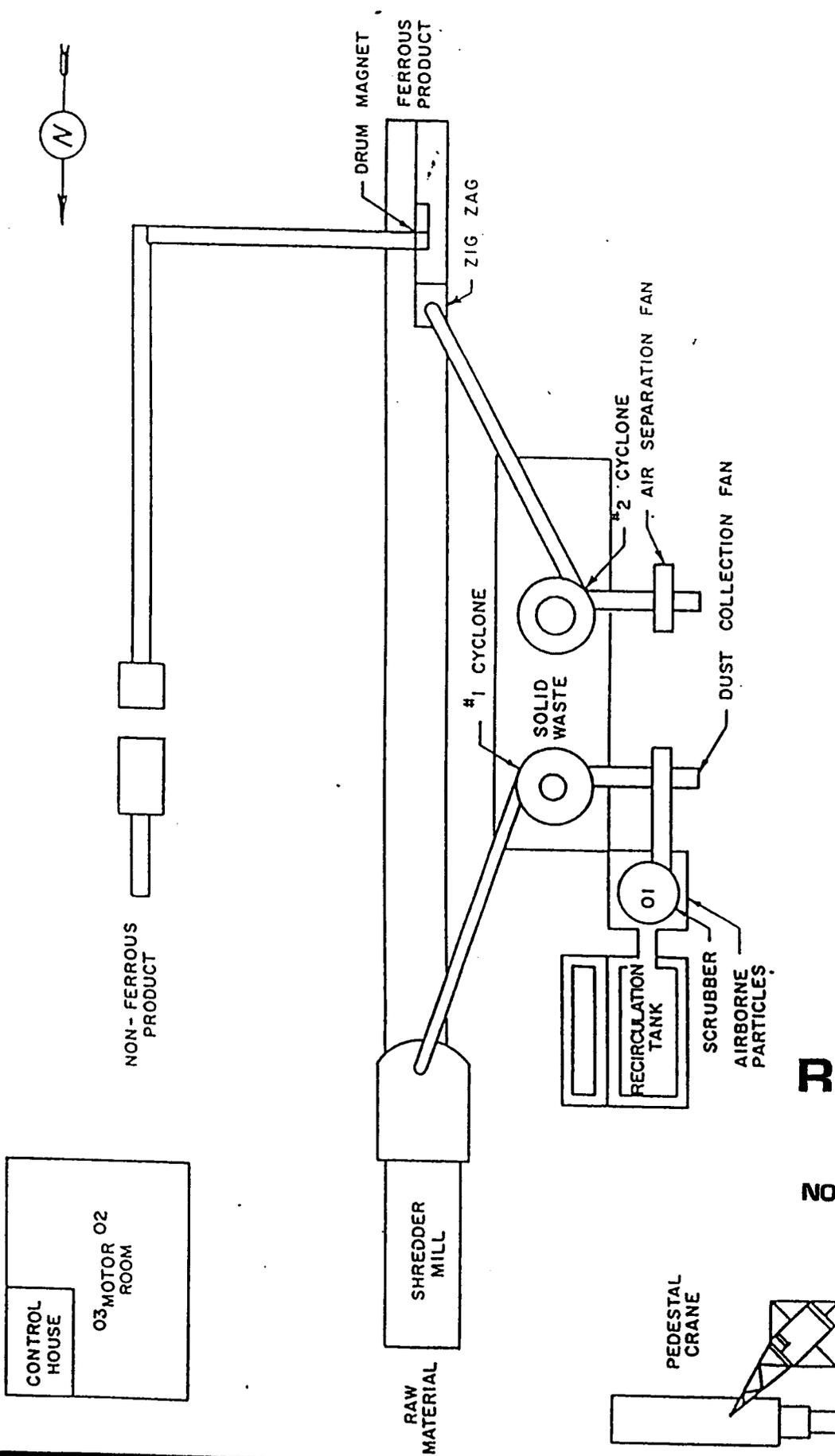


EXHIBIT NO. 2  
**AUTO-SHRED INDUSTRIES**  
 PENSACOLA, FLORIDA  
 TYPICAL FACILITY PLAN

AYB #88264

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