9-94

LEAD RACT

AN APPLICATION FOR CONSTRUCTION PERMIT

PREPARED FOR:

GULF COAST RECYCLING, INC.
TAMPA, FLORIDA

SEPTEMBER 1994

PREPARED BY:

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1.1 APPLICANT

Gulf Coast Recycling, Inc.

1901 North 66th Street

Tampa, Florida 33619

1.2 FACILITY LOCATION

Gulf Coast Recycling (GCR) is a secondary lead smelter located southeast of the intersection of Interstate 4 and US Highway 41 in Tampa, Hillsborough County, Florida. The UTM coordinates of the GCR facility are Zone 17, 364.05 km east and 3093.5 km north. The site location maps are presented in Figures 1.1 and 1.2.

1.3 PROJECT OVERVIEW

At the existing facility in Tampa, GCR recycles spent automotive and industrial lead-acid batteries to produce lead ingots. In July of 1994, Florida Department of Environmental Protection (FDEP) finalized a rule which established Reasonably Available Control Technology (RACT) for lead processing facilities in or near the lead nonattainment area located in Tampa, Florida. The rule set specific lead emission standards and work practices and specifically requires an owner or operator of an existing lead processing facility to submit an application for a new or revised federally enforceable air permit to address the lead rule requirements in Chapter 17-296 (recently renumbered as 62-296) of the Florida Administrative Code (FAC). It is in response to this rule requirement that GCR is submitting this permit application.

FIGURE 1-1

SITE LOCATION MAP

GULF COAST RECYCLING, INC.
TAMPA, FLORIDA

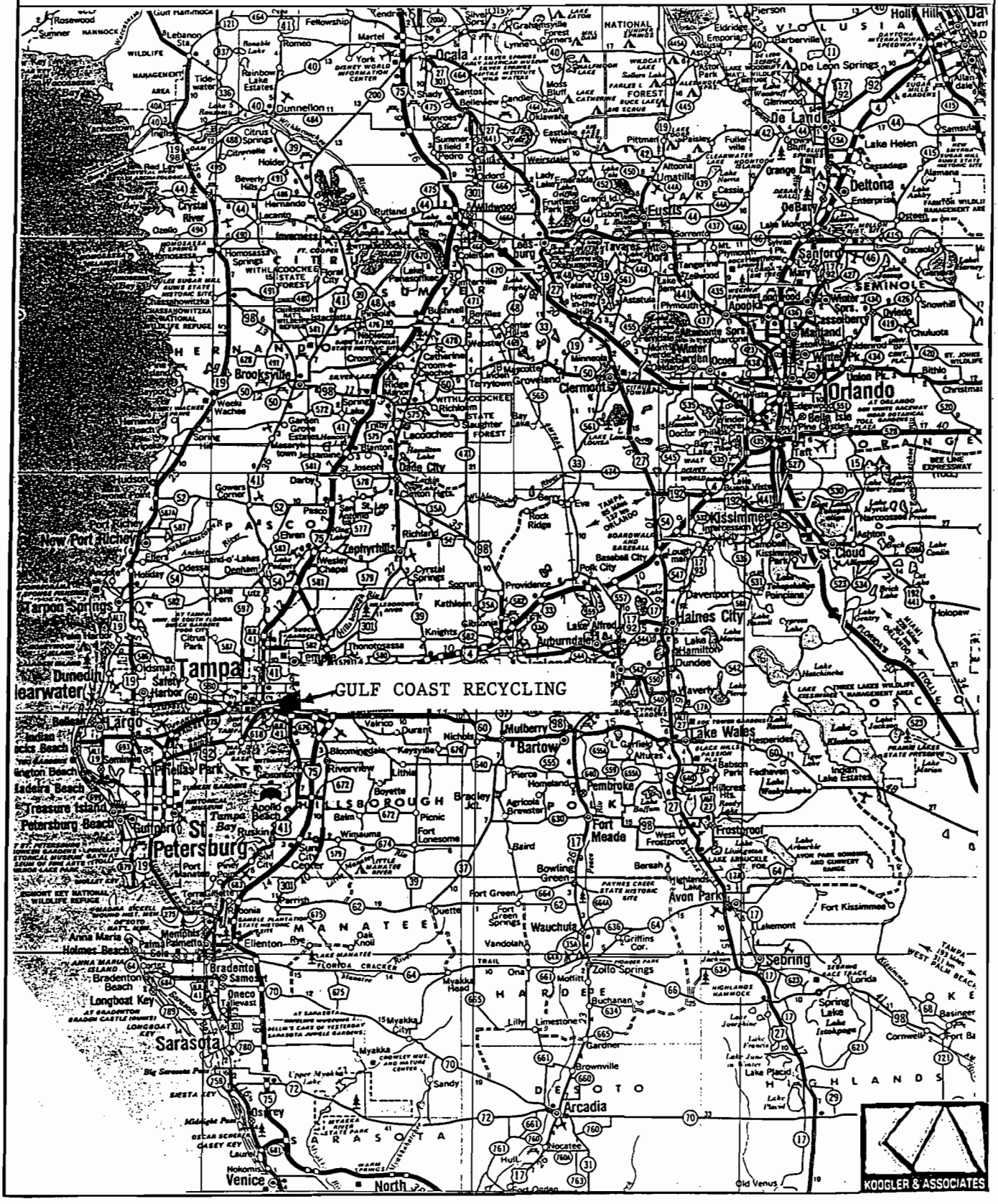
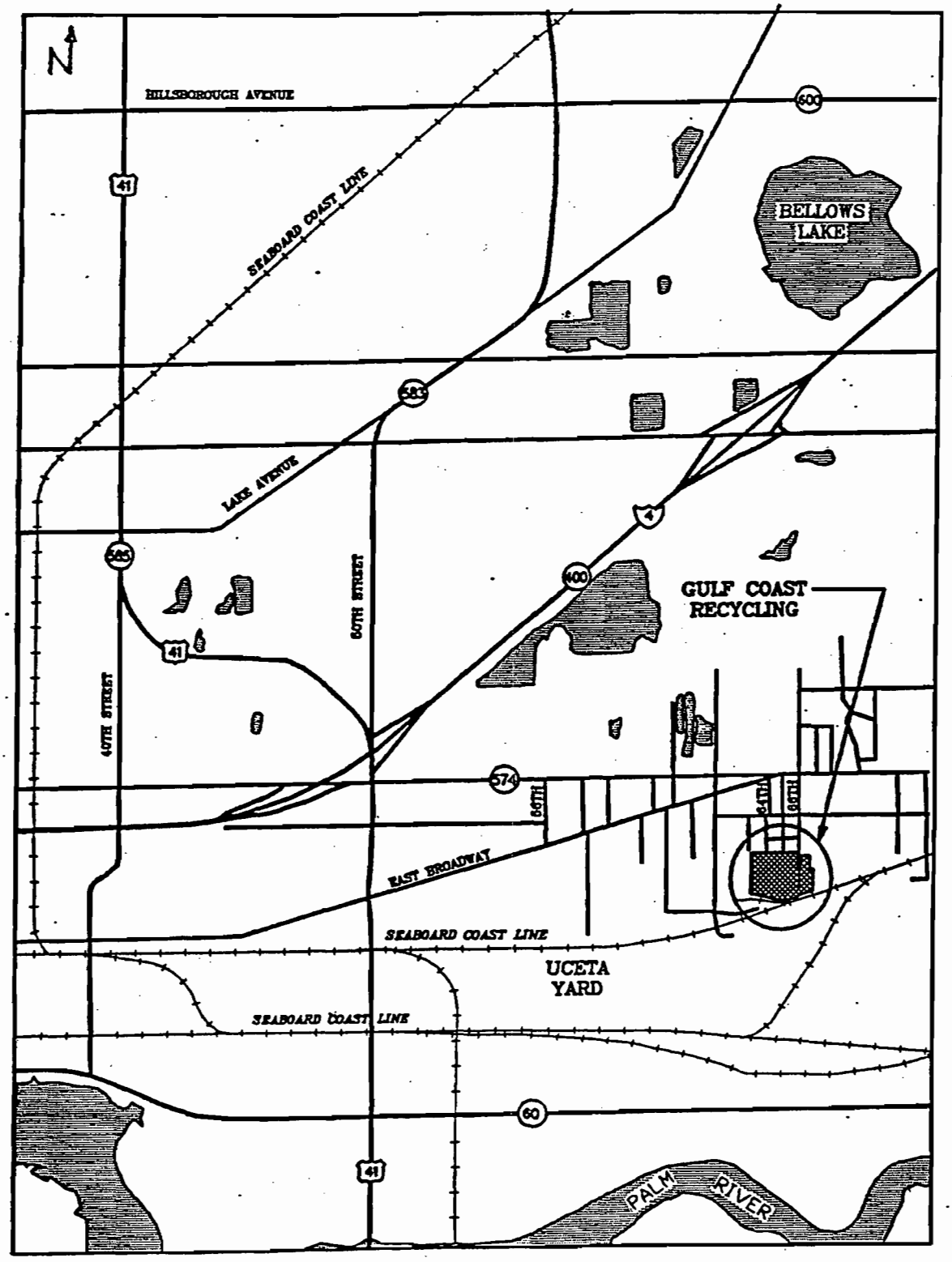


FIGURE 1-2

AREA LOCATION MAP

GULF COAST RECYCLING, INC.
TAMPA, FLORIDA



2.0 FACILITY DESCRIPTION

GCR's lead recycling operation includes several unit operations. A plot plan of the facility is presented in Figure 2.1. An overall process flow diagram is presented in Figure 2.2.

2.1 DESCRIPTION OF FACILITY OPERATIONS

At the existing lead recycling facility, spent automotive and industrial lead-acid batteries are cut and separated into their components. Sulfuric acid is drained and neutralized. Plastic casings are shipped off-site for further processing. The lead-bearing components are gathered and placed in short-term storage prior to being charged into the blast furnace for lead recovery. The lead is further refined and combined with alloying metals in refining kettles to produce the finished lead product. The finished lead from the kettles is cast into ingots for shipment.

Presently, the existing facility is permitted under three different air permits (attached):

PERMIT NO.	PROJECT/SOURCE
A029-173310	Blast Furnace and Flue Dust Agglomeration Furnace (Issued 7/17/90; Expires 6/22/95)
A029-173309	Lead Refining Area (Issued 4/30/92; Expires 4/28/97)
AC29-217704	Slag Stabilization Operation (Issued 4/21/93; Extension Requested until 2/95)

The operations covered by the above permits include the activities discussed below.

Blast Furnace and Flue Dust Agglomeration Furnace

Operation of a secondary lead blast furnace and a flue dust agglomeration furnace include the following activities. Lead-bearing scrap materials, coke, lime rock, cast iron and slag are loaded into a skip-hoist and charged into a blast furnace. Lead in liquid form collects at the base of the blast furnace. The lead is continuously tapped from the blast furnace and cast into buttons. Slag is tapped from the furnace periodically, cast into buttons, and delivered to the slag stabilization process. The permitted blast furnace material processing rate is 4.58 tons/hour, consisting of lead scrap and re-run slag, coke, lime rock and cast iron.

The dust from the blast furnace is recovered from the drop-out boxes at the base of the radiant cooling loops or from the blast furnace baghouse. This dust is transferred to a dust agglomeration furnace where it is agglomerated into an ingot to eliminate dust generation during subsequent handling. The agglomerated dust ingot is stored and later introduced to the blast furnace.

Lead Refining Area

The lead refining area consists of three refining kettles. Each kettle has a charging capacity of 52 tons per batch. Each kettle is fired only on natural gas at a maximum heat input rate of 4.0 MMBtu/hr.

Kettle No.1 is used primarily to produce hard lead using a combination of blast lead, antimony, arsenic, sulfur, tin, red phosphorus and selenium. Kettle No. 2 is used to produce calcium lead using a combination of calcium, aluminum and soft lead from Kettle No. 3. The Kettle No. 3 is used primarily to produce soft lead using a combination of blast lead, sodium nitrate, sodium hydroxide, sulfur, red phosphorus and aluminum.

The maximum permitted production rate for the lead refining area corresponds to 30,000 tons per year of finished lead.

Slag Stabilization Operation

A construction permit has been issued by FDEP for the slag stabilization process. Construction on this project is being completed. The operation consists of a receiving hopper, a kinetic crusher, a vibrating sizing screen, a 7-ton/batch capacity mixer and associated conveyors. In the operation, slag is crushed and mixed with sodium silicate, cement and water at a rate of 20 tons per hour and poured into forms to set.

Fugitive Emissions

Some of the activities at the facility generate fugitive lead emissions. These activities include battery breaking, raw material storage, smelter building activities, dross storage and vehicular traffic. The fugitive and point sources of lead emissions are discussed below.

2.2 LEAD EMISSIONS

As the RACT rule requirements pertain specifically to lead emissions, the lead emission sources at GCR are discussed below.

Blast Furnace and Flue Dust Agglomeration Furnace

Emissions generated by the blast furnace charging (Point 06), the blast furnace exhaust (Point 01) and furnace tapping (Point 04) are controlled by three sets of baghouses which vent separately. The flue dust collected by the baghouses is conveyed to an agglomeration furnace fired on natural gas. The emissions from the agglomeration furnace are controlled by the blast furnace baghouse.

As reflected in the current air permit, the blast furnace is subject to 40CFR60, Subpart L, Standards of Performance for Secondary Lead Smelters, and the Federal Implementation Plan contained in 40CFR62.535.

Source	Currently Permitted Lead Emission Limitations		
	lb/hr	tpy	VE (% opacity)
Blast Furnace Charging	0.22	0.86	
Closed Charge Doors	NA	NA	5
Charge Doors @ Charging	NA	NA	10
Blast Furnace	1.81	7.06	5
Blast Furnace Tapping	0.06	0.23	5

Lead Refining Area

Emissions of particulate matter and lead from the lead refining are controlled by two baghouses in parallel and exhausted through a common stack (Point 02).

Source	Currently Permitted Lead Emission Limitations		
	lb/hr	tpy	VE (% opacity)
Lead Refining Baghouse	0.20	0.60	
Building and Baghouse			5

Slag Stabilization Operation

Emissions of particulate matter and lead from the receiving hopper and the kinetic crusher will be controlled through the use of a water spray system and a baghouse (Point 07). The particulate matter and lead emissions from the vibrating screen and mixing operation will be controlled by a water spray system in a total enclosure.

Source	Currently Permitted Lead Emission Limitations		
	lb/hr	tpy	VE(% opacity)
Hopper/Conveyor/Crusher	0.001	0.0005	
Screen/Mixer/Conveyor	NA	0.0003	
Building and Baghouse			5

Fugitive Emissions

Fugitive lead emissions are expected from activities which include battery breaking, raw material storage, smelter building, slag storage, dross containers storage and vehicular traffic. The estimated fugitive emissions from these activities is presented in Table 2-1. Fugitive emission calculations are presented in Appendix B.

Several measures will be implemented in a staged fashion to reduce the potential for fugitive emissions from the blast furnace charging and tapping systems, including the following:

- The lead well tapping hood doors and the duct connection will be modified to decrease the introduction of tramp air. The access doors of the hood will be hinged in the middle instead of at the top so that more of the hood structure remains in place when access for button removal is needed.

- A strip curtain will be place inside of the charging door enclosure to reduce the area to be evacuated and partially seal off the large opening of the enclosure where the skip hoist enters.

- Dampers will be replaced with blast gate style dampers so that it will be possible to balance the air flow and maximize capture at pick-up points. The fans for the systems will be modified to achieve the desired air flow rates.

- Slide gates will be installed in the exit of the baghouse hoppers to prevent the re-entrainment of dust collected in the screw conveyor.

TABLE 2-1

LEAD EMISSIONS DATA
(CORRESPONDING TO RACT RULE)

GULF COAST RECYCLING, INC.
TAMPA, FLORIDA

Source/Activity	Estimated Lead Emissions g/hr	lb/hr
POINT SOURCES		
Blast Furnace	720.0	1.587
Slag Tapping	29.3	0.065
Furnace Charging	68.5	0.151
Lead Refining	21.6	0.048
Slag Processing	0.4	0.0009
FUGITIVE EMISSION SOURCES		
Battery Breaking (each, 2 areas)	3.26	0.0072
Raw Material Storage (each, 5 areas)	1.04	0.0023
Smelter Building (each, 4 areas)	5.85	0.0129
Dross Storage	0.27	0.0006
Vehicle Traffic (total of 8 areas)	0.93	0.0021

APPENDIX A

AIR PERMIT APPLICATION FORM

Florida Department of Environmental Regulation
Twin Towers Office Bldg. • 2600 Blair Stone Road • Tallahassee, Florida 32399-2400

DER Form #
Form Title
Effective Date
DER Application No.
(Filled in by DER)

APPLICATION TO OPERATE/CONSTRUCT AIR POLLUTION SOURCES

SOURCE TYPE: Secondary Lead Smelter [ ] New[1] [x] Existing[1]

APPLICATION TYPE: [x] Construction [ ] Operation [ ] Modification

COMPANY NAME: Gulf Coast Recycling, Inc. COUNTY: Hillsborough

Identify the specific emission point source(s) addressed in this application (i.e. Lime Kiln No. 4 with Venturi Scrubber; Peaking Unit No. 2, Gas Fired) See Report, Sect. 1

SOURCE LOCATION: Street 1901 North 66th Street City Tampa

UTM: East (17) 364.05 km North 3093.5 km

Latitude 27 ° 57 ' 43 "N Longitude 82 ° 22 ' 49 "W

APPLICANT NAME AND TITLE: Willis M. Kitchen, President

APPLICANT ADDRESS: 1901 North 66th Street, Tampa, Florida 33619

SECTION I: STATEMENTS BY APPLICANT AND ENGINEER

A. APPLICANT

I am the undersigned owner or authorized representative* of Gulf Coast Recycling, In

I certify that the statements made in this application for a construction permit are true, correct and complete to the best of my knowledge and belief. Furth I agree to maintain and operate the pollution control source and pollution cont facilities in such a manner as to comply with the provision of Chapter 403, Flor Statutes, and all the rules and regulations of the department and revisions thereof. also understand that a permit, if granted by the department, will be non-transfera and I will promptly notify the department upon sale or legal transfer of the permit establishment.

*Attach letter of authorization

Signed: Willis M. Kitchen

Willis M. Kitchen, President
Name and Title (Please Type)

Date: 9-28-94 Telephone No. (813) 626-6151

B. PROFESSIONAL ENGINEER REGISTERED IN FLORIDA (where required by Chapter 471, F.S.)

This is to certify that the engineering features of this pollution control project h been ~~designed~~/examined by me and found to be in conformity with modern engineer principles applicable to the treatment and disposal of pollutants characterized in permit application. There is reasonable assurance, in my professional judgment, t

[1] See Florida Administrative Code Rule 17-2.100(57) and (104)

the pollution control facilities, when properly maintained and operated, will discharge an effluent that complies with all applicable statutes of the State of Florida and the rules and regulations of the department. It is also agreed that the undersigned will furnish, if authorized by the owner, the applicant a set of instructions for the proper maintenance and operation of the pollution control facilities and, if applicable, pollution sources.

Signed _____

John B. Koogler, Ph.D., P.E.
Name (Please Type)

Koogler & Associates; Environmental Services
Company Name (Please Type)

4014 N.W. 13th Street, Gainesville, FL 32609
Mailing Address (Please Type)

Florida Registration No. 12925 Date: 9/29/94 Telephone No. (904) 377-5822

SECTION II: GENERAL PROJECT INFORMATION

A. Describe the nature and extent of the project. Refer to pollution control equipment, and expected improvements in source performance as a result of installation. State whether the project will result in full compliance. Attach additional sheet if necessary.

For a construction permit, as required in accordance with Rule 62-296.600(3), Florida Administrative Code. The project will be in full compliance with all applicable air regulations.

B. Schedule of project covered in this application (Construction Permit Application Only)

Start of Construction NA Completion of Construction NA

C. Costs of pollution control system(s): (Note: Show breakdown of estimated costs only for individual components/units of the project serving pollution control purposes. Information on actual costs shall be furnished with the application for operation permit.)

NA

D. Indicate any previous DER permits, orders and notices associated with the emission point, including permit issuance and expiration dates.

See Report, Section 2.1

E. Requested permitted equipment operating time: hrs/day 24 ; days/wk 7 ; wks/yr 52 ;

if power plant, hrs/yr_____; if seasonal, describe:_____

F. If this is a new source or major modification, answer the following questions. (Yes or No) NA

1. Is this source in a non-attainment area for a particular pollutant? _____

   a. If yes, has "offset" been applied? _____

   b. If yes, has "Lowest Achievable Emission Rate" been applied? _____

   c. If yes, list non-attainment pollutants. _____

2. Does best available control technology (BACT) apply to this source? If yes, see Section VI. _____

3. Does the State "Prevention of Significant Deterioriation" (PSD) requirement apply to this source? If yes, see Sections VI and VII. _____

4. Do "Standards of Performance for New Stationary Sources" (NSPS) apply to this source? _____

5. Do "National Emission Standards for Hazardous Air Pollutants" (NESHAP) apply to this source? _____

H. Do "Reasonably Available Control Technology" (RACT) requirements apply to this source? YES

   a. If yes, for what pollutsnts? Particulate Matter and Lead

   b. If yes, in addition to the information required in this form, any information requested in Rule 17-2.650 must be submitted.

Attach all supportive information related to any answer of "Yes". Attach any justification for any answer of "No" that might be considered questionable.

See Report.

SECTION III: AIR POLLUTION SOURCES & CONTROL DEVICES (Other than Incinerators)

SEE REPORT

A. Raw Materials and Chemicals Used in your Process, if applicable:

See Report

Description	Contaminants		Utilization Rate - lbs/hr	Relate to Flow Diagram
	Type	% Wt		

B. Process Rate, if applicable: (See Section V, Item 1) See Report

1. Total Process Input Rate (lbs/hr): _____

2. Product Weight (lbs/hr): _____

C. Airborne Contaminants Emitted: (Information in this table must be submitted for each emission point, use additional sheets as necessary) See Report

Name of Contaminant	Emission[1]		Allowed[2] Emission Rate per Rule 17-2	Allowable[3] Emission lbs/hr	Potential[4] Emission		Relate to Flow Diagram
	Maximum lbs/hr	Actual T/yr			lbs/yr	T/yr	

[1]See Section V, Item 2.

[2]Reference applicable emission standards and units (e.g. Rule 17-2.600(5)(b)2. Table II, E. (1) - 0.1 pounds per million BTU heat input)

[3]Calculated from operating rate and applicable standard.

[4]Emission, if source operated without control (See Section V, Item 3).

D. Control Devices: (See Section V, Item 4) See Report

Name and Type (Model & Serial No.)	Contaminant	Efficiency	Range of Particles Size Collected (in microns) (If applicable)	Basis for Efficiency (Section V Item 5)

E. Fuels See Report

Type (Be Specific)	Consumption*		Maximum Heat Input (MMBTU/hr)
	avg/hr	max./hr	

*Units: Natural Gas--MMCF/hr; Fuel Oils--gallons/hr; Coal, wood, refuse, other--lbs/hr.

Fuel Analysis:

Percent Sulfur:_____ Percent Ash:_____

Density: _____ lbs/gal Typical Percent Nitrogen:_____

Heat Capacity: _____ BTU/lb _____ BTU/gal

Other Fuel Contaminants (which may cause air pollution):_____

_____

F. If applicable, indicate the percent of fuel used for space heating. NA

Annual Average _____ Maximum _____

G. Indicate liquid or solid wastes generated and method of disposal. See Report

_____

_____

_____

_____

H. Emission Stack Geometry and Flow Characteristics (Provide data for each stack):
See Report, Section 4, Table 4-2.

Stack Height: _____ ft. Stack Diameter: _____ ft.

Gas Flow Rate: _____ ACFM _____ DSCFM Gas Exit Temperature: _____ °F.

Water Vapor Content: _____ % Velocity: _____ FPS

SECTION IV: INCINERATOR INFORMATION

NA

Type of Waste	Type 0 (Plastics)	Type I (Rubbish)	Type II (Refuse)	Type III (Garbage)	Type IV (Pathological)	Type V (Liq.& Gas By-prod.)	Type VI (Solid By-prod.)
Actual lb/hr Incinerated							
Uncontrolled (lbs/hr)							

Description of Waste _____

Total Weight Incinerated (lbs/hr) _____ Design Capacity (lbs/hr) _____

Approximate Number of Hours of Operation per day _____ day/wk _____ wks/yr. _____

Manufacturer _____

Date Constructed _____ Model No. _____

	Volume $(ft)^3$	Heat Release (BTU/hr)	Fuel		Temperature (°F)
			Type	BTU/hr	
Primary Chamber					
Secondary Chamber					

Stack Height: _____ ft. Stack Diamter: _____ Stack Temp. _____

Gas Flow Rate: _____ ACFM _____ DSCFM* Velocity: _____ FPS

*If 50 or more tons per day design capacity, submit the emissions rate in grains per standard cubic foot dry gas corrected to 50% excess air.

Type of pollution control device: [ ] Cyclone [ ] Wet Scrubber [ ] Afterburner

[ ] Other (specify) _____

Brief description of operating characteristics of control devices: _____

_____

_____

_____

_____

Ultimate disposal of any effluent other than that emitted from the stack (scrubber water, ash, etc.):

_____

_____

_____

_____

NOTE: Items 2, 3, 4, 6, 7, 8, and 10 in Section V must be included where applicable.

SECTION V: SUPPLEMENTAL REQUIREMENTS

See Report

Please provide the following supplements where required for this application.

1. Total process input rate and product weight -- show derivation [Rule 17-2.100(127)]

2. To a construction application, attach basis of emission estimate (e.g., design calculations, design drawings, pertinent manufacturer's test data, etc.) and attach proposed methods (e.g., FR Part 60 Methods 1, 2, 3, 4, 5) to show proof of compliance with applicable standards. To an operation application, attach test results or methods used to show proof of compliance. Information provided when applying for an operation permit from a construction permit shall be indicative of the time at which the test was made.

3. Attach basis of potential discharge (e.g., emission factor, that is, AP42 test).

4. With construction permit application, include design details for all air pollution control systems (e.g., for baghouse include cloth to air ratio; for scrubber include cross-section sketch, design pressure drop, etc.)

5. With construction permit application, attach derivation of control device(s) efficiency. Include test or design data. Items 2, 3 and 5 should be consistent: actual emissions = potential (1-efficiency).

6. An 8 1/2" x 11" flow diagram which will, without revealing trade secrets, identify the individual operations and/or processes. Indicate where raw materials enter, where solid and liquid waste exit, where gaseous emissions and/or airborne particles are evolved and where finished products are obtained.

7. An 8 1/2" x 11" plot plan showing the location of the establishment, and points of airborne emissions, in relation to the surrounding area, residences and other permanent structures and roadways (Example: Copy of relevant portion of USGS topographic map).

8. An 8 1/2" x 11" plot plan of facility showing the location of manufacturing processes and outlets for airborne emissions. Relate all flows to the flow diagram.

9. The appropriate application fee in accordance with Rule 17-4.05. The check should be made payable to the Department of Environmental Regulation.

10. With an application for operation permit, attach a Certificate of Completion of Construction indicating that the source was constructed as shown in the construction permit.

SECTION VI: BEST AVAILABLE CONTROL TECHNOLOGY

NA

A. Are standards of performance for new stationary sources pursuant to 40 C.F.R. Part 60 applicable to the source?

[ ] Yes [ ] No

Contaminant	Rate or Concentration

B. Has EPA declared the best available control technology for this class of sources (If yes, attach copy)

[ ] Yes [ ] No

Contaminant	Rate or Concentration

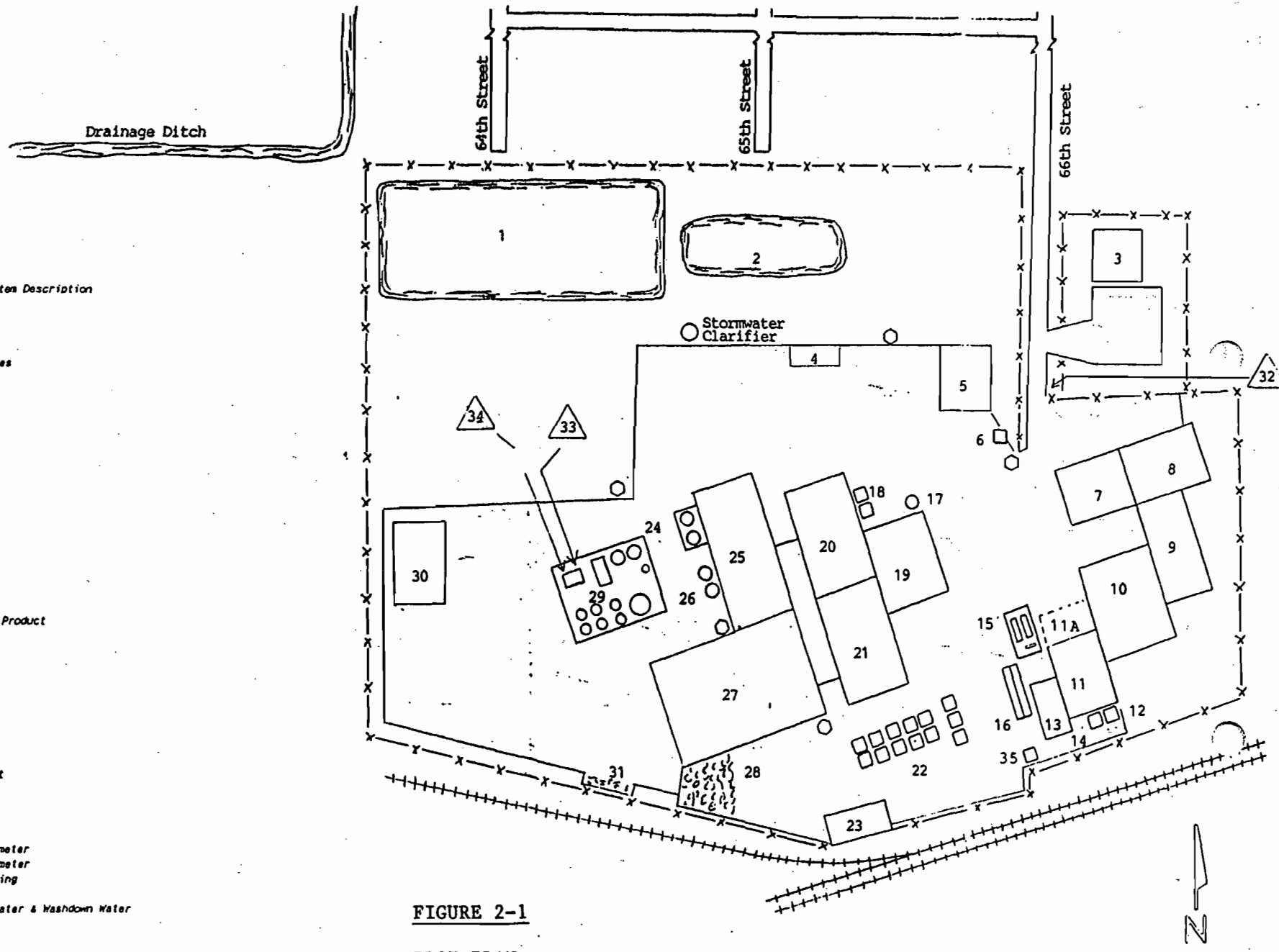
C. What emission levels do you propose as best available control technology?

Contaminant	Rate or Concentration

D. Describe the existing control and treatment technology (if any).

1. Control Device/System:
2. Operating Principles:
3. Efficiency:*
4. Capital Costs:

*Explain method of determining



Item Description

1. *Stormwater Tank*
2. *Old Stormwater Pond*
3. *Environmental/Safety Offices*
4. *Roofed Material Storage*
5. *Hygiene Building*
6. *Guard House*
7. *Laboratory*
8. *Administrative Offices*
9. *Warehouse*
10. *Maintenance/Welding Shop*
11. } Slag Fixation Bldg.
11A. }
12. *Keel Cast Baghouse*
13. *Mechanic Shop*
14. *Used Oil Storage*
15. *Fuel Storage*
16. *Truck Scales*
17. *Bulk Oxygen Tank*
18. *Refining Area Baghouses*
19. *Warehouse - Finished Lead Product*
20. *Refining & Pig Cast Area*
21. *Blast Furnace*
22. *Blast Furnace Baghouses*
23. *Slag Storage Tank*
24. *Sulfuric Acid Storage*
25. *Battery Saw Area*
26. *Sodium Hydroxide Tanks*
27. *Group Pile Building*
28. *Coke Pile*
29. *Wastewater Treatment Plant*
30. *Roofed Material Storage*
31. *Cast Iron Storage Bin*
32. *City Water Flowmeter*
33. *City Sewer Discharge Flowmeter*
34. *Stormwater Discharge Flowmeter*
35. *Existing Electrical Building*

⬡ - *Collection Sumps - Stormwater & Washdown Water*

▨ - *Paved Area*

File:SITEMAP

FIGURE 2-1

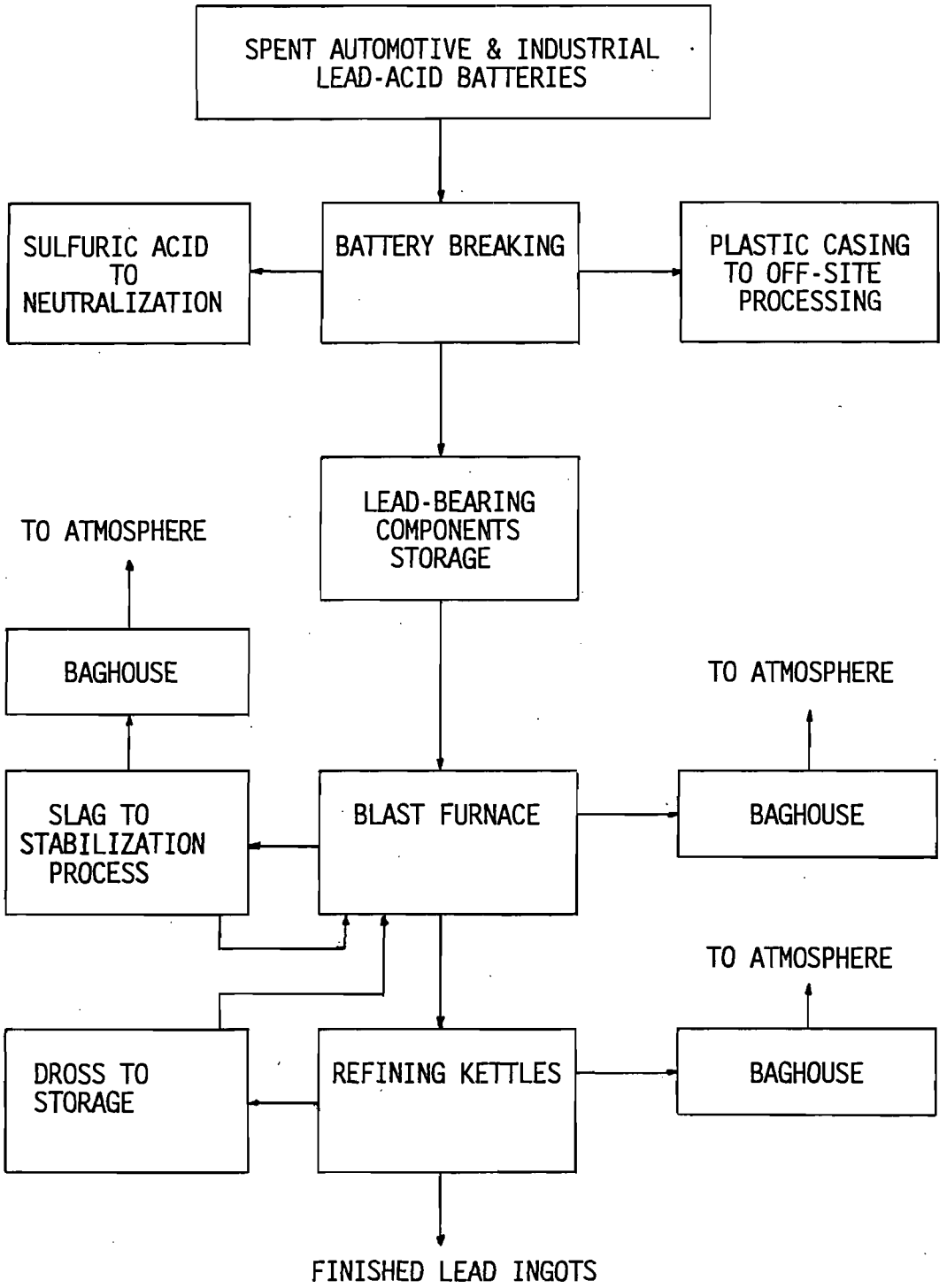
PLOT PLAN

GULF COAST RECYCLING, INC
TAMPA, FLORIDA

FIGURE 2-2

OVERALL PROCESS FLOW DIAGRAM

GULF COAST RECYCLING, INC.
TAMPA, FLORIDA



3.0 COMPLIANCE WITH RACT RULE REQUIREMENTS

In accordance with FAC Rule 62-275.410, the area encompassed within a radius of five kilometers, centered at UTM coordinates: Zone 17, 364.0 kilometers East and 3093.5 kilometers North, in Hillsborough County, is designated as nonattainment for the air pollutant lead.

Pursuant to definitions in FAC Rule 62-296.200, GCR is a "lead processing operation" and is subject to the provisions of FAC Rule 62-296.600, Reasonably Available Control Technology (RACT) for lead. GCR is submitting this permit application in order to address the recent lead rule requirements in FAC Rule 62-296.600. The specific rule requirements applicable to GCR are presented below.

GCR must comply with the permit requirements, operation and maintenance plan requirements, recordkeeping and reporting requirements, and compliance demonstration requirements of Rules 62-296.600(3) through 62-296.600(6), FAC, respectively, the general requirements of Rule 62-296.601, FAC and the specific emission limiting standards of Rules 62-296.602 through 62-296.605, FAC.

GCR will comply with the following rule requirements:

1. Permit Requirements: By September 30, 1994, GCR is applying for a new or revised federally enforceable air permit addressing the requirements of FAC Rule 62-296.600 pertaining to lead RACT. The permit application describes the reasonably available control technology employed to meet the rule requirements.

2. Operation and Maintenance Plan: GCR is submitting to the Department an operation and maintenance plan for the lead emissions control devices, collection systems, and processing systems. The operation and maintenance plan includes quarterly inspection methods for the lead emissions control devices, including black light leak detection tests or broken bag detectors in the baghouses, to prevent reduced lead collection efficiency. Lead oxide handling operations with the potential to emit 200 pounds or less of lead per year are exempt from the operation and maintenance plan provision.

3. Recordkeeping and Reporting: GCR will keep the following records for a minimum of two years and make them available for regulatory inspection (a) Records of control equipment operating parameters; (b) Maintenance records on the control equipment, including black-light tests, bag replacements, structural repairs, and motor replacements; (c) Records of control system malfunctions or failures and corrective actions taken.

4. Compliance Demonstration: GCR will demonstrate compliance with RACT limits as required by the construction permit addressing these requirements, and every five years thereafter. Compliance will be demonstrated as follows: (a) compliance with lead emission standards using EPA Method 12; (b) compliance with opacity standards using EPA Method 9.

No annual?

5. RACT for Fugitive Lead Emissions: GCR will use reasonably available control technology (RACT) to control lead emissions from vehicular movement, transportation of materials, construction, alteration,

demolition or wrecking, or industrially-related activities such as loading, unloading, charging, melting, tapping, casting, storing or handling. Examples of measures that constitute RACT, and to be implemented as necessary, are:

a. Paving, curbing, and maintaining roads, parking areas and yards which are routinely used by vehicular traffic.

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

c. Installing a permanent sprinkler system to continuously moisten open stock piles.

d. Vacuuming the roads and other paved areas under the control of GCR to prevent lead from becoming airborne.

e. Landscaping or vegetating unpaved roads, parking areas and yards.

f. Using hoods, fans, filters, and similar equipment to capture, contain, and control lead emissions.

g. Enclosing or covering conveyor systems.

h. Using walls or windbreaks to contain lead-bearing scrap, products, or raw materials.

6. Emission Limiting Standards: GCR will comply with the lead emission limitations summarized below.

Source	Lead Emission Limitation	
	gr/dscf	VE (% opacity)
Blast and slag furnaces	0.010	3 (at exit of APCD)
Closed charge doors	NA	3
Slag and product tapping	0.002	3 (at exit of APCD)
Blast furnace charging	0.002	3 (at exit of APCD)
Charge doors	NA	6 (during charging)
Melt kettles and pot furnaces	0.0002	3
Battery cracking	NA	3
Slag handling/processing	0.0000333	3
Lead oxide handling	NA	3

7. Collection Systems: Collection systems representing RACT will be installed and operated to capture, contain, and control lead emissions resulting from the storage, transport, and processing of all lead-bearing materials and products. Lead emissions will not be vented to the outside of any enclosed or partially enclosed process unless RACT is employed to control such emissions.

explain

8. Attainment Demonstration: As part of this permit application, GCR is submitting information to demonstrate to the Department that, after the application of RACT, the facility will not cause or contribute to a violation of the ambient air quality standard for lead as set forth in FAC Rule 62-272.300 (1.5 micrograms per cubic meter, maximum quarterly arithmetic average). The demonstration has been made using an air quality model as provided in FAC Rule 62-210.500 which addresses both stack and fugitive emissions.

4.0 AMBIENT AIR QUALITY ANALYSIS FOR LEAD

4.1 BACKGROUND AMBIENT AIRBORNE LEAD CONCENTRATION

The background concentration of airborne lead was estimated by using the 1993 ambient air monitoring data for Hillsborough County. The highest second-high 24-hour average total suspended particulate matter concentration in the air was 103 micrograms per cubic meter. It was assumed that the lead concentration of the total suspended particulate matter would be 2,000 ppm; the maximum lead concentration in soil samples collected at the Florida Steel site adjacent to GCR. Based on these conservative assumptions, the background concentration of airborne lead would be 0.21 micrograms per cubic meter, quarterly average. No other lead emissions are expected from the Florida Steel site as most activities have been curtailed and no other lead emitting facilities are expected to have a significant impact on the GCR site.

4.2 AIR DISPERSION MODELING

The point source and area source lead emissions from GCR, as addressed in the previous sections (see Table 4-1), were modeled with the ISC-ST2 (Version 93109) air quality model. Building dimensions were input to account for downwash of emissions from all point sources. As addressed in a previous section, fugitive emissions were assumed to emanate from area sources. The meteorological data used with the ISC-ST2 were from Tampa, Florida, and represented the period 1987-1991. It was determined from the modeling that the meteorological data for the Fourth Quarter of calendar year 1990 resulted in the highest ambient impacts. As a result, the impact analysis reported herein is based on meteorological data for the Fourth Quarter of calendar year 1990.

The receptors used for the modeling are shown in Figure 4-1. Receptors were selected to represent the GCR property line as well as receptors off property. Figures 4-2, 4-3 and 4-4 show the locations of the area sources selected to represent fugitive lead emissions.

The highest predicted impact of lead emissions from GCR is 1.1 micrograms per cubic meter, quarterly average (see Table 4-2). This impact is predicted south of the GCR property and west of the smelter building. If the background lead level is added to the impact predicted as a result of lead emissions from GCR, the total lead concentration at the point of maximum impact would be 1.3 micrograms per cubic meter, quarterly average. This impact is below the ambient air quality standard for lead of 1.5 micrograms per cubic meter, quarterly average.

The modeling output is provided on diskette and a summary is presented in Appendix C.

APPENDIX B

FUGITIVE EMISSIONS CALCULATIONS

The basis for the estimates of fugitive lead emissions from Gulf Coast Recycling (GCR) is the EPA Report entitled, Secondary Lead Smelter Test of Area Source Fugitive Emissions for Arsenic, Cadmium and Lead - Chloride Metals, Tampa, Florida, March 1985. The measurements were conducted at Chloride Metals in March 1984. The fugitive lead emissions reported for Chloride Metals were adjusted to conditions at GCR taking into consideration differences in production rates and differences in control efficiencies.

The operating rates representative of Chloride Metals in March 1984 were:

Annual Production	12,000 tons of lead per year
Daily Production during test period	37 tons per day
Battery Breaking	2,300 batteries per day

The measurements for fugitive lead emissions were made during normal working or during periods of time representative of a 100 percent operating factor.

The production rates for GCR used in adjusting fugitive lead emissions measured at Chloride Metals were:

Annual Production	28,000 tons of lead per year
Daily Production	86 tons per day
Battery Breaking	7,000 batteries per day
Operating Factor	318/325 days per year.

check

why 2

The fugitive lead emissions were estimated for the following sources, including battery breaking, raw materials storage, smelter building, slag storage, dross storage and vehicular traffic. The assumptions that were made in estimating fugitive lead emissions from GCR are discussed below.

Battery Breaking

At Chloride Metals, battery breaking was conducted in a shed-like structure with no significant enclosure. The area was normally wetted manually and by sprinklers. However, during the test period, the sprinklers were turned off so as not to interfere with the samplers. The battery breaking operation consisted of a slow and high speed saw, a hammer mill and a float/sink separator. The battery breaking rate during the test period was 2,300 batteries per day. The reported fugitive lead emission rate from this operation was 3.0 grams per hour.

always on during battery breaking?

At GCR, battery breaking is conducted in a shed-like structure with no appreciable enclosure. The area is wetted by sprinklers which operate on a programmed schedule. Activities include a slow speed saw, a hammermill and a float/sink separator. The battery breaking rate is 7,000 batteries per day. The battery breaking activity operates eight hours per day and five days per week. The following factors (multipliers) were used to adjust the lead emission rate measured at Chloride Metals.

Capacity factor

(7,000 batteries/day GCR)/(2300 batteries/day CM) = 3.04

based on.

Control Efficiency of water sprays estimated to be 50%,

(1 - 0.5) = 0.5

Operating Factor

(5 days/week at GCR)/(7 days/week) = 0.71

Estimated GCR lead emission rate

= 3.0 g/hr at CM x 3.04 x 0.50 x 0.71 = 3.26 g/hr

These emissions were assumed to emanate from an area source 60 feet in east-west dimension by 120 feet north-south dimension. The emissions were assumed to occur eight hours per day, five days per week.

Raw Materials Storage

The lead and lead residue removed from the battery carcass at Chloride Metals were stored in an open, three-sided structure with eight foot high concrete walls. The storage area was wetted by sprinklers. However, during the test period, the sprinklers were not operated. The fugitive lead emissions from the raw materials storage were determined to be 4.0 grams per hour.

At GCR, the raw materials are stored in three-sided concrete bins. The bins are enclosed in a covered structure with full walls on the west and south sides, a partial wall on the north side and the east side. The area is wetted by water sprays for fugitive emission control. Activity occurs within the storage area 325 days per year. The following factors (multipliers) were used to adjust the lead emission rate measured at Chloride Metals.

Capacity factor

The capacity factor used for adjusting emissions from raw materials storage was a ratio of annual productions as emissions from material storage are more a function of annual production than daily production.

(28,000 tpy at GCR)/(12,000 tpy at CM) = 2.33

Control efficiency by enclosure estimated to be 75%

(1 - 0.75) = 0.25

Control efficiency by water spray estimated to be 50%

(1 - 0.50) = 0.50

Operating factor

(325 day/year at GCR)/(365 days/year) = 0.89

Estimated GCR lead emission rate

= 4.0 g/hr at CM x 2.33 x 0.25 x 0.50 x 0.89 = 1.04 g/hr

These emissions were assumed to emanate from an area source approximately 180 feet east-west dimension by 120 feet north-south dimension. Emissions were assumed to occur 24 hours per day during the 325 days per year of operation.

Smelter Building

At Chloride Metals, during the test period, the lead production rate averaged 37 tons per day. The smelter building was open except for the west side. Fugitive emissions from the refining pots and dross hoods were collected and controlled by a scrubber. Potential emissions from slag tapping and the lead well were collected and controlled by a baghouse. There was no control of fugitive emissions generated during the furnace charging. Fugitive lead emissions were determined to be 58.0 g/hr.

At GCR, the daily lead production rate is 86 tons per day. The smelter building is open except for the north side. The west side of the smelter building opens into the raw material storage area which is described in another section. Fugitive emissions from the slag tapping and lead well are captured and controlled by a baghouse. Fugitive emissions during furnace charging are captured and controlled by two baghouses. Lead emissions from the refining pots and dross hoods, while in a separate building, are captured and controlled by two baghouses. The furnace was assumed to operate 24 hours per day, 318 days per year.

The following factors (multipliers) were used to adjust the lead emission rate measured at Chloride Metals.

Production rate

(86 tpd at GCR)/(37 tpd at CM) = 2.32

Control efficiency

Based on various reports, it was determined that 95+% of the fugitive emissions from a smelter building result from furnace charging. As Chloride Metals had no control for charging emissions and GCR has a well hooded and ventilated collection system, a 95% overall control efficiency was assumed for the smelter building.

(1 - 0.95) = 0.05

Operating factor

(318 days/yr at GCR)(365 days/yr) = 0.87

Estimated GCR lead emission rate

= 58 g/hr at CM x 2.32 x 0.05 x 0.87 = 5.85 g/hr

These emissions were assumed to emanate from an area source approximately 65 feet square. Emissions were assumed to occur 24 hours per day during the 318 days per year of operation.

Slag and Dross Storage

At Chloride Metals, the slag and dross were stored in open, three-sided structures. The slag was stored dry. The area for dross storage was wetted by sprinkler. During the test period, no slag loadout occurred, therefore, the reported emissions represent only lead emissions from the slag and dross storage area. The fugitive lead emissions were determined to be 5.3 g/hr.

At GCR, the dross is collected in containers and thoroughly wetted. The wetted drosses are transferred to the raw materials storage area and are wetted as described in another section. The slag at GCR will be crushed and treated in an enclosed fixation process, thus, eliminating the slag storage area.

The following factors (multipliers) were used to adjust the lead emission rate measured at Chloride Metals.

Production rate

(28,000 tpy at GCR)/(12,000 tpy at CM) = 2.33

Control efficiency

The practices of thoroughly wetting the dross and storing the wetted drosses in the GCR raw material was assumed to reduce emissions 95%. — based on ?

(1 - 0.95) = 0.05

Elimination of slag storage area will effectively reduce the lead emission rate measured at Chloride Metals by 50%; assuming half of the lead emissions were from slag storage and half from dross storage.

(1 - 0.50) = 0.50

Operating factor

Activities in the dross storage area were assumed to take place 318 days per year. — Chl. metals?

(318 day/year at GCR)/(365 days/year) = 0.87

Estimated GCR lead emission rate

= 5.3 g/hr at CM x 2.33 x 0.05 x 0.5 x 0.87 = 0.27 g/hr

These emissions were assumed to emanate from an area source approximately 80 feet square. Emissions were assumed to occur 24 hours per day during the 318 days per year of operation.

Vehicle Traffic

The traffic generating fugitive emissions both at GCR and Chloride Metals includes front end loaders and fork lifts moving materials within the plant and truck traffic delivering raw materials to the plant or removing waste materials from the plant. In both cases, the areas in which these vehicles travel are swept and wetted. The lead emissions due to vehicle traffic at Chloride Metals were determined to be 0.45 g/hr.

The following factors (multipliers) were used to adjust the lead emission rate measured at Chloride Metals.

Annual production factor

(28,000 tpy at GCR)/(12,000 tpy at CM) = 2.33

Annual operating factor

(325 days/yr at GCR)/(365 days/yr) = 0.89

Estimated GCR lead emission rate

= 0.45 g/hr at CM x 2.33 x 0.89 = 0.93 g/hr

These lead emissions due to vehicle traffic were assumed to emanate from eight area sources each approximately 60 feet square. Emissions were assumed to occur 24 hours per day and 325 days per year.

Point Source Lead Emissions

Point source lead emissions from GCR are based on the requirements of FAC Rule 62-296. These emission rates are summarized in Table 2-1.

APPENDIX C

SUMMARY OF MODELING OUTPUT

AMBIENT AIR IMPACT SUMMARY
FOR LEAD EMISSION SOURCES

GULF COAST RECYCLING, INC.
TAMPA, FLORIDA

Year	Quarterly Average Lead Impact (ug/m^3)			
	1	2	3	4
1987	0.63	0.59	0.65	0.97
1988	0.65	0.55	0.66	0.97
1989	0.59	0.46	0.73	0.96
1990	0.63	0.61	0.93	1.11
1991	0.63	0.61	0.77	1.07

Impact of lead emissions from GCR for various sets of Tampa meterological data

Maximum of 1.11 for the fourth quarter of 1990

TABLE 4-1

AIR QUALITY MODELING PARAMETERS
FOR LEAD EMISSIONS SOURCES

GULF COAST RECYCLING, INC.
TAMPA, FLORIDA

Point Sources	Lead Emissions (g/s)	Stack Parameters			
		Ht. (m)	Dia. (m)	Temp. (K)	Vel. (m/s)
Blast Furnace	0.2009880	45.72	0.61	339	17.37
Slag Tapping	0.0081484	10.97	0.32	305	18.89
Furnace Charging	0.0190345	19.81	0.61	308	15.80
Lead Refining	0.0060000	9.14	0.67	308	22.90
Slag Processing	0.0001115	7.62	0.61	333	5.49

Fugitive Sources	Lead Emissions g/s / sq.m	Release Height (m)	Area Dimension (m)
Battery Breaking, Area 1	1.40E-6	2.0	18
Battery Breaking, Area 2	1.40E-6	2.0	18
RM Storage, Area 1	1.78E-7	2.0	18
RM Storage, Area 2	1.78E-7	2.0	18
RM Storage, Area 3	1.78E-7	2.0	18
RM Storage, Area 4	1.78E-7	2.0	18
RM Storage, Area 5	1.78E-7	2.0	18
Smelter Bldg, Area 1	4.17E-6	3.7	10
Smelter Bldg, Area 2	4.17E-6	3.7	10
Smelter Bldg, Area 3	4.17E-6	3.7	10
Smelter Bldg, Area 4	4.17E-6	3.7	10
Dross Storage	1.22E-7	1.5	25
Vehicle Traffic, Area 1	1.00E-7	1.0	18
Vehicle Traffic, Area 2	1.00E-7	1.0	18
Vehicle Traffic, Area 3	1.00E-7	1.0	18
Vehicle Traffic, Area 4	1.00E-7	1.0	18
Vehicle Traffic, Area 5	1.00E-7	1.0	18
Vehicle Traffic, Area 6	1.00E-7	1.0	18
Vehicle Traffic, Area 7	1.00E-7	1.0	18
Vehicle Traffic, Area 8	1.00E-7	1.0	18

Table 4-2

AMBIENT AIR IMPACT SUMMARY
FOR LEAD EMISSION SOURCES

GULF COAST RECYCLING, INC.
TAMPA, FLORIDA

Year	Quarterly Average Lead Impact (ug/m^3)			
	1	2	3	4
1987	0.63	0.59	0.65	0.97
1988	0.65	0.55	0.66	0.97
1989	0.59	0.46	0.73	0.96
1990	0.63	0.61	0.93	1.11
1991	0.63	0.61	0.77	1.07

Impact of lead emissions from GCR for various sets of Tampa meterological data

Maximum of 1.11 for the fourth quarter of 1990

FIGURE 4-1

RECEPTOR GRID

GULF COAST RECYCLING, INC.
TAMPA, FLORIDA

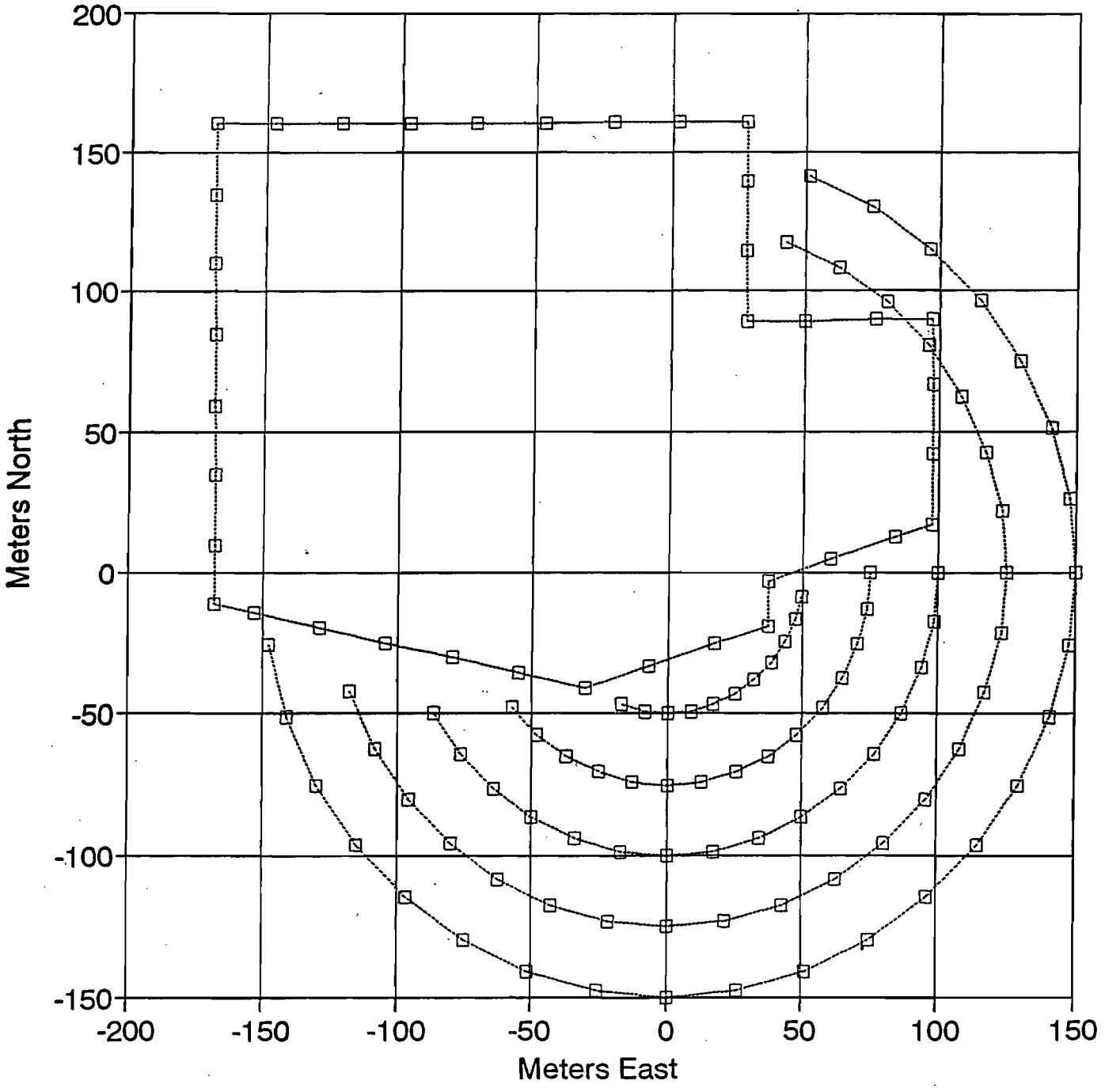


FIGURE 4-2
AREA SOURCE LOCATIONS - ROAD SOURCES
GULF COAST RECYCLING, INC.
TAMPA, FLORIDA

FIGURE 4-3

AREA SOURCE LOCATIONS - DROSS & SMELTER

GULF COAST RECYCLING, INC.
TAMPA, FLORIDA

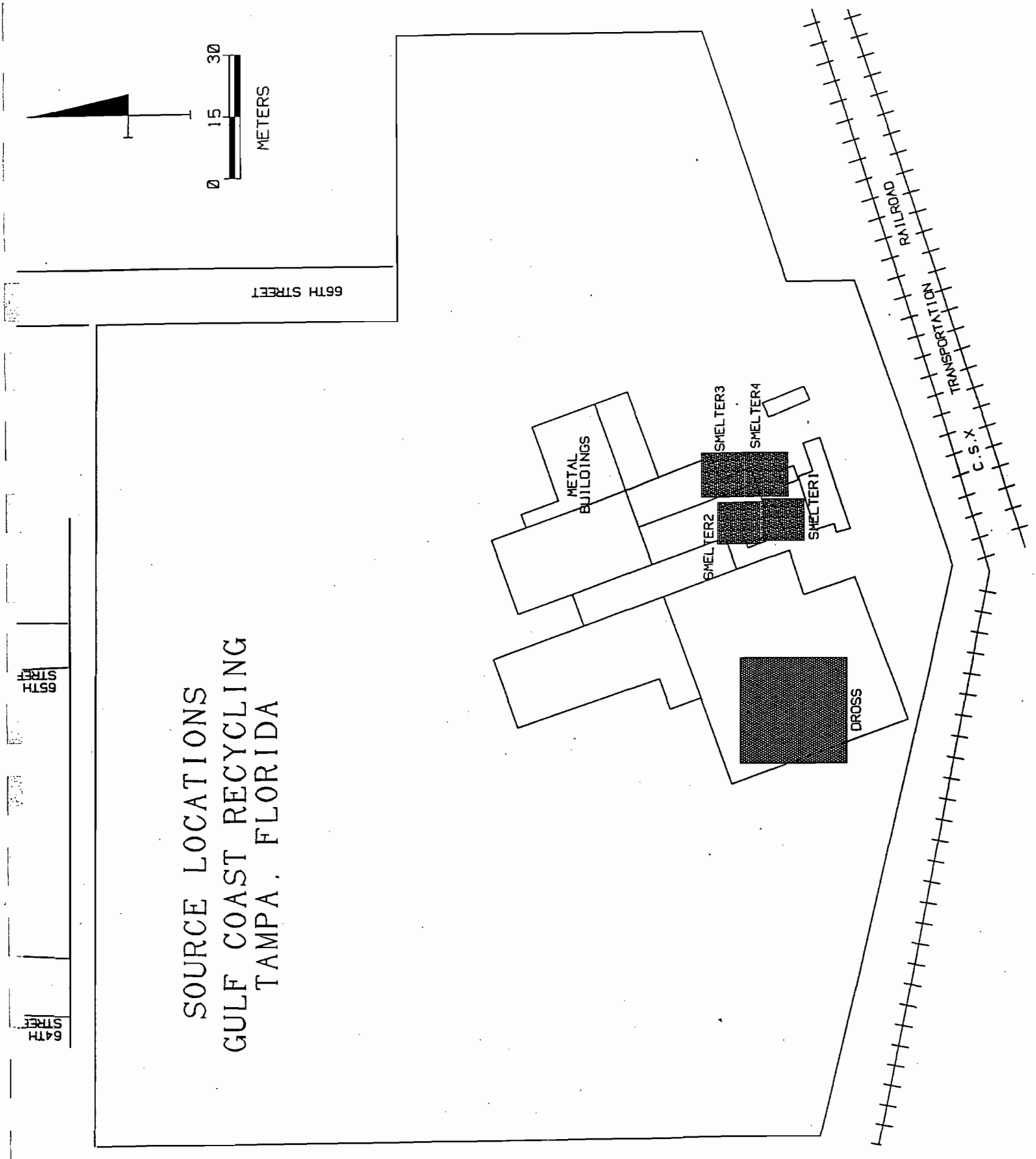


FIGURE 4-4

AREA & POINT SOURCE LOCATIONS - MATERIAL STORAGE

GULF COAST RECYCLING, INC.
TAMPA, FLORIDA

5.0 CONCLUSION

It can be concluded from the information in this report that the GCR facility will be in compliance with all the lead RACT requirements in FAC Rule 62-296.600. The air modeling analysis conducted in this application indicates that GCR will not cause or contribute to a violation of the lead ambient air quality standard.

6-14-94

Gulf Coast Recycling, Inc.
PSD-FL-215
Summary for PE Review

Date Assigned: June 7, 1994 Date Reviewed: June 14, 1994

APPLICANT INFORMATION

Gulf Coast Recycling (GCR) has applied for an after-the-fact construction permit to modify a battery recycling facility located in Tampa near the intersection of Highway 41 and Interstate 4. When initially constructed in 1984/85, this facility was determined by the Department to be exempt from PSD/NSR rules, however, the EPA later concluded that PSD/NSR should have been applied, hence, this permit is being submitted retroactively.

PROJECT DESCRIPTION

The project involved the construction of a new blast furnace which started up in late 1984. An operating permit was issued on January 28, 1985, then another on July 17, 1990, followed by a permit modification on November 19, 1990. This permit expires on November 15, 1995.

GCR recycles the lead from discarded automotive and industrial batteries. Steps in the process involve crushing, component separation, acid neutralization, and refining of the lead-bearing components. Both refined lead ingots and special lead alloys are produced.

How?

PROCESS DESCRIPTION

$FeS + Fe^{++} + S^{--} \rightarrow FeS$

Lead is charged along with coke, lime rock, cast iron and slag into a 60 ton blast furnace. The purpose of the lime rock is to displace lead from any lead silicate which may have formed. Cast iron combines with sulfur present to form iron sulfide which reduces sulfur dioxide emissions. Molten lead collects at the bottom of the furnace and is withdrawn for further refining or casting into ingots.

EMISSION SOURCES

The major source of air pollution is the blast furnace which burns metallurgical coke in the smelting of scrap lead. Emissions are generated from the charging and tapping operations as well as the furnace exhaust. Similar emissions are generated by a separate slag furnace. Other emission points include baghouse vents and loading/receiving areas.

POLLUTANTS EMITTED

PSD NOT SIGNIFICANT (NS) PSD PALT PSD NS NS

Air pollutants include SO2, Pb, PM, CO, NOx, and VOCs.

EMISSION CONTROL EQUIPMENT

Synthetic MINOR

Three sets of individually vented baghouses control emissions from the charging, tapping and furnace operations.

RULE APPLICABILITY

The subject area of Hillsborough County is classified as attainment for regulated pollutants except for Pb, Ozone and PM for which it is nonattainment and SO2 for which it is unclassifiable. PSD review is required for SO2 and CO while RACT applies to PM emissions. Other pollutant increases are below significant increase levels. Chassahowitzka NWA is the nearest Class I area. GCR is located approximately 47 miles SSE of the Class I area.

MODELING

Modeling analyses include a summary of ambient monitoring data and a source emission inventory for establishing baseline data. Dispersion modeling analyses were done for SO2 and CO. An AQRV analysis was included also.

United States Department of the Interior

FISH AND WILDLIFE SERVICE
1875 Century Boulevard
Atlanta, Georgia 30345

IN REPLY REFER TO:

July 13, 1994

RECEIVED
JUL 20 1994
Bureau of
Air Regulation

Mr. Clair H. Fancy
Chief, Bureau of Air Regulation
Department of Environmental Regulation
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399

Dear Mr. Fancy:

We have reviewed the Prevention of Significant Deterioration (PSD) permit application for Gulf Coast Recycling, Inc.'s (Gulf Coast) modification of their lead-acid battery recycling facility. We understand that the modification was completed in 1984, at which time a PSD review was not done. It was subsequently determined that a PSD review was applicable and that a full PSD analysis needed to be performed retroactively. The facility is located 75 km south-southeast of Chassahowitzka Wilderness Area (WA), a Class I air quality area, administered by the Fish and Wildlife Service (Service).

We find the application to be incomplete. Our reasons are discussed below.

Net Emission Increase

We are concerned that the baseline emissions used to determine the net emission increase for this facility are not based on the correct years and may not represent the actual increase in emissions which has affected Chassahowitzka WA over the past 9 years. The baseline emissions appear to be based on operation of the new furnace as it is presently permitted. The definition of "net emissions increase" requires that actual emission changes be evaluated to determine if Prevention of Significant Deterioration (PSD) applies. "Actual" emissions are defined as emissions which occur over a 2-year period (or any other representative period) before a modification occurs. Because the replacement of the old furnaces with the new furnace did not undergo PSD review, the new furnace must be treated as if it does not exist, for all analyses and evaluations. The proper baseline emissions are therefore the emissions which existed before the new furnace was installed. According to the Environmental Protection Agency's PSD determination memorandum included in the application, the increase in

sulfur dioxide (SO_2) emissions was estimated to be 356 TPY. In their application, Gulf Coast estimated the increase to be 251 TPY. We estimate the increase to be 824 TPY using the proposed emission rates and operating hours. We request that the net emission increase be recalculated based on the correct baseline years for all pollutants, and that analyses be redone if they were based on incorrect emission rates.

Best Available Control Technology (BACT)

The BACT analysis included in the application is incomplete. First, the application states that numerous technologies are available for controlling SO_2 emissions, yet only three are included in the analysis. The applicant should list the technologies and either explain why the others were not analyzed (based on technical infeasibility), or explain in more detail why the two chosen represent the others in the areas of removal efficiency, costs, and environmental considerations. Second, the analysis does not compare emission rates and cost effectiveness to similar facilities; therefore, the statements that proposed technologies are not feasible have not been properly documented. For example, the application states that two facilities are using desulfurization to reduce SO_2 emissions. The indicated costs are not compared to costs borne by the two other facilities, therefore, it cannot be determined if the cost is reasonable or not. The same is true of the dry and wet scrubber costs. The costs should be compared to similar facilities, not to a 12-year-old document (Costs for Control of SO_2 Emissions, CEP June 1982). In any case, inflation was not taken into account when comparing the estimated cost to the CEP document. Please note that the Interstate Lead Company in Alabama is required to use a wet scrubber to control SO_2 emissions by 94.2 percent. All cost calculations should be based on demonstrated control efficiencies, not lower efficiencies which provide a "cushion" and skew the cost effectiveness results (90 percent control instead of 95 percent control as attained by the two mentioned facilities was used to evaluate desulfurization). Finally, the analysis should discuss the contribution to SO_2 emissions from the coke used in the process and possible control alternatives.

Additional BACT analyses may be required for other pollutants, based on the outcome of revised net emission increase calculations (see discussion above).

Facilitywide Lead Emission Cap

Gulf Coast requests an overall lead emission cap of .59 TPY for its facility. We request that the permit include appropriate enforceable conditions, such as monitoring, recordkeeping, and reporting requirements, to ensure that PSD review is not triggered.

Air Quality Modeling Analysis

The air quality analysis for the Gulf Coast PSD permit is not complete. The proposed emissions increase in SO_2 emissions was underestimated (see discussion above). The revised emissions increase should be reflected in revised dispersion modeling. Dispersion modeling with the EPA Industrial Source Complex Short Term model indicated that Gulf Coast exceeded the Service Class I SO_2 significant impact levels for the 3-hour and 24-hour averaging periods during periods when the cumulative increment analysis indicated violations. Therefore, Gulf Coast performed a refined dispersion modeling analysis with the EPA MESOPUFF II model. There are several deficiencies in the MESOPUFF II analysis. First, the modeling only used one upper air station, Tampa/Ruskin, Florida. While the Gulf Coast facility itself is close to this site and is probably well represented by its data for most times, this one upper air station is not sufficient to address the windflow from other sources within the State in the cumulative analysis. Therefore, we request that two additional upper air stations also be included in the revised analysis. These stations are West Palm Beach, Florida, and Waycross, Georgia. Second, in the MESOPUFF analysis, the modeling only used the chemistry and deposition options for Gulf Coast impacts; it did not use these options for the 137 other sources included in the cumulative analysis. In the revised modeling analysis, we ask that the full chemistry and deposition options be exercised as recommended in the EPA document Interagency Workgroup on Air Quality Modeling (IWAQM) Phase 1 Report: Interim Recommendation for Modeling Long Range Transport and Impacts on Regional Visibility (EPA-454/R-93-015, April 1993). This will provide a more realistic assessment of actual impacts to AQRVs and Class I increment at Chassahowitzka WA.

There was no visibility analysis performed for the application. We ask that Gulf Coast use the EPA VISCREEN model to assess whether their emissions would result in a visible plume at Chassahowitzka WA.

Finally, we have one further comment regarding the dispersion modeling that was performed for the SO_2 National Ambient Air Quality Analysis (NAAQS). The application states that a monitor close to the Gulf Coast facility (5 miles) was being strongly impacted by other sources close to the monitor. Therefore, another monitor site was chosen to represent background SO_2 concentrations. This second monitor, known as TECO Big Bend Road, had a highest annual impact of 6 $\mu g/m^3$. The State is proposing to use this 6 $\mu g/m^3$ as the background value not only for the annual averaging period, but also for the 3-hour and 24-hour averaging periods. We disagree with this decision and suggest that SO_2 values monitored at the TECO Big Bend Road site

for the 3-hour and 24-hour periods be applied as background and added to the NAAQS impact analysis.

Air Quality Related Values Analysis (AQRV)

PSD applicants whose emissions may affect a Class I area are required to analyze potential impacts to Class I AQRVs. Gulf Coast discussed effects to vegetation and visibility in general, but did not address these resources in the Class I area--nor did they discuss potential impacts to other Class I AQRVs, including soils, wildlife, and aquatic resources. Please have Gulf Coast analyze potential impacts to all Class I AQRVs, including lichens, which are far more sensitive to SO_2 than the vascular plants mentioned in the application.

If you have questions, please call Ms. Ellen Porter of our Air Quality Branch in Denver at telephone number 303/969-2071.

Sincerely yours,

James W. Pulliam, Jr.
Regional Director

cc: J. Reynolds
E. Holladay
J. Kissel BWD
J. Campbell, EPCHC
J. Harper, EPA
J. Morales-Caramella
CHF/JB/APL

Department of Environmental Protection

Lawton Chiles
Governor

Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Virginia B. Wetherell
Secretary

June 28, 1994

Mr. Willis M. Kitchen, President
Gulf Coast Recycling, Inc.
1901 North 66th Street
Tampa, FL 33619

Re: Completeness Review for Application to Construct 60 ton Blast Furnace
AC 29-209018, PSD-FL-215

The Department has reviewed the above referenced application package received on May 31, 1994. Based on our initial review of your proposed project, we have determined that additional information is needed in order to process this application. Please complete the application by providing the information requested below:

1. Please respond to all of the comments contained in the attached letters which were faxed to the us by the National Park Service and the Environmental Protection Commission of Hillsborough County. In addition, you have not adequately addressed the comments contained in the EPA PSD determination memo (dated June 19, 1991) contained in Appendix B of your application. Please address all of these comments also.

2. You have performed screening modeling which shows that Gulf Coast Recycling (GCR) is not significantly contributing to predicted violations of the Florida Ambient Air Quality Standards (AAQS) for SO_2. The Department, in its September 24, 1993, letter to Lake Engineering concerning this project, stated that refined modeling should be performed using a finer mesh receptor grid centered over any critical receptors identified in the screening phase. Critical receptors for this project are receptors where exceedances of the AAQS are predicted when emissions from all 68 sources are modeled. The receptor spacing within 1 km of GCR is already sufficiently dense to be considered refined modeling. However, at receptor distances greater than 1 km from GCR, you must perform refined modeling at any receptor points where GCR's contribution to a predicted exceedance is within 20 percent of an applicable significant impact level. Refined modeling for these situations consists of modeling impacts from GCR's emissions at 100 m intervals out to a distance of 500 m (10 X 10 grid) around any of these receptor points. This modeling should be done using this refined grid for the year or for the day or 3-hour period during which an exceedance is predicted. If

any of the impacts predicted at these refined receptors exceeds the appropriate significant impact level, then all of the 68 surrounding sources must be modeled at that particular receptor to determine whether there is a predicted exceedance of the AAQS at that receptor point. If there is a predicted exceedance of the AAQS, then GCR would be significantly contributing to an exceedance.

If there are any questions, please call Cleve Holladay or John Reynolds at (904) 488-1344 or write to me at the above address.

Sincerely,

John C. Brown, Jr., P.E.
Administrator
Air Permitting and Standards

CHF/cgh

Enclosures

cc: Larry Carlson, Lake Engineering
Joyce Morales-Caramella, GCR
Liz Deken, EPCHC
Bill Thomas, DEP/SWD
Doug Beason, DEP/OGC
John Bunyak, NPS
Jewell Harper, EPA Region IV

Mr. Clair Fancy
Chief, Bureau of Air Regulation
Florida Department of Environmental Regulation
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Dear Mr. Fancy:

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We find the application to be incomplete. Our reasons are discussed below.

Net Emission Increase

We are concerned that the baseline emissions used to determine the net emission increase for this facility are not based on the correct years, and may not represent the actual increase in emissions which has affected Chassahowitzka WA over the past 9 years. The baseline emissions appear to be based on operation of the new furnace as it is presently permitted. The definition of "net emissions increase" requires that actual emission changes be evaluated to determine if Prevention of Significant Deterioration (PSD) applies. "Actual" emissions are defined as emissions which occur over a 2-year period (or any other representative period) before a modification occurs. Because the replacement of the old furnaces with the new furnace did not undergo PSD review, the new furnace must be treated as if it does not exist, for all analyses and evaluations. The proper baseline emissions are therefore the emissions which existed before the new furnace was installed. According to the Environmental Protection Agency's PSD determination memo included in the application, the increase in sulfur dioxide (SO_2) emissions was estimated to be 356 TPY. In their application, Gulf Coast estimated the increase to be 251 TPY. We estimate the increase to be 824 TPY using the proposed emission rates and operating hours. We request that the net emission increase be recalculated based on the correct baseline years for all pollutants, and that analyses be redone if they were based on incorrect emission rates.

Best Available Control Technology (BACT)

The BACT analysis included in the application is incomplete. First, the application states that numerous technologies are available for controlling SO_2 emissions, yet only three are included in the analysis. The applicant should list the technologies and either explain why the others were not analyzed (based on technical infeasibility), or explain in more detail why the two chosen represent the others in the areas of removal efficiency, costs and environmental considerations. Second, the analysis does not compare emission rates and cost effectiveness to similar facilities, therefore the statements that proposed technologies are not feasible have not been properly documented. For example, the application states that two facilities are using desulfurization to reduce SO_2 emissions. The indicated costs are not compared to costs borne by the two other facilities, therefore it cannot be determined if the cost is reasonable or not. The same is true of the dry and wet scrubber costs. The costs should be compared to similar facilities, not to a 12-year-old document (Costs for Control of SO_2 Emissions, CEP June 1982). In any case, inflation was not taken into account when comparing the estimated cost to the CEP document. Please note that the Interstate Lead Company in Alabama is required to use a wet scrubber to control SO_2 emissions by 94.2 percent. All cost calculations should be based on demonstrated control efficiencies, not lower efficiencies, which provide a "cushion" and skew the cost effectiveness results (90 percent control instead of 95 percent control as attained by the two mentioned facilities was used to evaluate desulfurization). Finally, the analysis should discuss the contribution to SO_2 emissions from the coke used in the process, and possible control alternatives.

Additional BACT analyses may be required for other pollutants, based on the outcome of revised net emission increase calculations (see discussion, above).

Facility-wide Lead Emission Cap

Gulf Coast requests an overall lead emission cap of .59 TPY for its facility. We request the permit include appropriate enforceable conditions, such as monitoring, recordkeeping, and reporting requirements, to ensure that PSD review is not triggered.

Air Quality Modeling Analysis

The air quality analysis for the Gulf Coast PSD permit is not complete. The proposed emissions increase in SO_2 emissions was underestimated (see discussion, above). The revised emissions increase should be reflected in revised dispersion modeling. Dispersion modeling with the EPA Industrial Source Complex Short Term (ISCST) model indicated that Gulf Coast exceeded the FWS Class I SO_2 significant impact levels for the 3-hour and 24-hour averaging periods during periods when the cumulative increment analysis indicated violations. Therefore, Gulf Coast performed a refined dispersion modeling analysis with the EPA MESOPUFF II model. There are several deficiencies in the MESOPUFF II analysis. First, the modeling only used one upper air station, Tampa/Ruskin, Florida. While the Gulf Coast facility itself is close to this site and is probably well represented by

its data for most times, this one upper air station is not sufficient to address the wind flow from other sources within the State in the cumulative analysis. Therefore, we request that two additional upper air stations also be included in the revised analysis. These stations are West Palm Beach, Florida, and Waycross, Georgia. Second, in the MESOPUFF analysis, the modeling only used the chemistry and deposition options for Gulf Coast impacts; it did not use these options for the other 137 other sources included in the cumulative analysis. In the revised modeling analysis, we ask that the full chemistry and deposition options be exercised as recommended in the EPA document Interagency Workgroup on Air Quality Modeling (IWAQM) Phase 1 Report: Interim Recommendation for Modeling Long Range Transport and Impacts on Regional Visibility (EPA-454/R-93-015, April 1993). This will provide a more realistic assessment of actual impacts to AQRVs and Class I increment at Chassahowitzka WA.

There was no visibility analysis performed for the application. We ask that Gulf Coast use the EPA VISCREEN model to assess whether their emissions would result in a visible plume at Chassahowitzka WA.

Finally, we have one further comment regarding the dispersion modeling that was performed for the SO_2 National Ambient Air Quality Analysis (NAAQS). The application states that a monitor close to the Gulf Coast facility (5 miles), was being strongly impacted by other sources close to the monitor. Therefore, another monitor site was chosen to represent background SO_2 concentrations. This second monitor, known as TECO Big Bend Road, had a highest annual impact of 6 $\mu g/m^3$. The State is proposing to use this 6 $\mu g/m^3$ as the background value not only for the annual averaging period, but also for the 3-hour and 24-hour averaging periods. We disagree with this decision, and suggest that SO_2 values monitored at the TECO Big Bend Road site for the 3-hour and 24-hour periods be applied as background and added to the NAAQS impact analysis.

Air Quality Related Values (AQRVs) Analysis

PSD applicants whose emissions may affect a Class I area are required to analyze potential impacts to Class I AQRVs. Gulf Coast discussed effects to vegetation and visibility in general, but did not address these resources in the Class I area. Nor did they discuss potential impacts to other Class I AQRVs, including soils, wildlife, and aquatic resources. Please have Gulf Coast analyze potential impacts to all Class I AQRVs, including lichens, which are far more sensitive to SO_2 than the vascular plants mentioned in the application.

If you have questions, please call Ellen Porter of our Air Quality Branch in Denver at (303) 969-2071.

Sincerely,

James W. Pulliam, Jr.
Regional Director

cc: Jewell Harper, Chief
Air Enforcement Branch
Air, Pesticides and Toxic Management Division
U.S. EPA, Region 4
345 Courtland Street, NE
Atlanta, Georgia 30365

COMMISSION
PHYLLIS BUSANSKY
JOE CHILLURA
SYLVIA KIMBELL
LYDIA MILLER
JIM NORMAN
JAN KAMINIS PLATT
ED TURANCHIK

FAX (813) 272-5157

ENVIRONMENTAL PROTECTION COMMISSION
HILLSBOROUGH COUNTY

ROGER P. STEWART
EXECUTIVE DIRECTOR
ADMINISTRATIVE OFFICES AND WATER MANAGEMENT DIVISION
1900 - 9TH AVENUE
TAMPA, FLORIDA 33605
TELEPHONE (813) 272-5960

AIR MANAGEMENT DIVISION
TELEPHONE (813) 272-5530

WASTE MANAGEMENT DIVISION
TELEPHONE (813) 272-5788

ECOSYSTEMS MANAGEMENT DIVISION
TELEPHONE (813) 272-7104

June 28, 1994

Mr. Preston Lewis
Division of Air Resources Management
Florida Department of Environmental
Protection
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Re: Gulf Coast Recycling PSD Permit Application

Dear Mr. Lewis:

The Environmental Protection Commission (EPC) of Hillsborough County has reviewed the PSD application submitted by Gulf Coast Recycling, Inc. (GCR) and based on our review, the following is a list of items that needs to be addressed:

1. In the PSD application, GCR has requested a SO_2 allowable of 374 lbs./hr. and a process input rate of 6.0 tons/hour with no SO_2 emission controls. The November 4, 1993 compliance test for the blast furnace resulted in an average SO_2 emission rate of 377 lbs./hr. Testing was conducted at a process input rate of 4.65 tons/hr. (The 1988 compliance test also resulted in a SO_2 emission rate of 377 lbs./hr. at a process input rate of 4.8 tons/hr.) Based on this compliance test, how can GCR provide the Department with reasonable assurances that at the increased process rate the allowable SO_2 emission rate will not be exceeded when the proposed limitation was exceeded at a lower process input rate?

2. The proposed afterburner is noted to have a residence time of 0.5 - 2.0 seconds. Please provide supporting documentation that demonstrates the relationship of a specific residence time (to be used as a minimum) and its relationship to destruction efficiency for CO and VOC. In addition, please provide information on the proposed installation location of the afterburner and its effects on the performance of the baghouse in accordance with 17-4.070(1), F.A.C. Please be advised that specific design information on the afterburner will have to be submitted and reviewed in order to determine if the proposed destruction efficiency and residence time can be met.

Please be advised that the proposed MACT standards for secondary lead smelting operations have been published. GCR may wish to consider the proposal when designing control equipment for applicable pollutants.

3. In Section III.C. of the Construction Application and Table 2.1 of the submittal, the actual emissions were tabulated for some pollutants using permitted allowables or maximum emission rates. Please be advised that actual emissions should be calculated based on actual production rates, compliance tests, and operating information. Revise these tables to reflect actual emissions. A definition of actual emissions can be found in 40 CFR 52 and 17-210, F.A.C.

4. In Section 2.1.4. and 7.0 of the application submittal, GCR indicates that the installation of an afterburner will result in the reduction of SO_2 formation. Please explain specifically how the formation of SO_2 will be reduced though process controls included in the response should be a description of how each process parameter/control will affect SO_2 formation. In addition, Section 2.4.4. discusses incorporating operating parameters to minimize CO formation. Please provide more information on the referenced operating parameters for our review and approval.

5. Any application submitted to the Department for review should address all regulated pollutants. Based on information gathered by the EPA, Secondary Lead Smelters can be sources of a number of hazardous air pollutants as defined by Title III of the Clean Air Act Amendments including HCl. In addition, this source category can also be a source of H_2S and SAM emissions. Emissions of these pollutants should be addressed in the application. Please provide emission rates for all regulated air pollutants.

6. In Section 2.0 of the submittal, GCR indicates that the emissions from the tapping, charging, and agglomeration furnace are incorporated into the blast furnace emissions. The tapping and charging should be calculated separately since they do not share ducting with the main baghouse controlling blast furnace emissions. GCR should calculate regulated air pollutant emissions from the tapping and charging operations separately and include in the calculation a capture efficiency for the hoods. For example, SO_2 emission estimates in the application were based on tests conducted on the stack for the blast furnace exhaust and did not include any emissions from tapping and charging.

7. Please address how the federally enforceable limitations on operations downstream of the blast furnace may be affected by an increase in the production rate of the blast furnace.

8. In the economic analysis for the proposed SO_2 emission control systems the following needs to be addressed:

   1) In a meeting with DEP and GCR in Tallahassee and Liz Deken by telephone, GCR indicated the tipping fee for disposal of lime waste from dryscrubbing was $15/ton; however, in the PSD submittal a $250/ton figure was used in the economic analysis. What does the $250/ton figure represent and what was it based on?

   2) The economic analysis does not take into account the benefit received by operating the furnace without SO_2 controls since 1984.

   3) When evaluating dry scrubbing for SO_2 with lime, the option of using the dryscrubbing lime containing waste to treat the waste water on site and then disposing of the filter cake was not addressed. This option should be addressed and include in the economic feasibility.

   4) Economic analysis for the scrubbing options for SO_2 and the control options submitted should incorporate the benefits obtained by removal of other regulated air pollutants such as acid gases or HAPs.

   5) GCR should include in the economic benefit analysis how they are determining economic feasibility. What are the proposed cost of controls being compared or evaluated against?

9. Please indicate how you will provide offsets to alleviate the modelling exceedance of the 3-hour sulfur dioxide standard indicated in Table 4.3 of your PSD application. Neither the Department nor the Environmental Protection Commission of Hillsborough County is in a position to authorize any increase in emissions, regardless of the level of significance, when an ambient standard is being exceeded.

Based on our review, we believe the above stated items should be addressed by GCR. Should you have any questions or require additional information about any of the material addressed in this letter, please contact Jerry Campbell or myself at (813) 272-5530.

Sincerely,

Liz Deken
Chief, Air Toxics Section

bm

Is your RETURN ADDRESS completed on the reverse side?

SENDER:
- Complete items 1 and/or 2 for additional services.
- Complete items 3, and 4a & b.
- Print your name and address on the reverse of this form so that we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write "Return Receipt Requested" on the mailpiece below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):
1. ☐ Addressee's Address
2. ☐ Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:
Mr. Willis M. Kitchen, President
Gulf Coast Recycling, Inc.
1901 North 66th Street
Tampa, Florida 33619

4a. Article Number
P 872 562 713

4b. Service Type
☐ Registered ☐ Insured
☒ Certified ☐ COD
☐ Express Mail ☐ Return Receipt for Merchandise

7. Date of Delivery
7-1-94

5. Signature (Addressee)
Connie Rodriguez

6. Signature (Agent)

8. Addressee's Address (Only if requested and fee is paid)

Thank you for using Return Receipt Service.

PS Form **3811**, December 1991 ★U.S. GPO: 1992—323-402 **DOMESTIC RETURN RECEIPT**

PS Form **3800**, JUNE 1991

Postmark or Date	Mailed: 6/29/94 AC 29-209018, PSD-FL-215
TOTAL Postage & Fees	$
Return Receipt Showing to Whom, Date, and Addressee's Address	
Return Receipt Showing to Whom & Date Delivered	
Restricted Delivery Fee	
Special Delivery Fee	
Certified Fee	
Postage	$
P.O., State and ZIP Code	Tampa, Florida 33619
Street and No.	1901 North 66th Street
Sent to	Mr. Willis M. Kitchen

Receipt for Certified Mail
No Insurance Coverage Provided
Do not use for International Mail
(See Reverse)

P 872 562 713

COMMISSION
PHYLLIS BUSANSKY
JOE CHILLURA
SYLVIA KIMBELL
LYDIA MILLER
JIM NORMAN
JAN KAMINIS PLATT
ED TURANCHIK

FAX (813) 272-5157

COPY FOR JR C LEWE GPL PATTY ORIG TO

ROGER P. STEWART
EXECUTIVE DIRECTOR
ADMINISTRATIVE OFFICES AND
WATER MANAGEMENT DIVISION
1900 - 9TH AVENUE
TAMPA, FLORIDA 33605
TELEPHONE (813) 272-5960

AIR MANAGEMENT DIVISION
TELEPHONE (813) 272-5530

WASTE MANAGEMENT DIVISION
TELEPHONE (813) 272-5788

ECOSYSTEMS MANAGEMENT DIVISION
TELEPHONE (813) 272-7104

June 28, 1994

RECEIVED
JUL 01 1994
Bureau of
Air Regulation

Mr. Preston Lewis
Division of Air Resources Management
Florida Department of Environmental Protection
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Re: Gulf Coast Recycling PSD Permit Application

Dear Mr. Lewis:

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1. In the PSD application, GCR has requested a SO_2 allowable of 374 lbs./hr. and a process input rate of 6.0 tons/hour with no SO_2 emission controls. The November 4, 1993 compliance test for the blast furnace resulted in an average SO_2 emission rate of 377 lbs./hr. Testing was conducted at a process input rate of 4.65 tons/hr. (The 1988 compliance test also resulted in a SO_2 emission rate of 377 lbs./hr. at a process input rate of 4.8 tons/hr.) Based on this compliance test, how can GCR provide the Department with reasonable assurances that at the increased process rate the allowable SO_2 emission rate will not be exceeded when the proposed limitation was exceeded at a lower process input rate?

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Sincerely,

Liz Deken
Chief, Air Toxics Section

bm

LAKE
ENGINEERING, INC.

RECEIVED
JUN 13 1994
Bureau of
Air Regulation

June 10, 1994

Ms. Patricia Adams
Florida Department of Environmental Protection
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

RE: Gulf Coast Recycling, Inc. PSD Application

Dear Ms. Adams:

As requested, enclosed are two additional copies of Gulf Coast Recycling, Inc.'s Prevention of Significant Deterioration application which was recently submitted. I hope this satisfies your request. If you need any additional copies please contact me at (404) 395-0464 or Ms. Joyce Morales-Caramella with Gulf Coast at (813) 626-6151.

Sincerely,

LAKE ENGINEERING, INC.

Larry G. Carlson
Air Pollution Compliance Specialist

LGC:cml
Enclosures

cc: Ms. Joyce Morales-Caramella, Gulf Coast Recycling, Inc.

460.20001
\460-94\0610ADAM,23L

SUITE 500, 35 GLENLAKE PARKWAY
ATLANTA, GEORGIA 30328
(404) 395-0464 FAX: (404) 395-0474

APPLICATION FOR REFUND FORM
THE STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION

STATE OF FLORIDA, COUNTY OF LEON

Pursuant to the provisions of Section 215.26, or Section ________, Florida Statutes, I hereby apply for a refund and request that a State Warrant be drawn in favor of:

NAME: Gulf Coast Recycling, Inc.

ADDRESS: ____________

FEID OR SS NUMBER: ____________

AMOUNT: ____________ REV OBJECT CODE: ____________

DOCUMENT NUMBER: ________ MONEY SHEET DATE: ____________

which represents moneys I paid into the State Treasury subject to refund, and to substantiate such claim the following facts are submitted:

REASON FOR CLAIM: ____________

CERTIFIED TRUE AND CORRECT this _____ day of ____________, 19 _____

____
Signature

*Must be completed if authority is other than Section 215.26, Florida Statutes.

****

(FOR AGENCY USE ONLY)

(1) Agency recommends denial of above claim based on the following facts, including statutory authority for collection:

____

or

(2) Agency recommends approval of above claim and submits the following information to substantiate such claim. $ ________ was originally deposited into the State Treasury, Receipt # ____________, dated ____________.

NAME OF ACCOUNT:

SAMAS ACCOUNT CODE

|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|

Statutory Authority for Collection ____________ It is requested that payment be made from:

NAME OF ACCOUNT:

SAMAS ACCOUNT CODE

|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|

****

CERTIFIED TRUE AND CORRECT this ______ day of ____________, 19 ______.

____
Signature and Title of Authorized Person

6-9-94

Florida Department of
Environmental Protection

Lawton Chiles
Governor

Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Virginia B. Wetherell
Secretary

June 9, 1994

Ms. Jewell A. Harper, Chief
Air Enforcement Branch
U.S. EPA, Region IV
345 Courtland Street, N.E.
Atlanta, Georgia 30308

Dear Ms. Harper:

RE: Gulf Coast Recycling, Inc.
Hillsborough County, PSD-FL-215

The Department has received the above referenced PSD permit application package. Please review this package and forward your comments to the Department's Bureau of Air Regulation by June 27, 1994. The Bureau's FAX number is (904)922-6979.

If you have any questions, please contact John Reynolds or Cleve Holladay at (904)488-1344 or write to me at the above address.

Sincerely,

Patty Adams

for C. H. Fancy, P.E.
Chief
Bureau of Air Regulation

CHF/pa

Enclosures

Printed on recycled paper.

6-9-94

Florida Department of
Environmental Protection

Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Lawton Chiles
Governor

Virginia B. Wetherell
Secretary

June 9, 1994

Mr. John Bunyak, Chief
Policy, Planning and Permit Review Branch
National Park Service-Air Quality Division
P. O. Box 25287
Denver, Colorado 80225

Dear Mr. Bunyak:

RE: Gulf Coast Recycling, Inc.
Hillsborough County, PSD-FL-215

The Department has received the above referenced PSD permit application package. Please review this package and forward your comments to the Department's Bureau of Air Regulation by June 27, 1994. The Bureau's FAX number is (904)922-6979.

If you have any questions, please contact John Reynolds or Cleve Holladay at (904)488-1344 or write to me at the above address.

Sincerely,

Patty Adams

for C. H. Fancy, P.E.
Chief
Bureau of Air Regulation

CHF/pa

Enclosures

Printed on recycled paper.

APPLICATION FOR REFUND FORM
THE STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION

STATE OF FLORIDA, COUNTY OF LEON

Pursuant to the provisions of Section 215.26, or Section _____, Florida Statutes, I hereby apply for a refund and request that a State Warrant be drawn in favor of:

NAME: Gulf Coast Recycling, Inc.

ADDRESS: 1901 North 66th Street, Tampa, FL 33619

FEID OR SS NUMBER: 59-0690405

AMOUNT: $ 2,000 OBJECT CODE: 002222

DOCUMENT NUMBER: 4344 MONEY SHEET DATE: 5-31-94

which represents moneys I paid into the State Treasury subject to refund, and to substantiate such claim the following facts are submitted:

REASON FOR CLAIM: Overpayment of permit processing fee.

CERTIFIED TRUE AND CORRECT this 6th day of June, 19 94

Willis M. Kitchen
Signature Willis M. Kitchen, Pres.

*Must be completed if authority is other than Section 215.26, Florida Statutes.

****

(FOR AGENCY USE ONLY)

(1) Agency recommends denial of above claim based on the following facts, including statutory authority for collection:

_____

or

(2) Agency recommends approval of above claim and submits the following information to substantiate such claim. $ _____ was originally deposited into the State Treasury, Receipt # _____, dated _____.

NAME OF ACCOUNT:

SAMAS ACCOUNT CODE

Statutory Authority for Collection _____ It is requested that payment be made from:

NAME OF ACCOUNT:

SAMAS ACCOUNT CODE

****

CERTIFIED TRUE AND CORRECT this 4th day of July, 19 94.

Patricia G. Adams
Signature and Title of Authorized Person

DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF FINANCE AND ACCOUNTING
RECEIPTS SECTION
DAILY CASH LISTING

DOC #	AMOUNT	NAME	REV DATE	COMMENTS
** DIVISION: F1				
* OBJECT CODE: 002222				
P224230	50.00	KBN ENGINEER	05/31/94	
* Subsubtotal *	50.00			
* OBJECT CODE: ~~002223~~ 002222				
0004344	7500.00	GULF COAST R	05/31/94	
* Subsubtotal *	7500.00			
* OBJECT CODE: 002278				
0004340	100.00	APOLLO ENVIR	05/31/94	
0004342	400.00	OKEELANTA CP	05/31/94	
0004343	1000.00	HTHW PIPING	05/31/94	SUNRISE SYSTEMS OF B
* Subsubtotal *	1500.00			
* OBJECT CODE: 004018				
P224229	20.65	ENVIROPLAN	05/31/94	COPIES
* Subsubtotal *	20.65			
** Subtotal **	9070.65			

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION

224232

RECEIPT FOR APPLICATION FEES AND MISCELLANEOUS REVENUE

Received from Gulf Coast Recycling, Inc. Date June 2, 1994

Address 1901 N. 66th St., Tampa, FL 33619 Dollars $ 7500.00

Applicant Name & Address Willis M. Kitchen

Source of Revenue C.# 029519

Revenue Code 002222 Application Number AC 29-209018

By Patricia G. Adams

Florida Department of
Environmental Protection

Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Lawton Chiles
Governor

Virginia B. Wetherell
Secretary

June 2, 1994

Mr. Willis M. Kitchen
President
Gulf Coast Recycling, Inc.
1901 North 66th Street
Tampa, FL 33619

RE: AC29-209018, PSD-FL-215
Battery Recycling Facility

Dear Mr. Kitchen:

Enclosed is an application for refund of $2000 for overpayment of the state processing fee for the above referenced project. Please fill in your FEID number, sign and date the top section of the request form and return it to me. If you have any questions, please call me at (904)488-1344.

Sincerely,

Patty Adams

Patty Adams
Planner
Bureau of Air Regulation

/pa

Enclosure

Printed on recycled paper.

APPLICATION FOR REFUND FORM
THE STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION

STATE OF FLORIDA, COUNTY OF LEON

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AMOUNT: $ 2,000 OBJECT CODE: 002222

DOCUMENT NUMBER: ________ MONEY SHEET DATE: ____________

which represents moneys I paid into the State Treasury subject to refund, and to substantiate such claim the following facts are submitted:

REASON FOR CLAIM: Overpayment of permit processing fee.

CERTIFIED TRUE AND CORRECT this _____ day of ____________, 19 _____

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Signature

*Must be completed if authority is other than Section 215.26, Florida Statutes.

****

(FOR AGENCY USE ONLY)

(1) Agency recommends denial of above claim based on the following facts, including statutory authority for collection:

____

or

(2) Agency recommends approval of above claim and submits the following information to substantiate such claim. $ ________ was originally deposited into the State Treasury, Receipt # ____________, dated ____________.

NAME OF ACCOUNT:

____________ SAMAS ACCOUNT CODE ____________

|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|

Statutory Authority for Collection ____________ It is requested that payment be made from:

NAME OF ACCOUNT:

____________ SAMAS ACCOUNT CODE ____________

|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|

****

CERTIFIED TRUE AND CORRECT this ______ day of ____________, 19 ______.

____
Signature and Title of Authorized Person

GULF COAST RECYCLING, INC.

1901 NORTH 66th STREET • TAMPA, FLORIDA 33619
PHONE: (813) 626-6151 FAX: (813) 622-8388

Assigned to John Reynolds
June 7, 1994

May 23, 1994

Mr. C. H. Fancy, P.E.
Chief, Bureau of Air Regulation
Florida Department of Environmental Protection
Twin Towers Office Building
2600 Blairstone Road
Tallahassee, FL 32399-2400

RECEIVED
DER-MAIL ROOM
1994 MAY 31 AM 9:59

Dear Mr. Fancy:

Attached are five copies of a Prevention of Significant Deterioration (PSD) application for the modification of our lead-acid battery recycling facility located in Tampa, FL Also included is check in the amount of $7,500 to cover the application fee. The modeling outputs, both hard copy and on disk, are included in three of the copies. The modeling summary is included in all copies. Although this modification was initially deemed exempt from PSD by the DEP in 1984, this application was recently requested retroactively for the replacement of a blast furnace. The new furnace is currently listed in permit number AO29-173310.

Should you have any question or require additional information, please contact me at (813) 626-6151.

Sincerely,

Willis M. Kitchen

Willis M. Kitchen
President

File:GTA4-355

GULF COAST RECYCLING, INC.
1901 NORTH 66th STREET
TAMPA, FLORIDA 33619
(813) 626-6151

Barnett Bank of Tampa

029519

DATE	CHECK NO.	CHECK AMOUNT
5/23/94	29519	$7500.00

SEVEN THOUSAND FIVE HUNDRED DOLLARS AND NO/100

PAY TO THE ORDER OF

FLORIDA DEPT. OF ENVIRONMENTAL PROTECTION
TWIN TOWERS OFFICE BLDG.
2600 BLAIR STONE ROAD
TALLAHASSEE, FL 32399-2400

Willis M. Kitchen

GULF COAST RECYCLING, INC.

VENDOR NO.

VENDOR NAME

ANSACTION DATE	REFERENCE	GROSS AMOUNT	DEDUCTION	NET AMOUNT
	PSD APPLICATION			

CHECK DATE	CHECK NO.	TOTAL GROSS	TOTAL DEDUCTION	CHECK AMOUNT

ORIGINAL APPL. 5-31-94

Prevention of Significant Deterioration Application

for a Construction Permit to Modify a Battery Recycling Facility

Volume I

Gulf Coast Recycling, Inc.

Tampa, Florida
Permit Number AO29-173310

Lake Engineering, Inc.
35 Glenlake Parkway, Suite 500
Atlanta, GA 30328
460.20001

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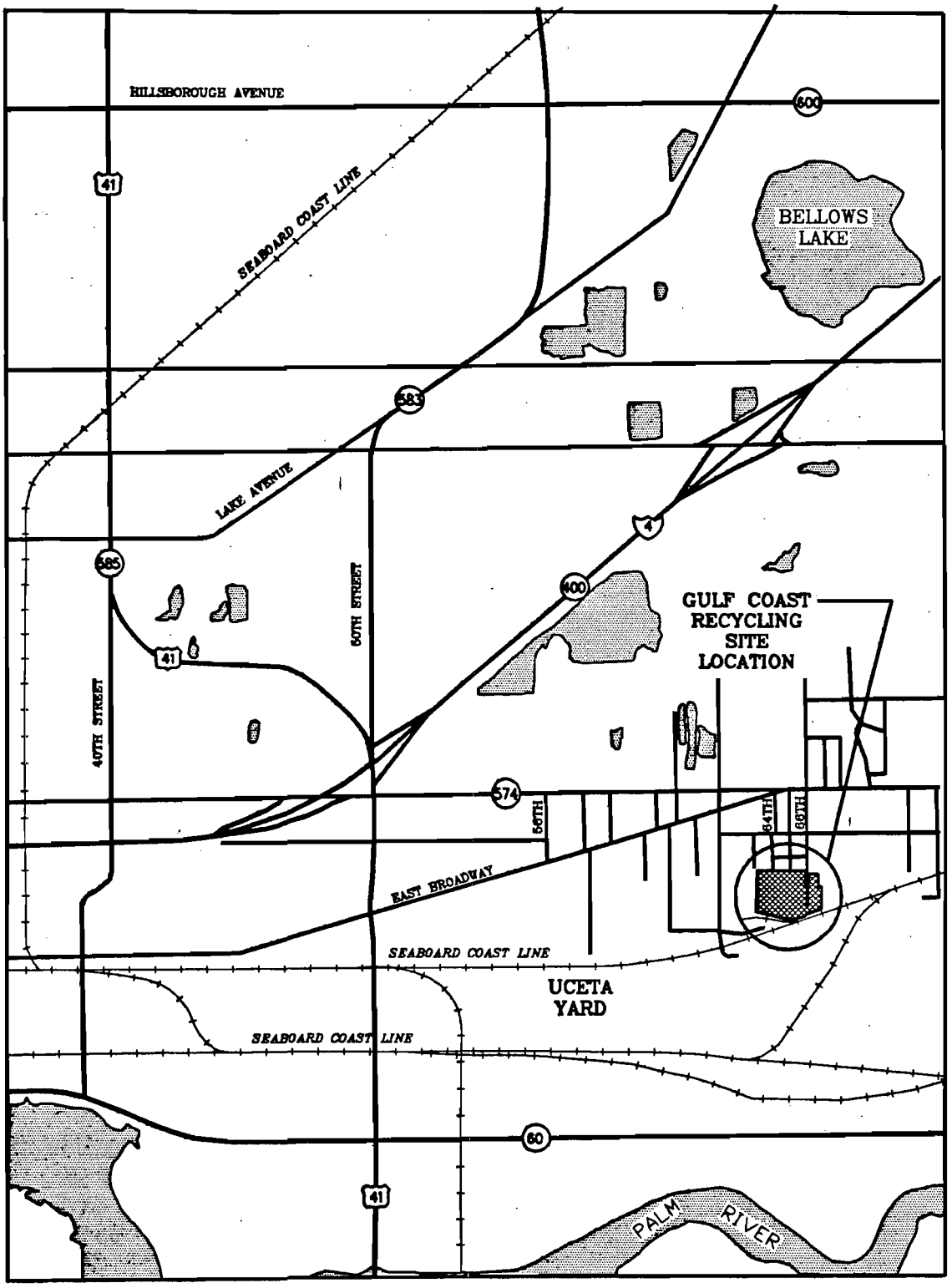
1.0 INTRODUCTION

Gulf Coast Recycling, Inc. ("Gulf Coast") is herein making application to the Florida Department of Environmental Protection (DEP) for a Construction Permit to modify a battery recycling facility located southeast of the intersection of Interstate 4 and U. S. Highway 41 in the city of Tampa, Hillsborough County, Florida. The site is depicted on **Figures 1.1 and 1.2**. Based on the emission levels and the location involved, the permitting of this source is subject to the USEPA requirements of 40 CFR §51.166 "Prevention of Significant Deterioration" (PSD) and the corresponding Florida Air Quality Regulations Rule 17-2.500.

This document describes the anticipated air quality impacts from, and the air pollution control techniques used in, the modification of Gulf Coast's facility. It presents a technical demonstration that this modification, which consisted of the replacement of two existing blast furnaces with one furnace 25 percent larger, has and will comply with all applicable state and federal air pollution control regulations. This demonstration generally uses conservative estimates and values regarding control efficiencies and estimates of impacts for purposes of presenting a worst-case scenario. Actual impacts are expected to be significantly less than the projected estimates contained herein.

The actual startup of the new furnace took place in late 1984. This furnace was first permitted on January 28, 1985 by permit number AO29-95366, later by permit number AO29-173310 on July 17, 1990, and finally by amended permit number AO29-173310 on November 19, 1990 (see **Appendix A**). This latter permit expires on November 15, 1995. At the time of the modification it was determined by DEP that no PSD review was required. Subsequent events have, however, determined that a PSD review was applicable and that a full PSD analysis needs to be performed retroactively (see **Appendix B**). The history of the exhaustive permitting process for this modification can be found in the "After-the-Fact Construction Application" previously submitted on February 10, 1992.



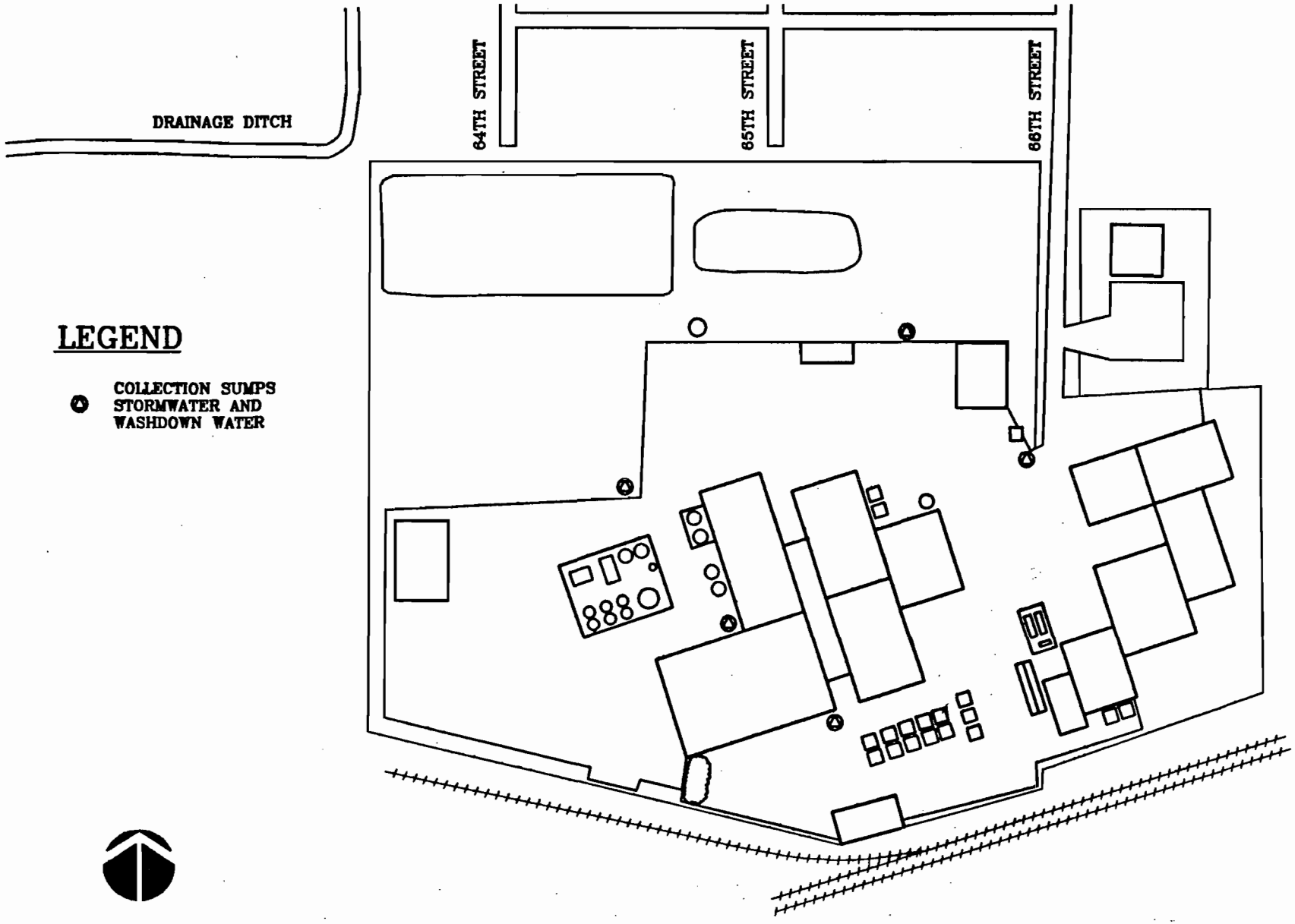
AREA MAP
GULF COAST RECYCLING, INC.
TAMPA, FLORIDA

FIGURE 1.1

460-010 1=1 04-14-94 BKE 460.26001

460-008 1=1 08-18-93 RCW 460.20001

GULF COAST RECYCLING, INC.



SITE MAP

FIGURE 1.2

1.1 PROCESS DESCRIPTION

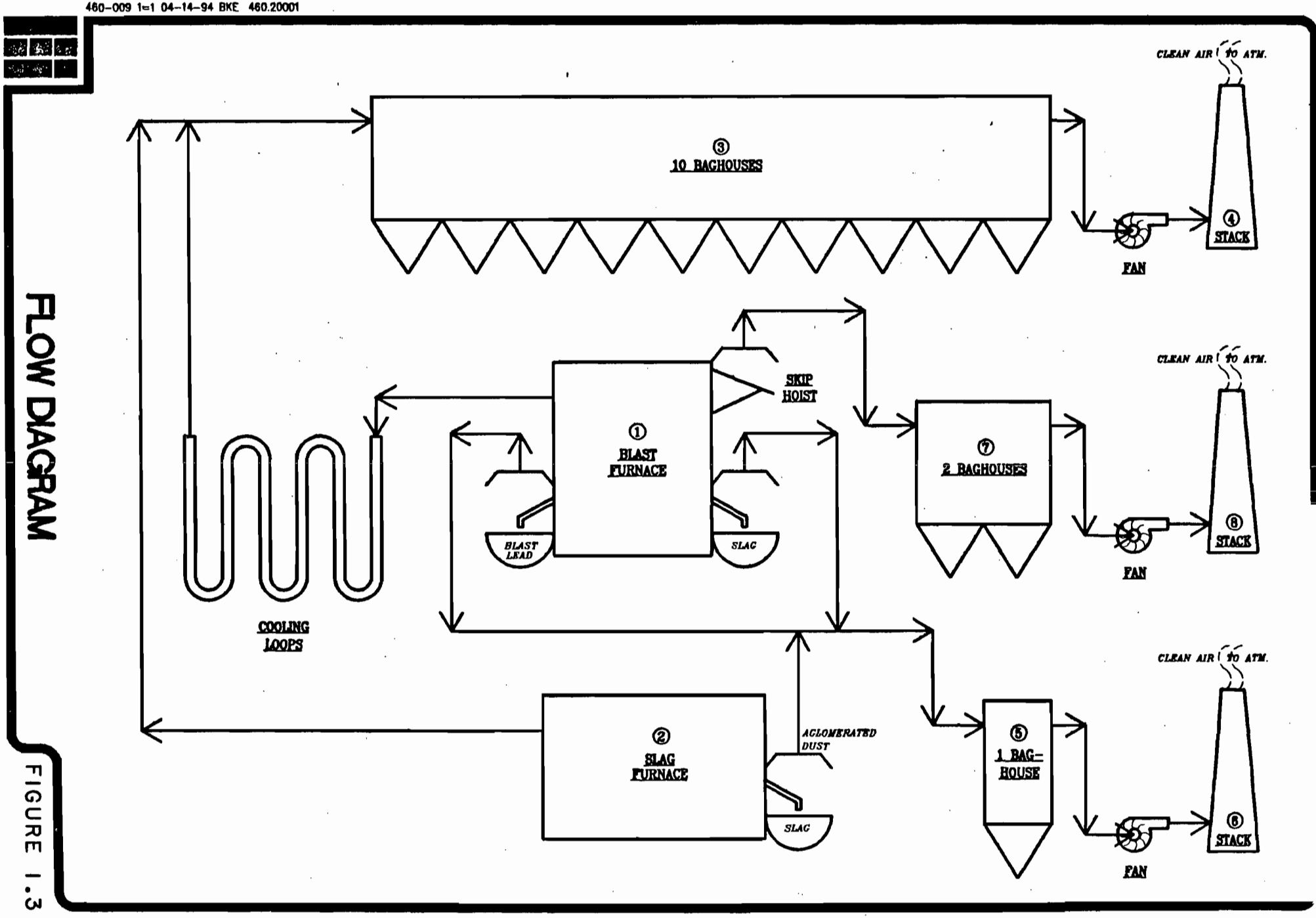
In the battery recycling process, discarded automotive and industrial lead-acid storage batteries are crushed and mechanically separated into their component fractions. In this process, the sulfuric acid is drained and neutralized while the plastic casings are segregated and shipped off-site for further processing and eventual resale. The lead-bearing components are then fed into the blast furnace for lead recovery. The lead is then refined further and eventually combined with alloying metals in refining kettles to produce finished lead alloys meeting customer specifications. Finished lead from the kettles is cast into ingots for shipment and eventual re-use. The major source of air pollution at the facility is the blast furnace which burns metallurgical coke in the smelting of lead scrap. Exhaust gases are emitted to the atmosphere through an existing baghouse and stack. It is this blast furnace which is the subject of this application. A simplified flow diagram is shown on **Figure 1.3**.

1.2 PSD APPLICABILITY

PSD regulations seek to protect areas in which the ambient air quality is better than the federally-established health-related National Ambient Air Quality Standards (NAAQS). Florida has established lower ambient standards than the federal standards. They will be referred to as the Florida Ambient Air Quality Standards (FAAQS). Sources are considered "major stationary sources" and are subject to the PSD regulations if they fall into either one of the following two categories: (1) One of the 28 specific categories of industries specified in Title 40 of CFR Part 51.166 (b)(1)(i)(a) and with the "potential" to emit more than 100 tons/yr of a regulated pollutant; or, (2) Any source with the "potential" to emit 250 tons or more/yr of a regulated pollutant.

Pollutants emitted from the new blast furnace include lead (Pb), sulfur dioxide (SO_2), carbon monoxide (CO), particulate matter (PM), nitrogen oxides (NO_x), and volatile organic compounds (VOCs). The Gulf Coast facility is considered a secondary lead smelter which is one of the 28 specific categories mentioned above (secondary metal production plants). PSD regulations also establish "significant" or "de minimus" levels for all regulated pollutants. For "major" sources, these "significant" levels determine applicability of PSD review for all pollutants emitted.

460-009 1=1 04-14-94 BKE 460.20001



FLOW DIAGRAM

FIGURE 1.3

Once a facility is determined to be "major" for one pollutant (either the 100 or 250 tons/yr limit described above), then a PSD review must also be done for all other pollutants that have the "potential" to exceed the significant levels. Gulf Coast Recycling was already considered a "major" source due to its existing CO and SO_2 emission levels being greater that 100 tons/yr. It was subsequently determined that the CO and SO_2 emissions increases associated with the replacement of the blast furnace exceeded the 100 and 40 tons/yr significance levels. This made the modification subject to PSD review.

2.0 BEST AVAILABLE CONTROL TECHNOLOGY REVIEW

All affected emissions units, regardless of size, must undergo a Best Available Control Technology (BACT) analysis. However, in light of the criterion of economic reasonableness, an analysis should only be as extensive as the quantity of pollutants emitted and the ambient air impacts created. Experience has shown that facilities that emit small amounts of pollutants have extremely high costs associated with the installation and operation of highly effective emission controls. This section describes and quantifies emissions from the new blast furnace as well as from the rest of the facility and performs a BACT review for each applicable pollutant. A "top-down" BACT review identifies all reasonable control technologies and analyzes them for control efficiency and environmental, energy, and economic impacts. This analysis is performed for each identified technology in order of control efficiency. If the first technology (highest control efficiency) is not chosen an indication, e.g., cost prohibitiveness, of why it was not chosen must be given.

An emissions summary is presented in **Table 2.1**. The only source associated with this modification is the new blast furnace. Since it has been in operation for about nine years, there are good source test data available. There are three distinct operations associated with the furnace. In addition to the basic smelting there is *charging*, when raw material is being added to the furnace, and *tapping*, when the molten lead is tapped from the furnace. All operations are included in the blast furnace total.

2.1 SULFUR DIOXIDE

The primary source of SO_2 is from the furnace exhaust. Gulf Coast is currently permitted for a maximum of 384.2 lbs/hr and 7,800 hours/yr. However, this application requests a federally enforceable permit limit of 374 lbs/hr and to allow for 8,760 hours/yr, limits which were used in the air dispersion modeling analysis. The installation of the new blast furnace increased emissions above the 40 tons/yr significance level for SO_2 and subsequently made PSD/BACT applicable for this pollutant. As stated previously, the blast furnace is the primary source of SO_2 emissions and therefore this blast furnace will be the focal point of the BACT analysis. This analysis will attempt to discuss a representative sample of control

TABLE 2.1

PSD APPLICABILITY FOR NEW BLAST FURNACE

values are in tons/year

POL	CURRENT EMISSIONS (based on 7,800 hrs/yr)	PROPOSED EMISSIONS (based on 8,760 hrs/yr)	OLD FURNACE EMISS.	EMISSIONS INCREASE [10]	SIGNIF LEVEL	PSD	EMISSION REDUCTION W/ AFTERBURNER [10]	AFTERBURNER EMISSIONS [10] (products of combustion)	NET EMISSIONS INCREASE [10]	EMISSIONS W/ AFTERBURNER [10]
SO_2	1,498.00[1]	1,638.12 [6]	1,387.00	251.12	40	YES	0.00	0.09	251.21	1638.21
Pb	0.0234 [2]	0.59 [7]	6.69	-6.10	0.6	NO	0.00	0.00	-6.10	0.59
PM	12.48 [3]	14.02 [8]	9.51	4.51	15	NO	0.00	0.75	5.26	14.77
CO	2,665.00 [4]	2,992.95 [9]	1,774.00	1,218.95	100	YES	2,693.66 [5]	5.23	-1,469.48	304.53
NO_x	7.72 [4]	8.67 [9]	5.14	3.53	40	NO	0.00	20.91	24.44	29.58
VOC	129.09 [4]	144.98 [9]	85.91	59.07	40	N/A [11]	137.73 [12]	0.42	-78.24	7.67

[1] Based on permitted maximum of 384.2 lbs/hr, 7800 hrs/yr

[2] Based on October 24, 1991 source test (0.006 lbs/hr, 7,800 hrs/yr)

[3] Based on permitted maximum, 7,800 hrs/yr

[4] Based on October 21, November 4, 1991 source tests, 7800 hrs/yr

[5] Based on a design destruction efficiency of 90%

[6] Based on requested limit of 374 lbs/hr, 8,760 hrs/yr

[7] Based on requested limit of 0.134 lbs/hr, 8,760 hrs/yr

[8] Based on permitted limit, 8,760 hrs/yr

[9] Based on October 21, November 4, 1991 source tests, 8,760 hrs/yr

[10] Based on 8,760 hrs/yr

[11] Surrounding area classified as non-attainment for ozone (VOCs), PSD not applicable

[12] Based on a design destruction efficiency of 95%

technologies for SO_2 removal while evaluating the environmental, energy, and economic impacts of each.

Nearly twenty different types of flue gas desulfurization systems (FGDs) have been developed over the years, each of which removes SO_2 from the flue gas by an absorption process. For convenience, FGDs are classified either as "throwaway" or "regenerable," depending on whether the absorber product is treated to recover the reagents or simply disposed. Furthermore, it would not be feasible in this analysis to evaluate the advantages and disadvantages of each and every scrubbing alternative available on the market today. The selection of a specific process as the ideal one would be virtually impossible since so many factors are involved: capital investment, construction costs, operating costs, reagent costs, waste treatment, stabilization, disposal, and possible by-product reclaim.

The New Source Performance Standards (NSPS) concerning this industry do not address SO_2 emissions due to the variation and cost of controlling them. For purposes of this analysis, two representative control strategies have been selected for a detailed evaluation. The two strategies that have proven to be effective in reducing potential SO_2 emissions are dry lime slurry injection (dry scrubbing) and wet limestone scrubbing (wet scrubbing). A third control strategy, desulfurization, is also included for comparison purposes.

2.1.1 Dry Scrubbing

In a semi-dry process, the exhaust flue gas from the furnace's metallurgical baghouse and a lime slurry are mixed in a spray dryer. The lime then reacts with and absorbs the sulfur dioxide components in the gas stream forming sulfur-bearing particulates. Baghouses are excellent devices for controlling particulates, including lead. For this reason, the metallurgical baghouse catch is rich in lead and is typically cycled back into the furnace for reprocessing.

There are some process-related constraints concerning dry scrubbing inherent in Gulf Coast's current operation. If a dry scrubber were to precede the metallurgical baghouse, the sulfate particles would contaminate the lead catch and would also be recycled back into the furnace, which would increase the potential for increased SO_2 loading. The only logical solution is to follow the dry scrubbing system with an additional baghouse including a segregated hopper/receiving bin. The collected particulates from this secondary baghouse could not be recycled through the furnace but would have to be classified as a hazardous waste and

transported to a certified landfill. Historical control efficiencies for this particular type of control technology range from 75-90 percent. The following economic impact analysis is based on an overall removal efficiency of 90 percent.

ECONOMIC IMPACT ANALYSIS

Design Parameters:

Flow rate:	24,300 acfm
SO_2 Emission Rate:	374 lbs/hr
Temperature:	154°F
Removal Efficiency:	90%
Expected Life of Equipment:	10 years

Capital Investment[1]:

Control Equipment[2] (delivered):	$ 506,250
Site Preparation[3]/Installation:	$ 300,000
Total:	$ 806,250

1 Quote from Electric Controls & Service Co., Inc., Birmingham, AL

2 Control equipment includes: spray dryer absorber, associated baghouse, reagent and slurry preparation and handling equipment, solids transfer and recycle equipment, fan/motor, other support equipment/instrumentation, delivery, etc.

3 Installation includes: engineering design, site preparation, erection, field management, startup, etc.

Annual Costs

Operating Labor and Supervision:	$ 15,000
Maintenance and Repairs:	$ 15,200
Power and Utilities:	$ 129,441
Depreciation @ 10%/yr:	$ 101,250
Disposal Cost:	$ 464,750
Total:	$ 725,641

Annualized SO_2 Removal Calculation

Inlet Emission Rate:	374 lbs/hr
Removal Efficiency:	90%
Total SO_2 Removed:	336.6 lbs/hr
Hours of Operation:	8,760 hours (requested)
Annual Reduction:	1,474 tons/yr
Net Annual Cost:	$ 725,641
Net Ann Cost/Ton SO_2 Removed:	$ 492/ton
Capital Cost:	$ 806,250
Capital Cost/Ton SO_2 Removed:	$ 547/ton

Control Technology Costing Calculations

1. Cost of Dry Scrubbing Reagent (lime)
   88 lbs/hr of lime x $ 75/ton ÷ 2,000 lbs/ton x 8,760 hrs/yr = $ 28,908/yr

2. Cost of Handling and Disposal of Hazardous Waste ($ 250/ton)
   (1,474 tons/yr of SO_2 removed + 385 tons/yr of lime) x $ 250/ton = $ 464,750/yr

3. Power Requirements for Pollution Control System
   Booster Fan/Motor, Process Req., Instrumentation, Air Compressor, etc = 342 hp
   342 hp x 745.7 watts/hp ÷ 1000 watts/kW = 255 kW/hr
   255 kW/hr x $ 0.045/kW x 8,760 hrs/yr = $100,533/yr

Product Costs

Avg. annual pounds of lead produced/sold:	49,415,000 (@ 8,760 hrs/yr)
Annual cost of scrubbing system:	$ 725,641
Cost per pound of lead produced:	$ 0.0147
Current price received for lead:	$ 0.23/lb
Percent of gross income from product sales spent on scrubber system:	6.38%

The economic impact of this technology is estimated above at $492/ton of SO_2 removed. Due to the relatively low throughput of this facility, it is also estimated that 6.38 percent of gross income from product sales would be spent on the scrubbing system. Based on these costs, it is recommended that this technology not be considered BACT for this particular application.

ENERGY IMPACT ANALYSIS

The total power requirements were addressed in the economic analysis, as far as determining total annual cost for the operation of the subject pollution control equipment. It has been shown that the electrical requirements will be 255 kW or 1.99 million kWh/yr. It has been estimated that the 255 kW electrical demand, for this subject control system, would require an equivalent heat value of 870,672 Btu/hr or approximately 69.6 lbs of coal/hr at 12,500 Btu/lb. Based on these energy requirements, it is recommended that this technology not be considered BACT for this particular application.

ENVIRONMENTAL IMPACT ANALYSIS

In conjunction with the additional cost for power, the incremental SO_2 increase associated with the power production phase and the solid waste disposal requirements must also be considered. To provide the 255 kW needed to operate this system, it was estimated above that 271.4 additional tons of coal would need to be burned at a typical power generating station in the area. Assuming a typical coal sulfur content of 1.2 percent would result in a net annual potential increase in air emissions of 12,704 lbs of SO_2/yr.

It was estimated above that approximately 1,656 tons of sulfur-bearing particulates would be generated each year. These particulates must then be classified as a hazardous waste and buried in a certified landfill. The country's landfills are rapidly nearing capacity, and new ones are proving to be very difficult to permit, especially those that accept hazardous substances. In this situation, the scrubbing system is merely a trade-off of pollutants. Air emissions are reduced while hazardous waste is increased at a cost of reduced landfill space. It is, therefore, recommended that this technology not be considered as BACT for this project.

2.1.2 Wet Scrubbing

Conventional wet limestone scrubbing was selected over the many other wet scrubbing alternatives because it utilizes a cheap, abundant absorbent and is widely applied commercially. As of 1989, over 48 percent of all scrubbing applications in this country employed wet limestone technology. In this process, a limestone slurry solution is injected in a spray tower to absorb SO_2 and form a calcium sulfite/sulfate sludge. The advantage of this system is that, in some situations, it is capable of achieving an overall removal efficiency of more than 90 percent. The industry average for this type of control technology is more on the order of 82 percent. Some of the disadvantages are:

1. A wet effluent is produced that requires additional treatment with complex effluent treatment systems. For every ton of SO_2 removed, 4.25 tons of sludge are produced and, in this particular application, the sludge would be classified as hazardous, thereby requiring highly specialized treating, stabilizing, handling, and disposal requirements.

2. Economics and space requirements are not as attractive as for other alternatives.

3. Wet scrubbers are more prone to corrosion problems and may require expensive materials of construction.

4. Historically, wet scrubbers have experienced more operating problems (i.e., scaling, plugging, erosion, and corrosion) and higher maintenance requirements than the alternatives.

ECONOMIC IMPACT ANALYSIS

Design Parameters:

Flow Rate:	24,300 acfm
SO_2 Emission Rate:	374 lbs/hr
Temperature:	154°F
Removal Efficiency:	90%
Expected life of equipment:	10 years

Capital Investment[1]:

Control Equipment[2] (delivered):	$ 530,100
Site Preparation/Installation[3]:	$ 570,000
Total:	$ 1,100,100

1 Quote from Electric Controls & Service Co., Inc., Birmingham, AL

2 Control equipment includes: spray dryer absorber, associated baghouse, reagent and slurry preparation and handling equipment, solids transfer and recycle equipment, fan/motor, other support equipment/instrumentation, delivery, etc.

3 Installation includes: engineering design, site preparation, erection, field management, startup, etc.

Annual Costs

Operating Labor and Supervision:	$ 15,000
Maintenance and Repairs:	$ 20,000
Power & Utilities:	$ 121,430
Depreciation @ 10%/yr:	$ 25,200
Disposal Cost:	$ 1,566,125
Total:	$ 1,747,755

Annualized SO_2 Removal Calculation

Inlet Emission Rate:	374 lbs/hr
Removal Efficiency:	90%
Total SO_2 Removed:	336.6 lbs/hr
Hours of Operation:	8,760 (requested)
Annual Reduction:	1,474 tons/yr
Net Annual Cost:	$ 1,747,755
Net Ann Cost/Ton SO_2 Removed:	$ 1,186/ton
Capital Cost:	$ 1,100,100
Capital Cost/Ton SO_2 Removed:	$ 746/ton

Control Technology Costing Calculations

1. Cost of Wet Scrubbing Reagent (limestone)
   174 lbs/hr of limestone x $ 75/ton ÷ 2,000 lbs/ton x 8,760 hrs/yr = $ 57,159/yr

2. Cost of Handling and Disposal of Hazardous Waste = $ 250/ton
   For every ton of SO_2 removed, 4.25 tons of sludge are generated
   1,474 tons of SO_2 removed/yr x 4.25 tons of sludge generated = 6,265 tons of sludge/yr
   6,265 tons sludge/yr x $250/ton = $ 1,566,125/yr

3. Power Requirements for Pollution Control System Booster Fan/Motor, pump/motors, agitators, process requirements, instrumentation, etc. = 165 hp
   Conversion Factor = 745.7 watts/hp
   165 hp x 745.7 watts/hp ÷ 1,000 watt/kW = 123 kW/hr
   123 kW/hr x $0.045/kW x 8,760 hrs/yr = $48,503/yr

4. Water Requirements
   15 gallons/min x 60 min/hr x 8,760 hrs/yr x $ 2.00/1000 gals = $ 15,768/yr

In addition to the above water costs, there also exists a capacity problem. Gulf Coast's current wastewater disposal permit allows for 20 gallons per minute to be discharged into the City's sewer line which runs from the facility to the main trunk line approximately 1 mile away. This rate of 20 gallons per minute is also the current maximum capacity of the line. In a letter from the City of Tampa concerning this issue (see **Appendix C**) they state that the capacity of this line is not scheduled to be increased until 1995 at the earliest.

Product Costs

Avg. annual pounds of lead produced/sold:	$49,415,000 (@ 8,760 hrs/yr)
Annual cost of scrubbing system:	$ 1,747,755
Cost per pound of lead produced:	$ 0.0354
Current price received for lead:	$ 0.23/lb
Percent of gross income from product sales spent on scrubber system:	15.38%

The economic impact of this technology is estimated above at $1,186/ton of SO_2 removed. Due to the relatively low throughput of this facility, it is also estimated that 15.38 percent of gross income from product sales would be spent on the scrubbing system. Based on these costs, it is recommended that this technology not be considered BACT for this particular application.

ENERGY IMPACT ANALYSIS

The total power requirements were addressed in the economic analysis, as far as determining total annual cost for the operation of the subject pollution control equipment. It has been shown that the electrical requirements will be 123 kW/hrs or 1,077,480 kWh/yr. It has been estimated that the 123 kW electrical demand, for this subject control system, would require an equivalent heat value of 471,785 Btu/hr or approximately 37.7 lbs of coal/hr at 12,500 Btu/lb. Based on these energy requirements, it is recommended that this technology not be considered BACT for this particular application.

ENVIRONMENTAL IMPACT ANALYSIS

In conjunction with the additional cost for power, the incremental SO_2 increase associated with the power production phase and the solid waste disposal requirements must also be considered. To provide the 123 kW needed to operate this system, it was estimated above that 165 additional tons of coal would need to be burned at a typical power generating station in the area. Assuming a typical coal sulfur content of 1.2 percent would result in a net annual potential increase in air emissions of 7,700 lbs of SO_2/yr.

It was estimated above that approximately 6,265 tons of sludge would be generated each year. This sludge must then be classified as hazardous and then treated, handled, and buried as such in an appropriate landfill. The country's landfills are rapidly nearing capacity and new ones are proving to be very difficult to permit, especially those that accept hazardous substances. An additional 15 gallons of wastewater per minute is also required by this technology. As stated earlier, the sewer line is already operating at capacity and it is unknown at this time when, or if, the capacity will be increased. It is, therefore, recommended that this technology not be considered as BACT for this project.

2.1.3 Desulfurization

Desulfurization removes the sulfur contained in the furnace feed material before it is fed into the furnace. The sulfur-bearing paste from the batteries is not sent directly to the smelting furnaces, but rather is chemically processed first to remove most of the sulfur. The resultant desulfurized paste is then fed into the furnace where as much as a 95 percent reduction can be realized in potential sulfur dioxide emissions. Rather than relying on the exclusive use of add-on pollution control devices, this technology can achieve equivalent reductions in emissions based on modifications of the conventional lead recovery process through such means as material separation and desulfurization. Presently, there are two new lead recovery plants operating in this country which have successfully demonstrated the technological effectiveness of desulfurization as a viable means of minimizing SO_2 emissions. In both cases desulfurization was the accepted control methodology for SO_2 emissions and no add-on controls were required. However, this technology requires an upgraded breaker and reverberatory furnace, which Gulf Coast does not currently have. To successfully implement desulfurization, this additional equipment would have to be installed, at a great monetary cost and with the additional associated air emissions.

Since desulfurization qualifies as an emissions reduction technique, the cost effectiveness of this process should be addressed for comparison purposes. To quantify the economic impacts of the proposed desulfurization process would prove to be a difficult task since it is an integral part of the overall battery recycling process. It would suffice to say that the capital expenditure for this process, which would include the breaker and reverberatory furnace mentioned above, is substantial and has been estimated, since this is an existing plant, at roughly $4-6 million. However, is would not be justifiable to assign 100 percent of this expenditure to the traditional cost-benefit analysis as typically required for BACT determinations. However, a practical budgetary estimate would assign a capital value of approximately $1.65 million. Conservative emissions estimates, using a 90 percent removal efficiency, have shown that 1,313 tons of SO_2 will be removed on an annual basis. The associated capital cost-per-ton of SO_2 removal for this process will be approximately $1,257 per ton.

2.1.4 Sulfur Dioxide Conclusions

The primary function of this recycling facility is to recover lead from spent lead-acid batteries and then to sell this lead on the open market at a profit. As such point where the recovery costs equal or exceed the market price for lead, such a facility fails to substantiate its existence. Based on rough industry estimates, average plant operating costs vary from 16.8 to 19.6 cents per pound of refined lead. The current price of lead is approximately 23 cents. Just six months ago the average price was 17 cents per pound. It has been estimated that additional SO_2 control equipment would add between 1.5 and 3.5 cents per pound of refined lead to the proposed operating costs for this facility.

As has been shown in the preceding economic analysis, the economic burden of additional SO_2 removal controls would create distinct economic disadvantages for this recycling facility to compete on the open market. Reasonable cost effectiveness (cost/ton of pollutant removed) for non-boiler sources (Metals Industry) for non-hazardous situations has been estimated at $293/ton ("Cost for Control of SO_2 Emissions," *CEP* June 1982 pg. 52). The scrubbing systems discussed earlier range from $492/ton to $1,186/ton. Desulfurization was previously estimated at $1,257/ton. Therefore, economic reasonableness has not been achieved.

This BACT analysis showed sulfur dioxide emissions are not reasonably controllable due to the relatively low output of SO_2 at the Gulf Coast facility and high cost of the control systems. Both dry and wet scrubbing systems are cost prohibitive and raise additional solid waste disposal problems. Desulfurization of the raw feed material is inappropriate at this time due to the cost as well as the unsuitability of Gulf Coast's current plant configuration. With the addition of the proposed afterburner discussed in section 2.4.3, the blast furnace will be able to operate at lower temperatures. By operating the furnace at lower temperatures sulfur dioxide formation will decrease, thereby decreasing SO_2 emissions. The exact expected reduction is unknown at this time. The EPA BACT/LAER Clearinghouse lists the BACT determination for SO_2 emissions from the cupola or blast furnace for Sanders Lead, BLIS ID AL-0028 to be process controls. It is believed that with process controls, including the lower operating temperatures allowed by the addition of the afterburner, Gulf Coast can continue to be in compliance with the requested SO_2 emission rate of 374 pounds per hour.

Gulf Coast is the only lead-acid battery recycler remaining in the State of Florida. If Gulf Coast is required to install cost-prohibitive control technology, it will be placed in an extremely tight economic situation that could easily result in the facility becoming uneconomical to operate if an uncontrollable event, such as a slight drop in lead prices, occurs. If this should happen, the nearest battery recycling facility would be in Columbus, Georgia—approximately 425 miles away. The estimated 1.1 million batteries that Gulf Coast recycles annually would therefore have to be shipped by truck to the Columbus facility. This would inherently increase the cost of recycling which would hinder recycling efforts. There is no environmentally acceptable alternative to recycling spent lead-acid batteries. Resource Conservation and Recovery Act (RCRA) land-ban restrictions prohibit their disposal in hazardous waste landfills. As recycling becomes economically prohibitive, the potential for the public discarding batteries along roadways, in vacant lots, etc. increases dramatically.

2.2 LEAD

The current blast furnace permit limits lead emissions to 2.09 lbs/hr and 8.15 tons/yr. This permitted level was established years ago by assuming the lead levels to be a certain percentage of total particulates. This facility employs baghouses for particulate control including control of the blast furnace exhaust. These baghouses typically operate in excess of 99.5 percent control efficiency. Since lead is a particulate these baghouses are also very efficient in controlling lead. A source test performed on October 24, 1991 showed lead levels to be 0.006 lbs/hr (see **Appendix D**). Assuming that rate for a full year of 8,760 operational hours would give 0.0263 tons/yr, well below the 0.6 tons/yr significance level for lead. Therefore, lead levels from the blast furnace have actually decreased as a result of the modification.

Gulf Coast is hereby requesting a federally-enforceable, facility-wide permit limit for lead emissions of 0.59 tons/yr, which correlates to 0.134 lbs/hr for 8,760 hrs/yr. As mentioned above, Gulf Coast utilizes baghouses for particulate (and lead) control throughout the facility. A roof-mounted sprinkler system is also used for ambient dust suppression which minimizes fugitive emissions of particulates (and lead). Since the 0.59 tons/yr requested limit is below the significance level for lead, PSD/BACT is not applicable for this pollutant.

2.3 TOTAL PARTICULATES

Current permitted levels are 3.20 lbs/hr and 12.48 tons/yr, which are based on 7,800 hrs/yr. With the requested 8,760 hrs/yr, the annual emission rate correlates to 14.02 tons/yr. This level does not exceed the 15 tons/yr significance level for particulates. Therefore, PSD/BACT is not applicable for this pollutant. In addition, Gulf Coast is located within an Air Quality Maintenance Area for particulate matter, subjecting them to F.A.C. Rule 17-2.650 (2), Reasonably Available Control Technology (RACT). The 14.02 tons/yr emission level requested above also keeps Gulf Coast in compliance with Specific Condition Number Two in the permit, and Exemption Number One of the RACT regulations which exempts facilities from the RACT requirements if facility-wide emissions are less than 5.0 lbs/hr and 15 tons/yr.

The NSPS pertaining to this industry is 40 CFR Subpart L §60.120. This standard limits particulate matter emissions from the blast furnace to 0.022 gr/dscf and 20% opacity. The flow rate of the blast furnace baghouse is 24,350 acfm, correlating to 20,250 dscfm. Assuming the allowable grain loading this results in an allowable emission rate of 3.82 lbs/hr:

$$20{,}250 \text{ dscfm} \times 0.022 \text{ gr/dscf} \div 7{,}000 \text{ gr/lb} \times 60 \text{ min/hr} = 3.82 \text{ lbs/hr}$$

The blast furnace is currently permitted for a maximum of 3.20 lbs/hr, below the NSPS limit. Because of this, it would be expected that the furnace is also in compliance with the opacity limit.

2.4 CARBON MONOXIDE

A source test performed on October 21 and November 4, 1991 showed CO emissions from the new blast furnace to be 683.32 lbs/hr (see **Appendix E**). With the requested hours of operation of 8,760 hrs/yr, the annual rate correlates to a maximum 2,993 tons/yr, compared to the old furnace emission rate of 1,774 tons/yr. This is an increase of 1,219 tons/yr, greater than the 100 tons/yr significance level and making the furnace applicable to PSD/BACT for this pollutant.

There are several technologies available to control carbon monoxide emissions. Most of them fall into one of two categories: *incineration* or *catalytic conversion*. Both categories convert CO to carbon dioxide and water. Incineration techniques employing the combustible properties of CO burn it while catalytic conversion utilizes a catalyst instead of combustion. One catalytic conversion technology and two incineration technologies are reviewed in the following section.

2.4.1 Catalytic Oxidation

This technology utilizes a catalyst bed for the conversion of CO to carbon dioxide and water instead of a combustion device. Advantages to this system are lower fuel costs and no additional emissions from the combustion of natural gas. Disadvantages are high initial cost, cost of new or regenerating the catalyst bed, catalyst disposal problems, and fouling of the catalyst. Because of the high content of impurities in the gas stream from the furnace, e.g., SO_2, lead, particulates, and trace amounts of other metals, fouling of the catalyst would be a significant problem. It is not believed this technology is being used anywhere in this industry for controlling carbon monoxide emissions. It is therefore determined for this analysis that this technology could not be considered BACT.

2.4.2 Incineration Technology Number One: CO Waste-Heat Boiler

Carbon Monoxide boilers are widely used in the petroleum refining industry as a means of controlling the CO emissions from the Fluid Catalytic Cracking Unit (FCCU). Combustible CO and auxiliary fuel is introduced into the firebox of the boiler. The CO is then converted into carbon dioxide and water. As this control technology may be appropriate for a refinery with large steam needs, it is not appropriate for Gulf Coast. Also, as mentioned previously, Gulf Coast has a wastewater discharge capacity issue. CO boilers also require a very "clean" fuel source, meaning the auxiliary fuel (usually natural gas) and FCCU waste gases must be combined with a high concentration of CO and other combustibles. CO boilers do not work well if large amounts of particulates or non-combustible gases are present. Any inorganic dusts and fumes deposit on heat transfer surfaces causing excess maintenance costs and decreased efficiencies.

2.4.3 Incineration Technology Number Two: Afterburner/Incineration

A search of EPA's BACT/LAER Clearinghouse listed the following BACT determinations for carbon monoxide emissions from cupola and blast furnaces:

Thermal incineration	- 99.5% efficiency	Partek Insulations, Inc.	BLIS ID AL-0063
Afterburner	- 94% efficiency	U.S. Gypsum	BLIS ID IN-0004
3 stack afterburners	- 94% efficiency	Lufkin Industries, Inc.	BLIS ID TX-0023
Incineration	- 98.7% efficiency	Vermont Castings	BLIS ID VT-0001
Incineration	- 1300°F & 0.3 sec	Waupaca Foundry #2	BLIS ID WI-0012

The *Best Available Control Technology Guidelines* document published by the South Coast Air Quality Management District (SCAQMD) in Los Angeles address CO emissions from lead melting furnaces (cupola or blast furnace) associated with secondary lead smelting. The BACT determination for CO from this source type is an afterburner with $\geq$ 0.3 second retention time at $\geq$ 1400°F (see **Appendix F**).

2.4.4 Carbon Monoxide Conclusions

Gulf Coast is hereby proposing to install an afterburner on the new furnace as BACT in addition to following good combustion practices to decrease the emissions increase to below the significance level. Assuming a minimum 90 percent reduction in emissions with the added CO emissions from the afterburner, this would result in annual emissions of approximately 299 tons/yr (68.3 lbs/hr for 8,760 hrs/yr). A screening model using this emission rate resulted in an 8-hour high, second-high impact of 27.2 $\mu g/m^3$, well below the significance level of 575 $\mu g/m^3$ (see section 4.1.4). This exempts CO from a refined air quality analysis.

All other sources of CO from the facility, while minor compared to the new furnace, will continue to incorporate operating parameters in an effort to minimize CO formation. An afterburner system with a minimum 1400°F temperature and 0.5-2.0 second retention time to reduce CO emissions at least 90 percent has been identified. Gulf Coast is currently in the process of accepting bids on afterburner systems. A separate application will be submitted at such time as the specific system has been selected. Estimated capital cost is $350,000-500,000.

2.5 NITROGEN OXIDES

The October through November 1991 source tests showed NO_x emissions to be 1.98 lbs/hr (see **Appendix E**). With the requested hours of operation of 8,760 hrs/yr, the annual rate correlates to a maximum 8.67 tons/yr, compared to the old furnace emission rate of 5.14 tons/yr. This is an increase of 3.53 tons/yr, well below the 40 tons/yr significance level. Even with the additional emissions from the proposed afterburner (20.91 tons/yr) NO_x emissions will remain below the significance level. Therefore, PSD/BACT is not applicable for this pollutant.

2.6 VOLATILE ORGANIC COMPOUNDS

The October through November 1991 source tests determined VOC emissions to be 33.10 lbs/hr (see **Appendix E**). With the requested hours of operation of 8,760 hrs/yr, the annual rate correlates to a maximum 145 tons/yr, compared to the old furnace emission rate of 86 tons/yr. This is an increase of 59 tons/yr, greater than the 40 tons/yr significance level outlined in the PSD regulations.

VOC emissions have not been addressed in detail specific to this industry. Neither the EPA BACT/LAER Clearinghouse nor the SCAQMD BACT Guidelines address VOC or reactive organic gases (ROG) from this source type. In addition, the applicable NSPS do not set limits for VOCs. Control technology in other industries varies widely from incinerators and flares to carbon adsorption and condensation. Due to the type of organics present, the lack of in-house reuse opportunities for collected organics, and lack of storage capacity, recovery techniques are not desirable at Gulf Coast. Of the various destruction technologies being used, flares and other open-flame combustion systems are not desirable in urban settings.

Afterburner destruction efficiencies for VOCs are typically in the 90-99 percent range. Therefore, assuming a 95 percent efficiency, VOC emissions with the proposed afterburner presented earlier (including VOC emissions from the afterburner) are estimated to be 7.67 tons/yr. This is a 90+ percent reduction from the 86 tons/yr from the old furnace. Since the Tampa-St. Petersburg area is classified as non-attainment for ozone, of which VOCs are considered precursors, the non-attainment regulations apply instead of the PSD regulations. This 90 percent reduction, obtained by internal offsets, complies with the net decrease provisions in the non-attainment regulations.

VOCs are not addressed in the current operating permit for the furnace. Gulf Coast is currently in the process of accepting bids on afterburner systems. A separate application will be submitted once a specific system has been selected. All other sources of VOCs from the facility are minor compared to the furnace.

3.0 BASELINE DATA

This section discusses the existing air quality and the major sulfur dioxide-emitting sources in the subject area.

3.1 AMBIENT MONITORING DATA SUMMARY

Gulf Coast Recycling, Inc. was not required to conduct any pre-construction monitoring given the availability of data from nearby state-operated monitors. The area is designated as "unclassifiable" (cannot be classified as attainment or non-attainment) for SO_2. According to the Florida Department of Environmental Regulation, the ambient concentrations of sulfur dioxide near the Gulf Coast facility are 21 $\mu g/m^3$, annual average; 93 $\mu g/m^3$, 24-hour average (second-highest 24-hour monitored value in 1992); and 304 $\mu g/m^3$, 3-hour average (second-highest 3-hour monitored value in 1992). These values were recorded at the Davis Island monitoring station, number 4360-0350-G02 located 8 kilometers (approximately 5 miles) WSW from Gulf Coast.

The responsible regulatory authority has discretion in requiring post construction monitoring data and, in general, will not require such monitoring. Factors such as complex terrain, fugitive emissions, and other uncertainties in source or emission characteristics result in significant uncertainties about the projected impact of the source. Gulf Coast is not located in complex terrain nor are fugitive emissions considered significant. Also, emissions of particulates that result in high concentrations near the property boundary are also not significant. Sulfur dioxide emissions, which are considered to result in more of a regional problem, have been modeled and have been shown to be below those emission rates that would result in exceedances of, or significantly contribute to, any air quality standards. In addition, the DEP operates the Davis Island SO_2 monitor which is only approximately 5 miles WSW from Gulf Coast. This monitor has not shown any exceedances of the FAAQS.

3.2 SURROUNDING SOURCE EMISSION INVENTORY

Table 3.1 shows the major sulfur dioxide-emitting sources within 30 km of the Gulf Coast facility and their respective operating data. This area has a high density of large utility power generating stations with high sulfur dioxide emissions. The nine largest emitting units collectively emit over 100,000 lbs/hr compared to Gulf Coast's 374 lbs/hr.

Gulf C[redacted] Recycling, Inc.
Source[redacted]ithin 30 km to be included in modeling
August 12, 1993
460.20001

Owner	Facility ID	Model ID	Dist from GCR-km	UTM Coord, E	UTM Coord, N	SO2 Emissions lbs/hr	Stack Ht. ft	Stack Dia. ft	Temp F	Velocity ft/sec
Gulf Coast Recycling, Inc	40HIL290057	0001	0.0	364.0	3093.5	374.0000	150	2.0	160	123
Scrap-All, Inc.	40HIL290054	1302	4.5	359.4	3093.1	0.0200	38	0.7	435	51
Tampa City McKay Bay R-T-E	40HIL290127	1701	4.3	360.0	3091.9	42.500	160	5.7	450	41
Tampa City McKay Bay R-T-E	40HIL290127	1702	4.3	360.0	3091.9	42.500	160	5.7	450	41
Tampa City McKay Bay R-T-E	40HIL290127	1703	4.3	360.0	3091.9	42.500	160	5.7	450	41
Tampa City McKay Bay R-T-E	40HIL290127	1704	4.3	360.0	3091.9	42.500	160	5.7	450	41
Verlite Company	40HIL290077	1901	3.7	360.2	3093.0	1.1300	50	2.0	230	28
Cargill/Nutrena Feed Division	40HIL290037	2108	3.6	360.8	3095.8	0.3700	16	1.0	410	29
Couch Construction Company	40HIL290012	2402	3.4	362.1	3096.7	17.000	41	4.1	350	66
Nitram	40HIL290029	2703	4.9	362.5	3089.0	0.7200	90	4.5	260	35
Nitram	40HIL290029	2704	4.9	362.5	3089.0	0.7200	30	4.5	450	35
Nitram	40HIL290029	2713	4.9	362.5	3089.0		9	1.7	260	24
Weyerhauser Co	40HIL290070	2801	4.6	362.8	3098.3		25	2.0	375	18
Weyerhauser Co	40HIL290070	2802	4.6	362.8	3098.3	0.1000	25	1.7	375	20
Royster Co	40HIL290003	2901	4.7	362.8	3098.4	4.3500	25	2.5	500	28
Verlite Co	40HIL290136	3103	4.3	363.0	3098.1		40	1.0	171	41
W.R. Bonsal Co	40HIL290097	3301	4.3	363.6	3098.1		17	2.3	300	57
City of Tampa, Dept. San. Sew.	40HIL290373	3401	4.3	364.0	3089.5		75	5.0	216	29
City of Tampa, Dept. San. Sew.	40HIL290373	3402	4.3	364.0	3089.5		75	5.0	216	29
Griffin Industries	40HIL290163	3501	2.6	364.1	3096.4	0.0200	50	2.8	450	22
Griffin Industries	40HIL290163	3502	2.6	364.1	3096.4	0.0200	48	0.3	450	1414
Couch Construction Co	40HIL290223	3602	4.3	364.3	3098.1		34	4.5	325	62
Florida Steel Corp	40HIL290020	3701	1.2	364.6	3092.8	0.0420	40	2.8	105	148
Florida Steel Corp	40HIL290020	3702	1.2	364.6	3092.8	0.0690	40	2.0	150	482
Florida Steel Corp	40HIL290020	3703	1.2	364.6	3092.8	0.0700	40	3.3	155	194
Florida Steel Corp	40HIL290020	3704	1.2	364.6	3092.8	0.1400	40	2.3	155	641
Florida Steel Corp	40HIL290020	3706	1.2	364.6	3092.8	0.0800	76	7.2	1090	28
Florida Steel Corp	40HIL290020	3708	1.2	364.6	3092.8	0.0036	50	1.5	75	
Southeastern Wire	40HIL290090	3801	4.4	368.3	3094.5		14	3.5	68	34
Southeastern Galvanizing Div	40HIL290069	3901	4.6	368.5	3094.5		11	1.5	150	229
Sulfur Terminals Co, Inc.	40HIL290082	1001	7.0	358.0	3090.0	23.5400	30	1.8	660	17
TECO-Hookers Pt. Sta.	40HIL290038	1101	6.5	358.0	3091.0	328.0000	280	11.3	295	20
TECO-Hookers Pt. Sta.	40HIL290038	1102	6.5	358.0	3091.0	328.0000	280	11.3	329	18
TECO-Hookers Pt. Sta.	40HIL290038	1103	6.5	358.0	3091.0	452.7000	280	12.0	322	26
TECO-Hookers Pt. Sta.	40HIL290038	1104	6.5	358.0	3091.0	452.0000	280	12.0	300	24
TECO-Hookers Pt. Sta.	40HIL290038	1105	6.5	358.0	3091.0	671.0000	280	11.3	347	36
TECO-Hookers Pt. Sta.	40HIL290038	1106	6.5	358.0	3091.0	856.0000	280	9.4	322	73

TABLE 3.1

Gu[illegible]oast Recycling, Inc.
Sources within 30 km to be included in modeling
August 12, 1993
460.20001

Owner	Facilty ID	Model ID	Dist from GCR-km	UTM Coord, E	UTM Coord, N	SO2 Emissions lbs/hr	Stack Ht. ft	Stack Dia. ft	Temp F	Velocity ft/sec
TECO-Gannon Sta.	40HIL290040	1601	7.4	360.0	3087.5	3017.0000	306	10.0	289	94
TECO-Gannon Sta.	40HIL290040	1602	7.4	360.0	3087.5	3017.0000	306	10.0	298	101
TECO-Gannon Sta.	40HIL290040	1603	7.4	360.0	3087.5	3838.0000	306	10.6	296	126
TECO-Gannon Sta.	40HIL290040	1604	7.4	360.0	3087.5	4502.0000	306	10.0	309	75
TECO-Gannon Sta.	40HIL290040	1605	7.4	360.0	3087.5	5482.0000	306	14.6	303	76
TECO-Gannon Sta.	40HIL290040	1606	7.4	360.0	3087.5	9115.0000	306	17.6	320	81
TECO-Gannon Sta.	40HIL290040	1607	7.4	360.0	3087.5	9.2000	35	5.0	1010	448
Cargill Fertilizer, Inc.	40HIL290008	3004	11.3	362.9	3082.5	366.6700	150	7.5	153	44
Cargill Fertilizer, Inc.	40HIL290008	3005	11.3	362.9	3082.5	416.6700	150	8.0	152	34
Cargill Fertilizer, Inc.	40HIL290008	3006	11.3	362.9	3082.5	433.2000	70	9.0	160	37
Cargill Fertilizer, Inc.	40HIL290008	3007	11.3	362.9	3082.5		126	8.0	132	37
Cargill Fertilizer, Inc.	40HIL290008	3022	11.3	362.9	3082.5		133	7.3	120	48
Cargill Fertilizer, Inc.	40HIL290008	3023	11.3	362.9	3082.5		133	7.0	120	52
Cargill Fertilizer, Inc.	40HIL290008	3034	11.3	362.9	3082.5	0.0400	66	2.0	140	53
Cargill Fertilizer, Inc.	40HIL290008	3041	11.3	362.9	3082.5	0.8900	40	1.7	120	32
Cargill Fertilizer, Inc.	40HIL290008	3043	11.3	362.9	3082.5	0.5200	20	4.0	420	52
Cargill Fertilizer, Inc.	40HIL290008	3055	11.3	362.9	3082.5	31.8000	133	7.0	108	50
Cargill Fertilizer, Inc.	40HIL290008	3063	11.3	362.9	3082.5	0.4000				
Cargill Fertilizer, Inc.	40HIL290008	3064	11.3	362.9	3082.5	0.4000				
Cargill Fertilizer, Inc.	40HIL290008	3065	11.3	362.9	3082.5	0.4000				
Cargill Fertilizer, Inc.	40HIL290008	3069	11.3	362.9	3082.5	0.3000				
TECO-Big Bend Sta.	40HIL290039	2201	18.9	361.9	3075.0	26241.1300	490	24.0	269	45
TECO-Big Bend Sta.	40HIL290039	2202	18.9	361.9	3075.0	25974.0000	490	24.0	269	42
TECO-Big Bend Sta.	40HIL290039	2203	18.9	361.9	3075.0	26748.0000	490	24.0	279	47
TECO-Big Bend Sta.	40HIL290039	2204	18.9	361.9	3075.0	3551.0000	490	24.0	156	59
TECO-Big Bend Sta.	40HIL290039	2205	18.9	361.9	3075.0	277.0000	75	14.0	928	61
TECO-Big Bend Sta.	40HIL290039	2206	18.9	361.9	3075.0	277.0000	75	14.0	928	61
TECO-Big Bend Sta.	40HIL290039	2207	18.9	361.9	3075.0	79.0000	35	5.0	1010	447
Florida Power-Bartow	40PNL520011	5201	24.2	342.4	3082.6	3558.5000	300	9.0	312	119
Florida Power-Bartow	40PNL520011	5202	24.2	342.4	3082.6	3445.0000	300	9.0	305	102
Florida Power-Bartow	40PNL520011	5203	24.2	342.4	3082.6	5786.0000	300	11.0	275	113
Florida Power-Bartow	40PNL520011	5204	24.2	342.4	3082.6	14.4000	30	3.0	515	17
Florida Power-Bartow	40PNL520011	5205	24.2	342.4	3082.6	569.2000	45	17.3	930	73
Florida Power-Bartow	40PNL520011	5206	24.2	342.4	3082.6	569.2000	45	17.3	930	73
Florida Power-Bartow	40PNL520011	5207	24.2	342.4	3082.6		45	17.3	930	73
Florida Power-Bartow	40PNL520011	5208	24.2	342.4	3082.6		45	17.3	930	73
Florida Power-Higgins	40PNL520012	4901	27.7	336.5	3098.4	1434.0000	174	12.5	312	27
Florida Power-Higgins	40PNL520012	4902	27.7	336.5	3098.4	1368.0000	174	12.5	310	27
Florida Power-Higgins	40PNL520012	4903	27.7	336.5	3098.4	1434.0000	174	12.5	301	24
Florida Power-Higgins	40PNL520012	4904	27.7	336.5	3098.4	14.1100	55	15.1	850	372
Florida Power-Higgins	40PNL520012	4905	27.7	336.5	3098.4	14.1100	55	15.1	850	372
Florida Power-Higgins	40PNL520012	4906	27.7	336.5	3098.4	15.7300	55	15.1	850	372
Florida Power-Higgins	40PNL520012	4907	27.7	336.5	3098.4	15.7300	53	15.1	850	372

4.0 DISPERSION MODELING ANALYSIS

The PSD regulations require modeling analyses to predict the impacts on the ambient air quality standards and on the air quality increments for that area. The regulations also require an analysis of the predicted impacts on any Class I area that may be impacted. Thus, three separate analyses were done for SO_2 for this project:

1) The FAAQS analysis looked at the predicted impacts from Gulf Coast and surrounding sources on the human health-based Federal and Florida Ambient Air Quality Standards;
2) The Class I increment analysis predicted Gulf Coast's and other PSD sources' consumption of air quality increments at the Chassahowitzka National Wilderness Area;
3) The Class II increment analysis predicted Gulf Coast's and other PSD sources' consumption of air quality increments of the surrounding area, which is classified as a Class II area.

A screening analysis was performed for CO to determine if the predicted impacts exceeded the significance level. If it did, full FAAQS and Class I and II analyses would have to be performed.

Both increment analyses aimed at predicting the amount of remaining increments that would be consumed by Gulf Coast and other PSD sources and then comparing that prediction with the allowed consumption. This requirement provides for future growth by assuring that no one new source will deteriorate the air quality to the point that the ambient standards are on the verge of being violated, thereby not allowing any future source to locate in the area without causing a violation of the standards.

4.1 PROTOCOLS AND RESULTS

The modeling was conducted using EPA-approved methods as outlined in *Guideline on Air Quality Models* (Revised, EPA, 1986). The particular models used were the latest versions of the Industrial Source Complex Short Term model (ISCST2), used for the Class II and FAAQS SO_2 analyses and the CO screening analysis, and MESOPUFF II long-range transport model, used for the Class I SO_2 analysis.

A modeling protocol was submitted to DEP on August 17, 1993 for the SO_2 analyses (see **Appendix G**) and was approved as amended on September 24, 1993 (see **Appendix H**). The modeling protocol called for five years of meteorological data to be used for each analysis. The years 1982-86 were chosen, with the data being collected at the Tampa surface and upper air station number 12842 for all runs. The Class I analysis also utilized surface met data from Orlando and Gainsville. Each modeling run calculated SO_2 impacts for three averaging periods: 3-hour, 24-hour, and annual. For each analysis, the 3-hour and 24-hour standard (or increment) can be exceeded once per year at each receptor. Therefore, the maximum impact for each receptor for these averaging periods is the highest second-high value. The annual standard (or increment) cannot be exceeded. Therefore, the maximum impact for the annual averaging period for each receptor is the highest value.

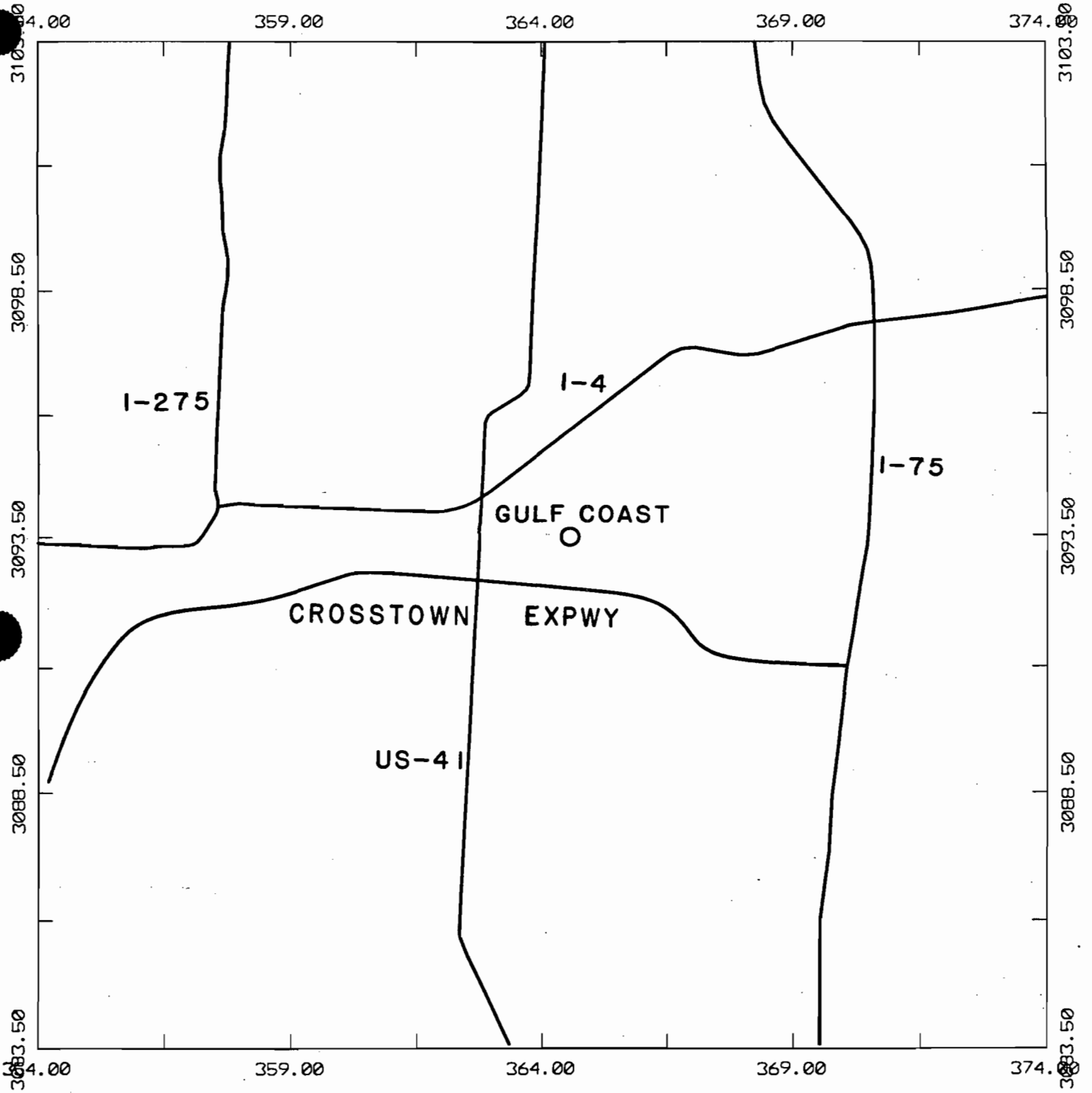
The ISCST2 model was run in the regulatory default mode resulting in conservative impacts. Wet and dry deposition as well as SO_2 conversion were not used which further overestimates the impacts. All modeling assumed the blast furnace operates 8,760 hrs/yr. The Gulf Coast facility is located in a mixed-use area with both industrial facilities and residential areas located within a 50 km radius. The area is assumed to be rural with flat terrain for modeling purposes. The model did not calculate building downwash or wake effects due to the sufficient height of the furnace stack. This resulted in maximum downwind concentrations being calculated.

Three separate cartesian receptor grids were used for the FAAQS and Class II analyses. The first grid placed 441 receptors at 100-meter intervals from Gulf Coast out to 1 kilometer. The second grid placed 441 receptors at 1-kilometer intervals from Gulf Coast out to 10 kilometers. The third grid placed 121 receptors at 10-kilometer intervals from Gulf Coast out to 50 kilometers, for a total of 1,003 receptors. **Figures 4.1 and 4.2** show the boundary file used for the graphics and a map showing the boundary file outline. **Figure 4.3** shows the area covered by the modeling. The DEP identified 13 discrete receptors to be used for the Class I analysis. See **Appendix L** for these receptor locations.

4.1.1 Florida Ambient Air Quality Standards (FAAQS) Analysis

The FAAQS analysis compared the modeled impacts of emissions from Gulf Coast and sixty-eight surrounding sources with the Florida Ambient Air Quality Standards for SO_2. A listing of the 68 sources can be found in **Appendix I**. These sources' locations are shown on **Figure 4.4**. Florida's ambient standards were used for comparison instead of the federal standards because Florida's are more stringent for two of the three averaging periods (24-hour

GRAPHICS BOUNDARY FILE

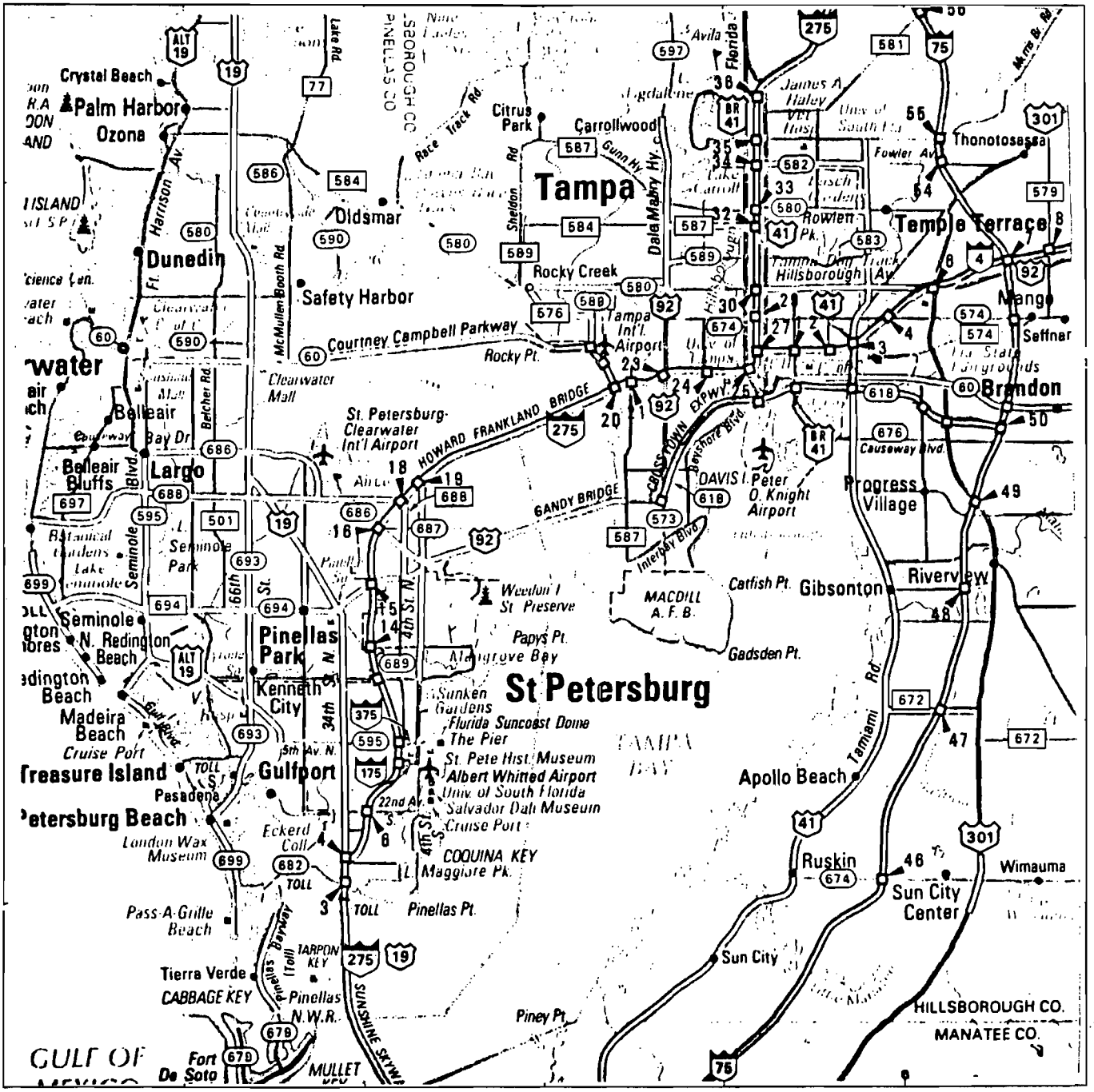


GULF COAST RECYCLING, INC. TAMPA, FL

SCALE: 1 INCH = 2.857 KM

FIGURE 4.1

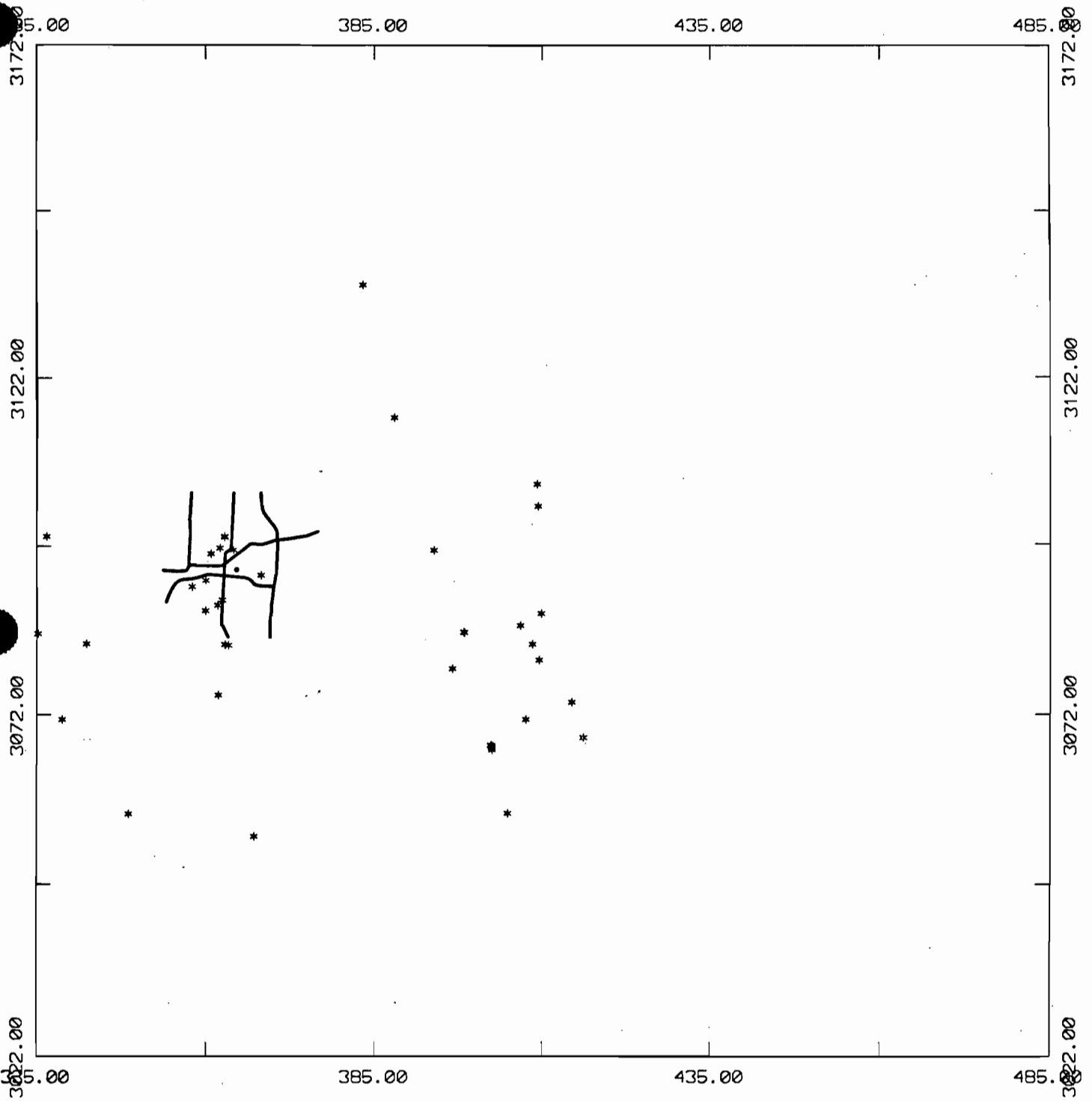
REGIONAL MAP SHOWING BOUNDARY FILE OUTLINE



GULF COAST RECYCLING, INC. TAMPA, FL

FIGURE 4.2

AAQS ANALYSIS SURROUNDING SOURCE INVENTORY



GULF COAST RECYCLING, INC. TAMPA, FL

SCALE: 1 INCH = 21.429 KM

FIGURE 4.3

and annual). Background values measured at the Davis Island monitor, located approximately 8 kilometers (5 miles) WSW from Gulf Coast, were added to the modeled impacts, then compared to the ambient standards. The results of this exercise are shown in **Table 4.1**. Model outputs can be found in **Volume II**.

TABLE 4.1

PRELIMINARY FAAQS ANALYSIS RESULTS

values are in $\mu g/m^3$

AVG. PERIOD	FED. STND.	FLA. STND.	1982	1983	1984	1985	1986
3-hour [1]	1300	1300	**1575** [3] 1271 [4]	**1369** 1065	**1316** 1012	**1567** 1263	**1702** **1398**
24-hour [1]	365	260	**497** [3] **404** [4]	**374** **281**	**365** **272**	**364** **271**	**386** **293**
annual [2]	80	60	**76** [3] 55 [4]	**71** 50	**76** 55	**81** **60**	**83** **62**

[1] Highest second-high modeled impacts

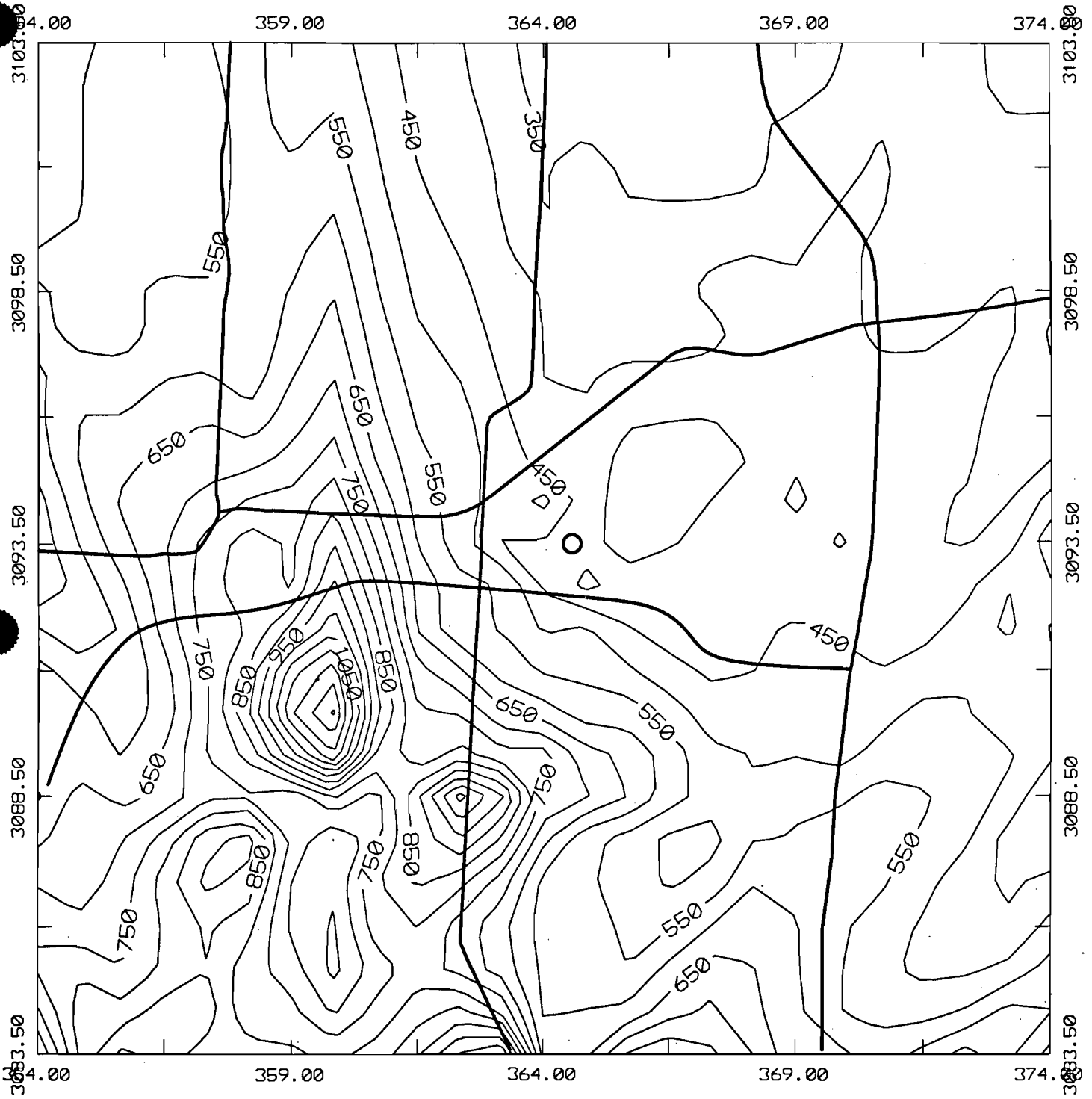
[2] Highest first-high modeled impacts

[3] Results **include** background values of 304 $\mu g/m^3$, 3-hour average; 93 $\mu g/m^3$, 24-hour average; 21 $\mu g/m^3$, annual average. Values recorded at the Davis Island monitoring station, number 4360-0350-G02.

[4] Results **do not include** background values

The 3-hr impacts for all five years are depicted in **Figures 4.4-4.8**; the 24-hr impacts are depicted in **Figures 4.9-4.13**; the annual averages are depicted in Figures **4.14-4.18**. These figures do not include any background values. As shown in the above table, there were some predicted exceedances of the standards. Although without the background values added, the exceedances became fewer in number and closer to the standards. Due to the location of the monitor in relation to all sources included in this analysis and the prevailing wind direction (see **Figure 4.19** for a Wind Rose for this area) it appeared as though many of the sources, including Gulf Coast, were already impacting the monitor. Tampa Electric Company's (TECO) Hooker's Point generating station, with a combined SO_2 emission rate for all units of over 3,087 lbs/hr, is located between 1.0 and 2.3 miles upwind (predominant wind direction) of the monitor, depending on the exact location of the monitor on Davis Island.

SO2 3-HR HIGH 2ND HIGH 1982



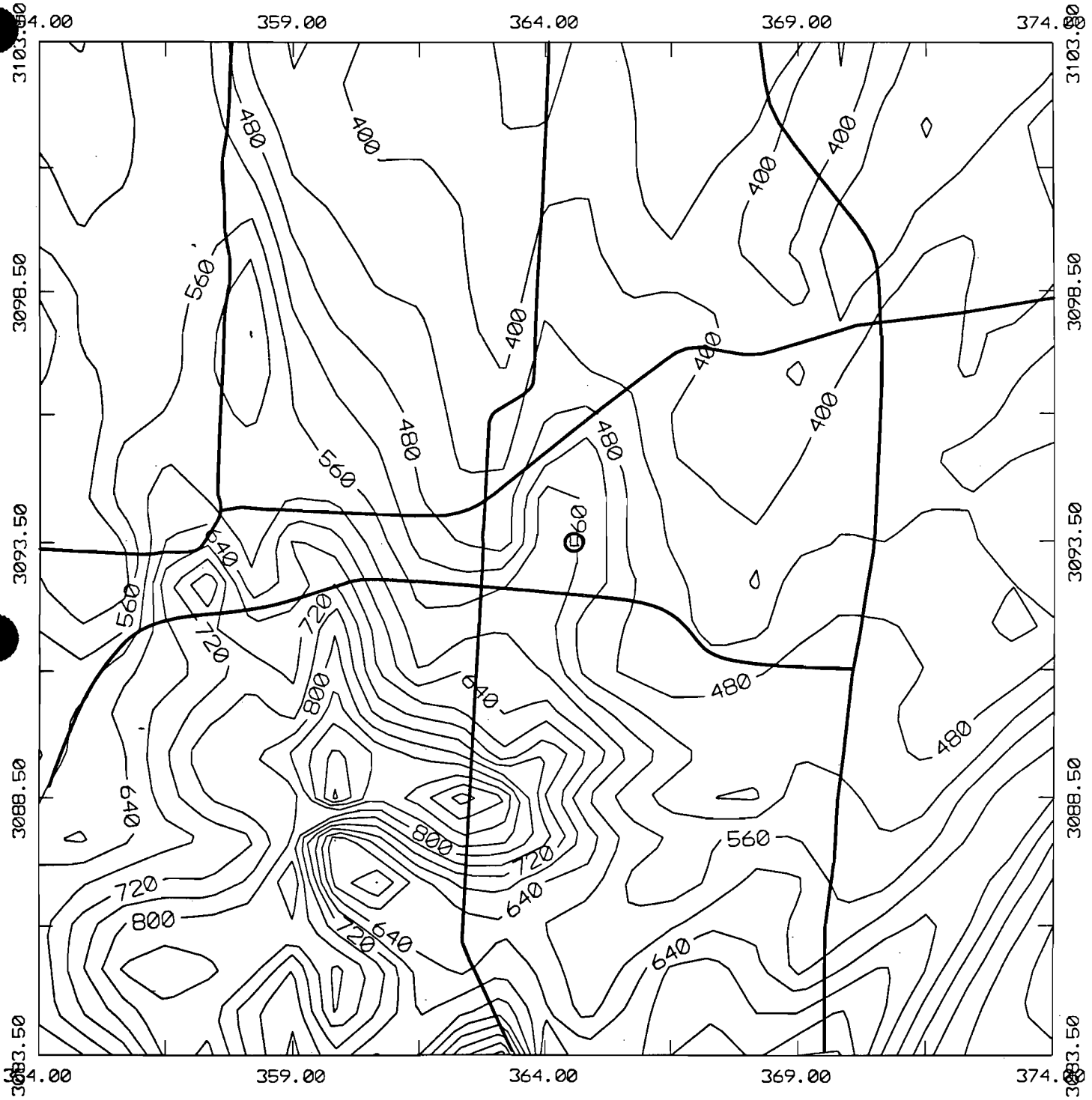
GULF COAST RECYCLING, INC. TAMPA, FL

SCALE: 1 INCH = 2.857 KM

(Isopleths in micrograms/cubic meter)

FIGURE 4.4

SO2 3-HR HIGH 2ND HIGH 1983



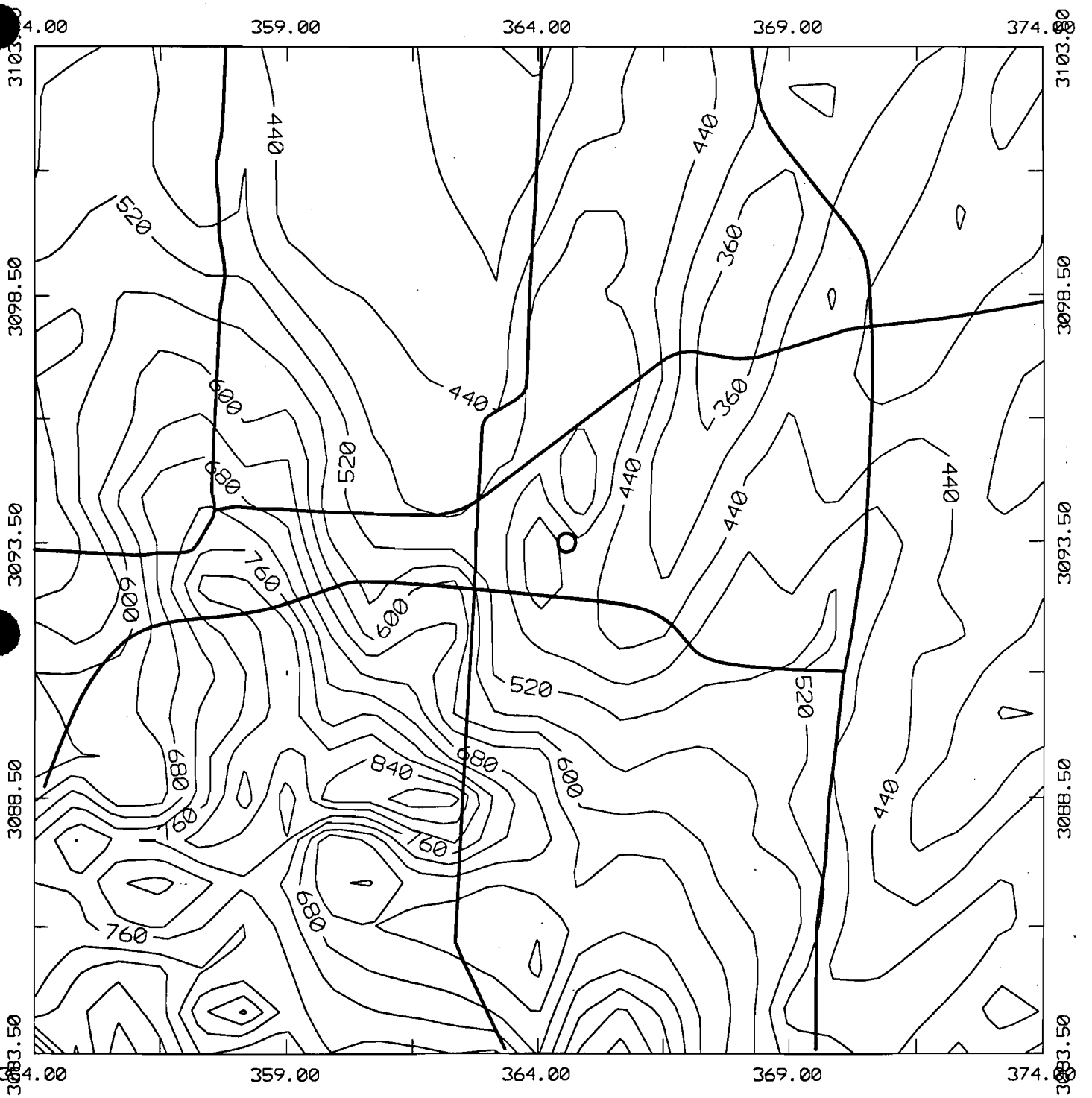
GULF COAST RECYCLING, INC. TAMPA, FL

SCALE: 1 INCH = 2.857 KM

(Isopleths in micrograms/cubic meter)

FIGURE 4.5

SO2 3-HR HIGH 2ND HIGH 1984



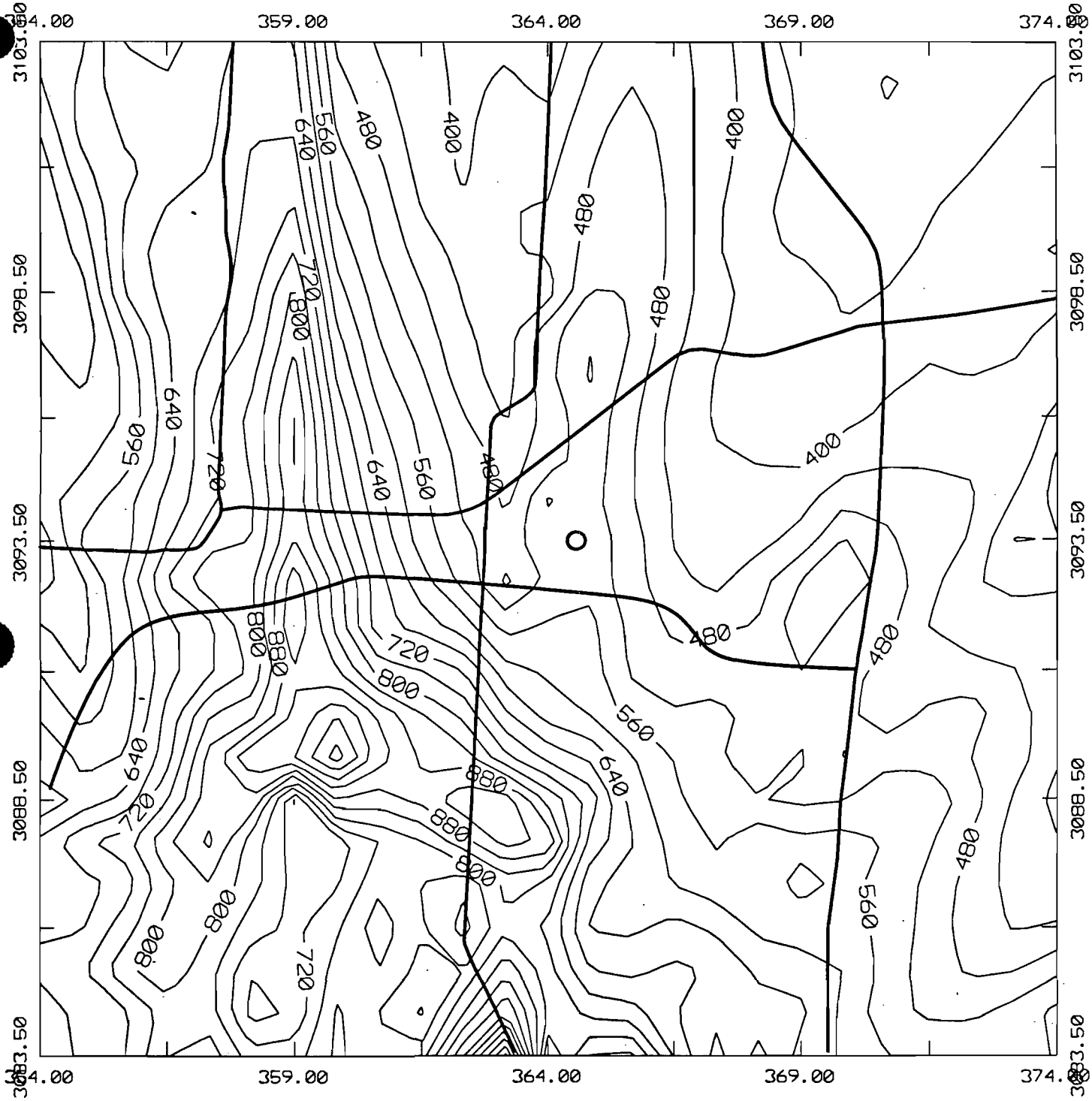
GULF COAST RECYCLING, INC. TAMPA, FL

SCALE: 1 INCH = 2.857 KM

(Isopleths in micrograms/cubic meter)

FIGURE 4.6

SO2 3-HR HIGH 2ND HIGH 1985



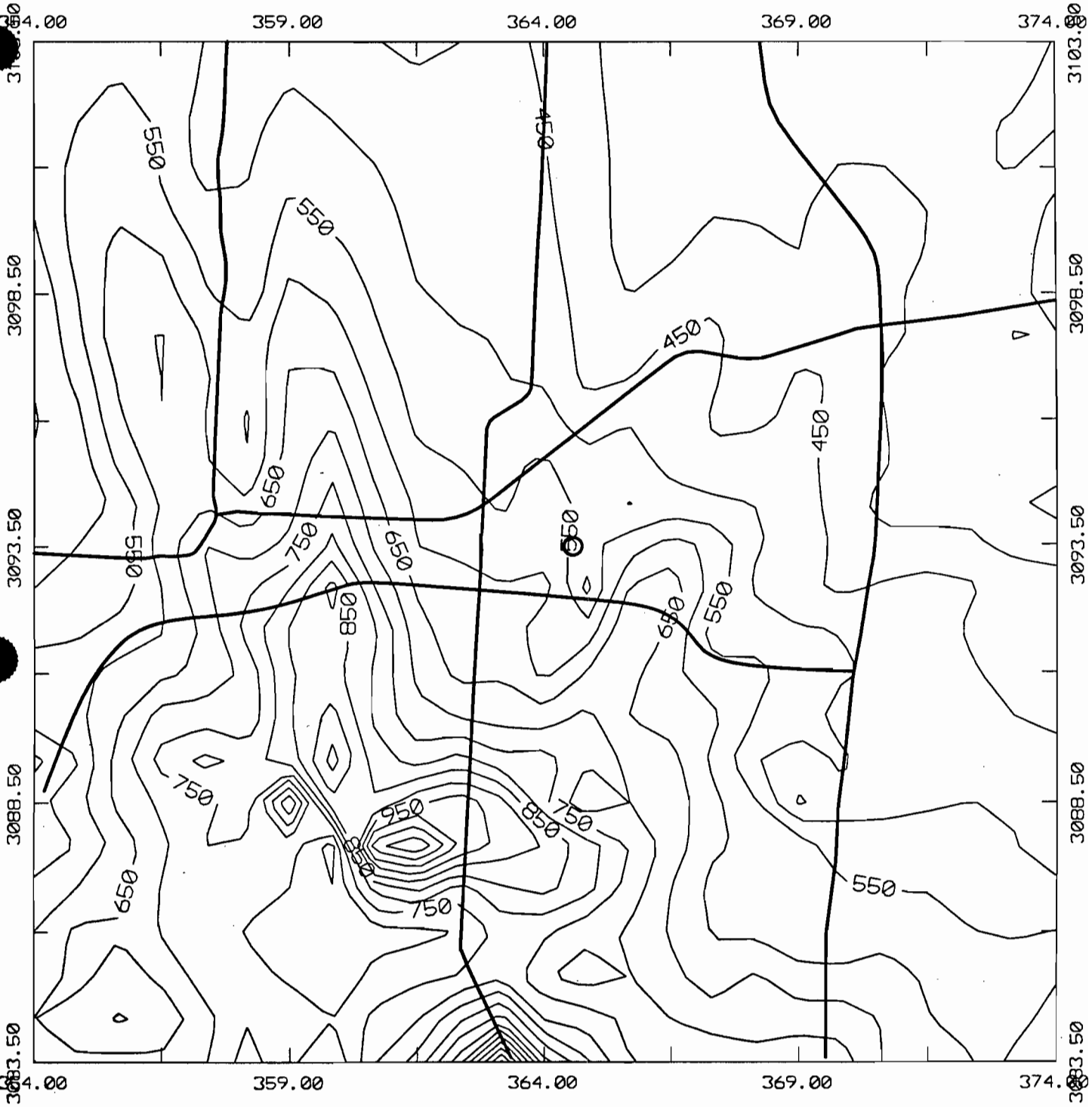
GULF COAST RECYCLING, INC. TAMPA, FL

SCALE: 1 INCH = 2.857 KM

(Isopleths in micrograms/cubic meter)

FIGURE 4.7

SO2 3-HR HIGH 2ND HIGH 1986



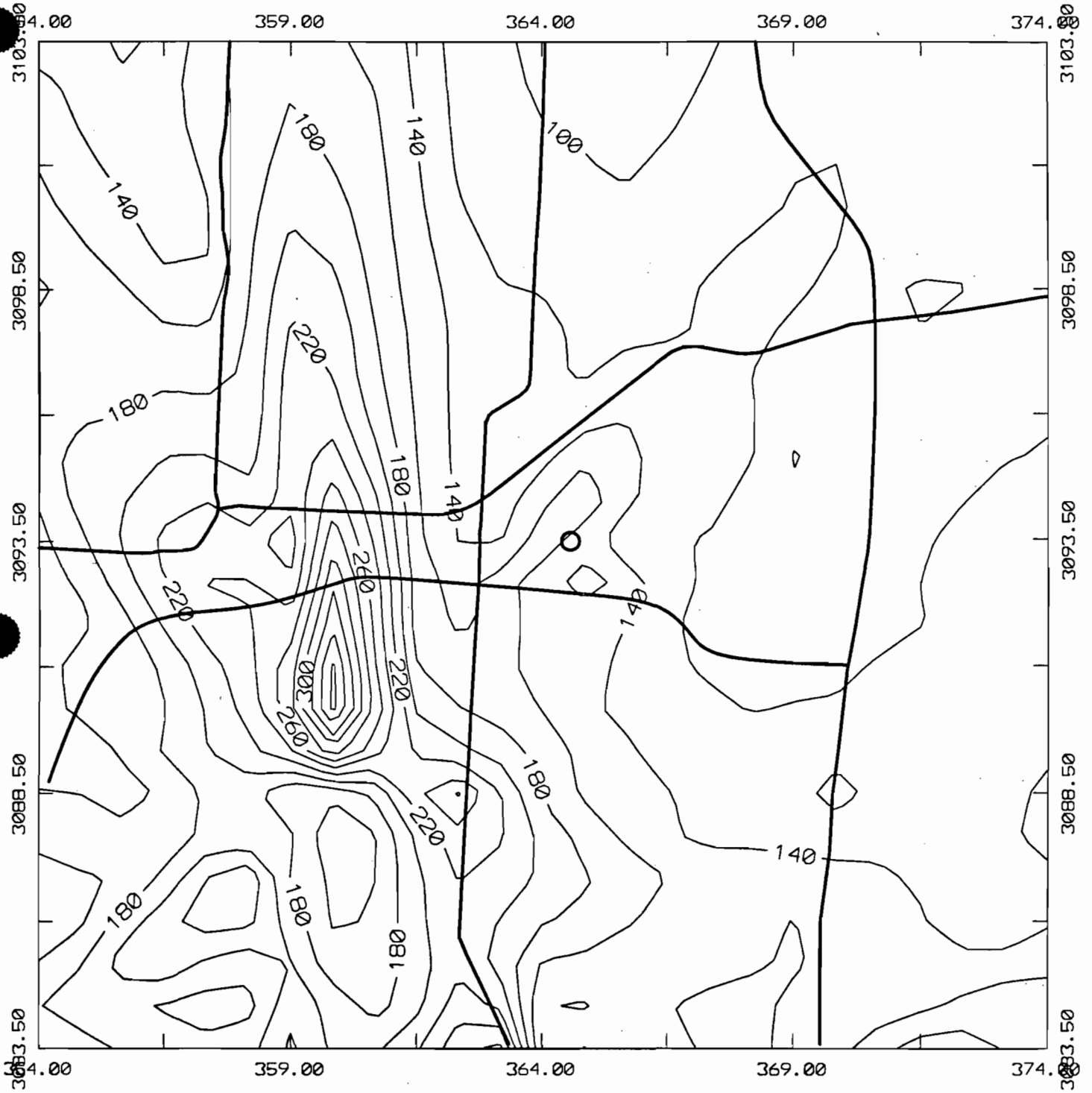
GULF COAST RECYCLING, INC. TAMPA, FL

SCALE: 1 INCH = 2.857 KM

(Isopleths in micrograms/cubic meter)

FIGURE 4.8

SO2 24-HR HIGH 2ND HIGH 1982



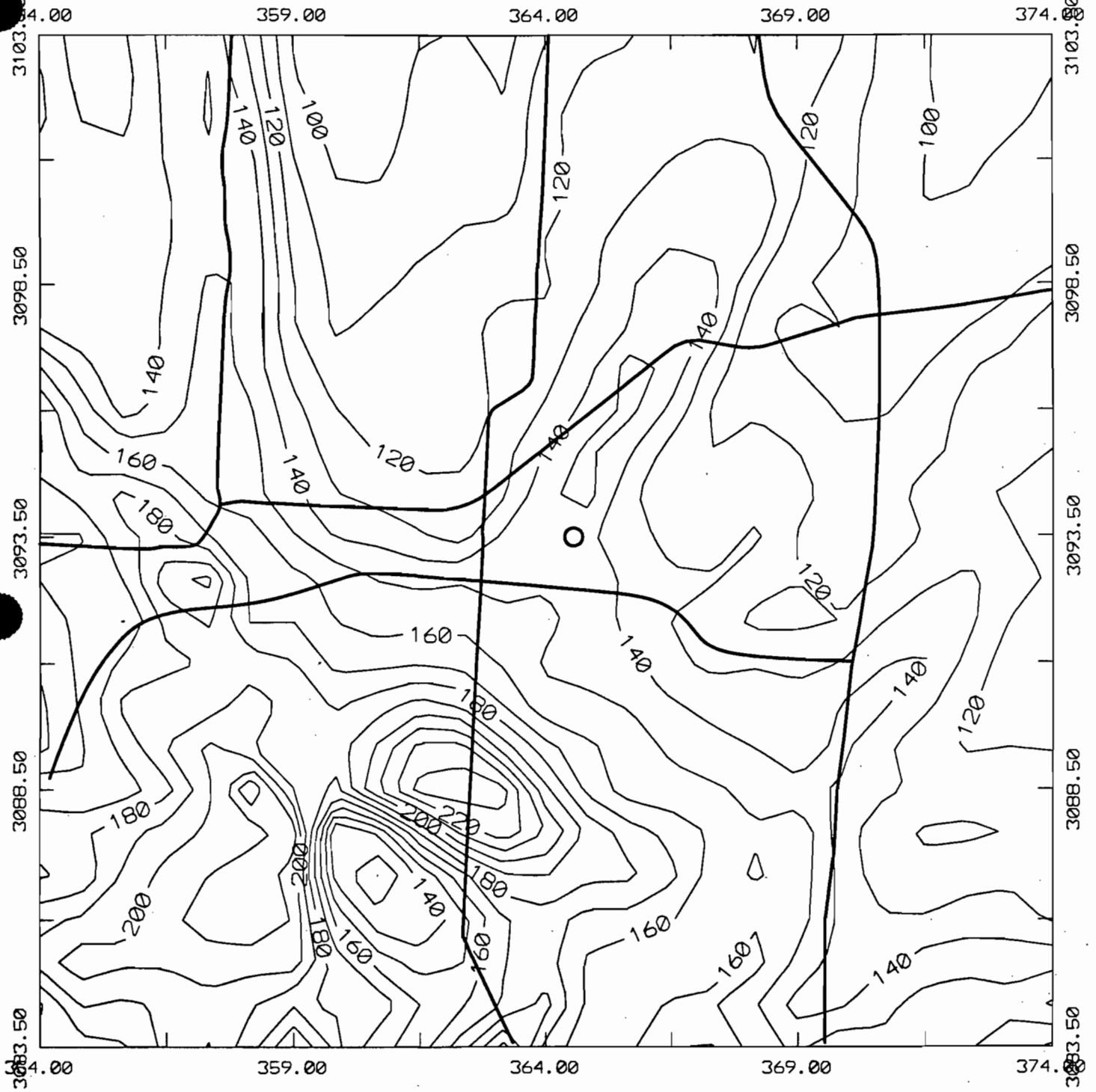
GULF COAST RECYCLING, INC. TAMPA, FL

SCALE: 1 INCH = 2.857 KM

(Isopleths in micrograms/cubic meter)

FIGURE 4.9

SO2 24-HR HIGH 2ND HIGH 1983



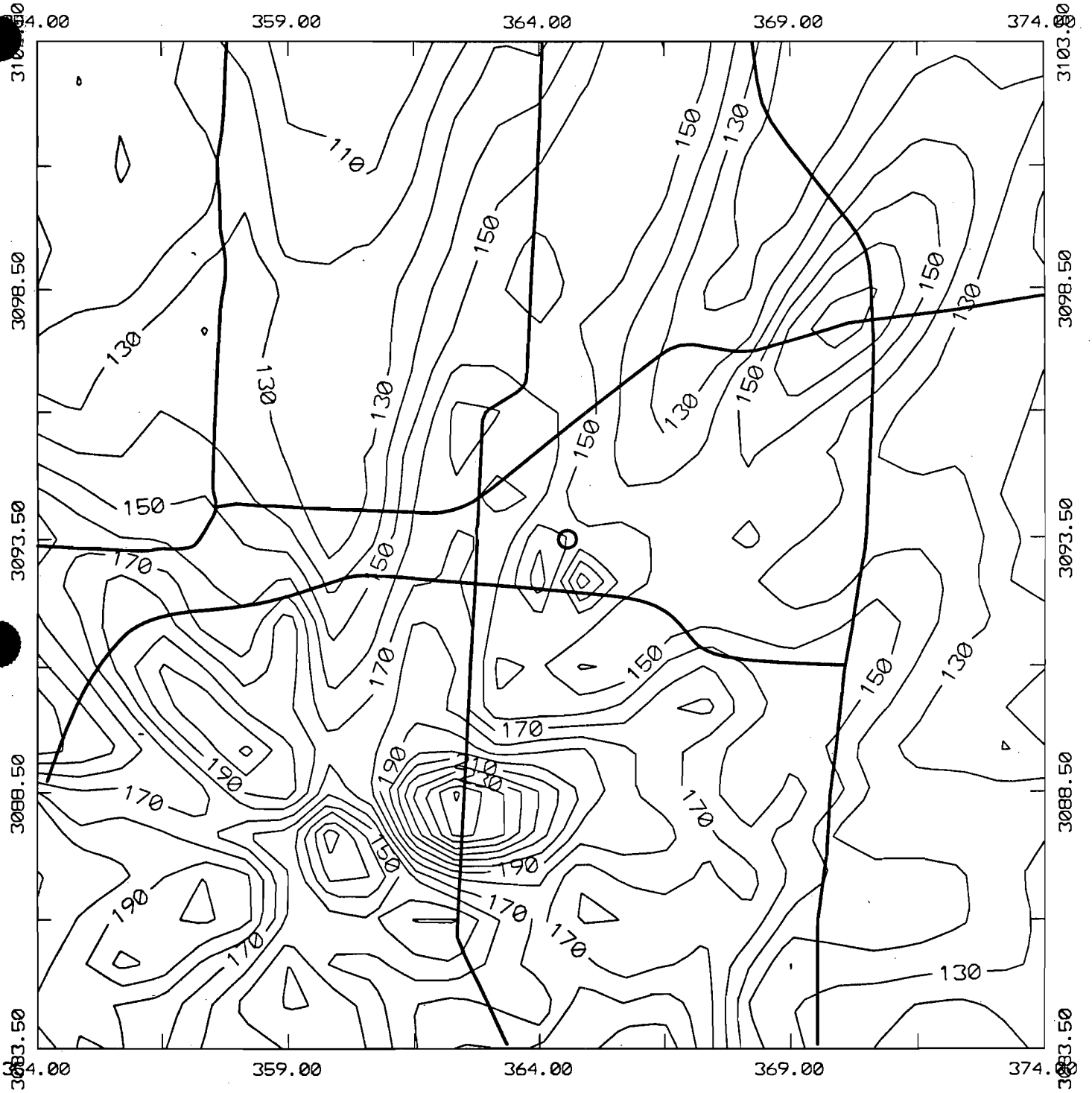
GULF COAST RECYCLING, INC. TAMPA, FL

SCALE: 1 INCH = 2.857 KM

(Isopleths in micrograms/cubic meter)

FIGURE 4.10

SO2 24-HR HIGH 2ND HIGH 1984



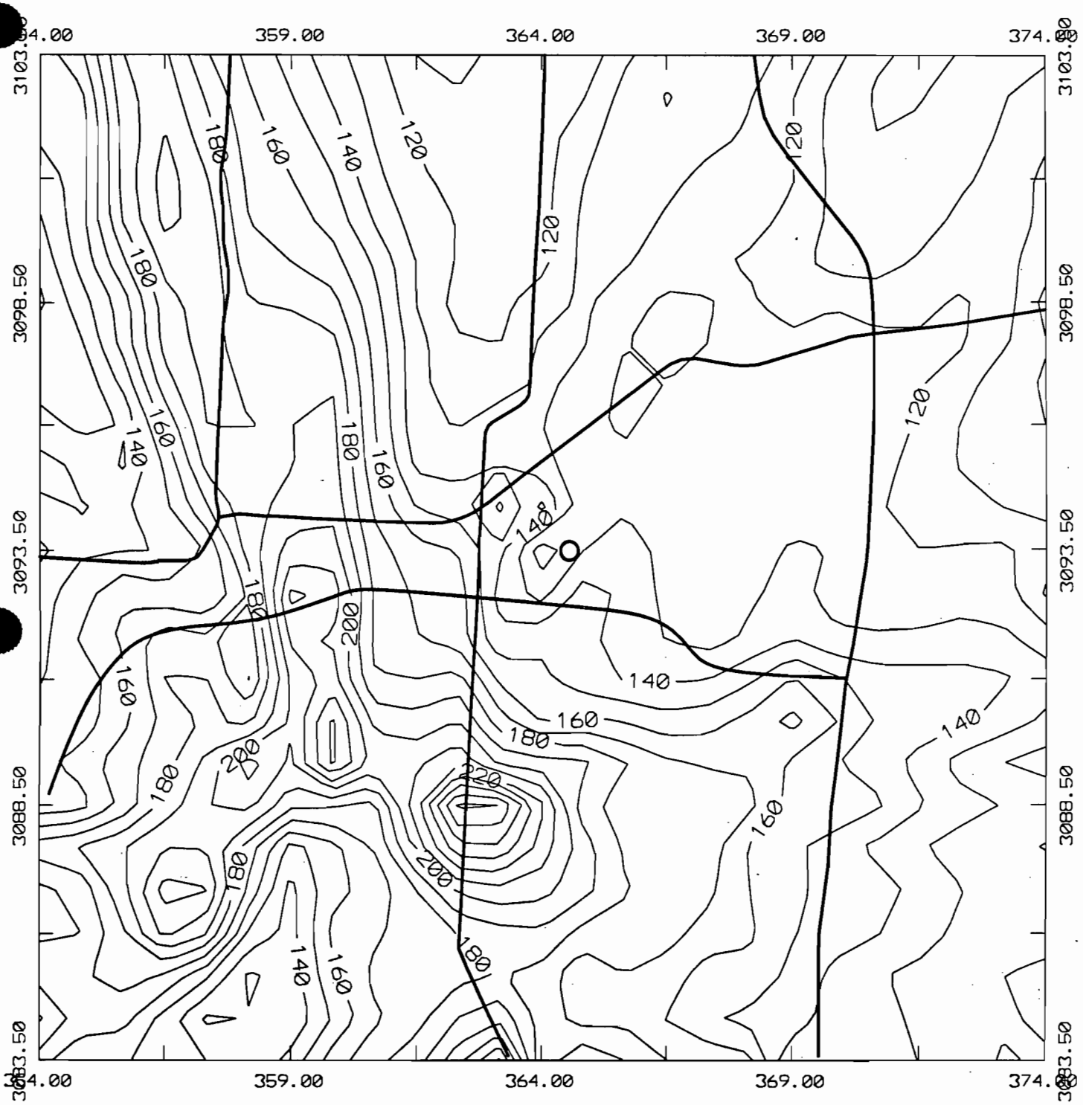
GULF COAST RECYCLING, INC. TAMPA, FL

SCALE: 1 INCH = 2.857 KM

(Isopleths in micrograms/cubic meter)

FIGURE 4.11

SO2 24-HR HIGH 2ND HIGH 1985



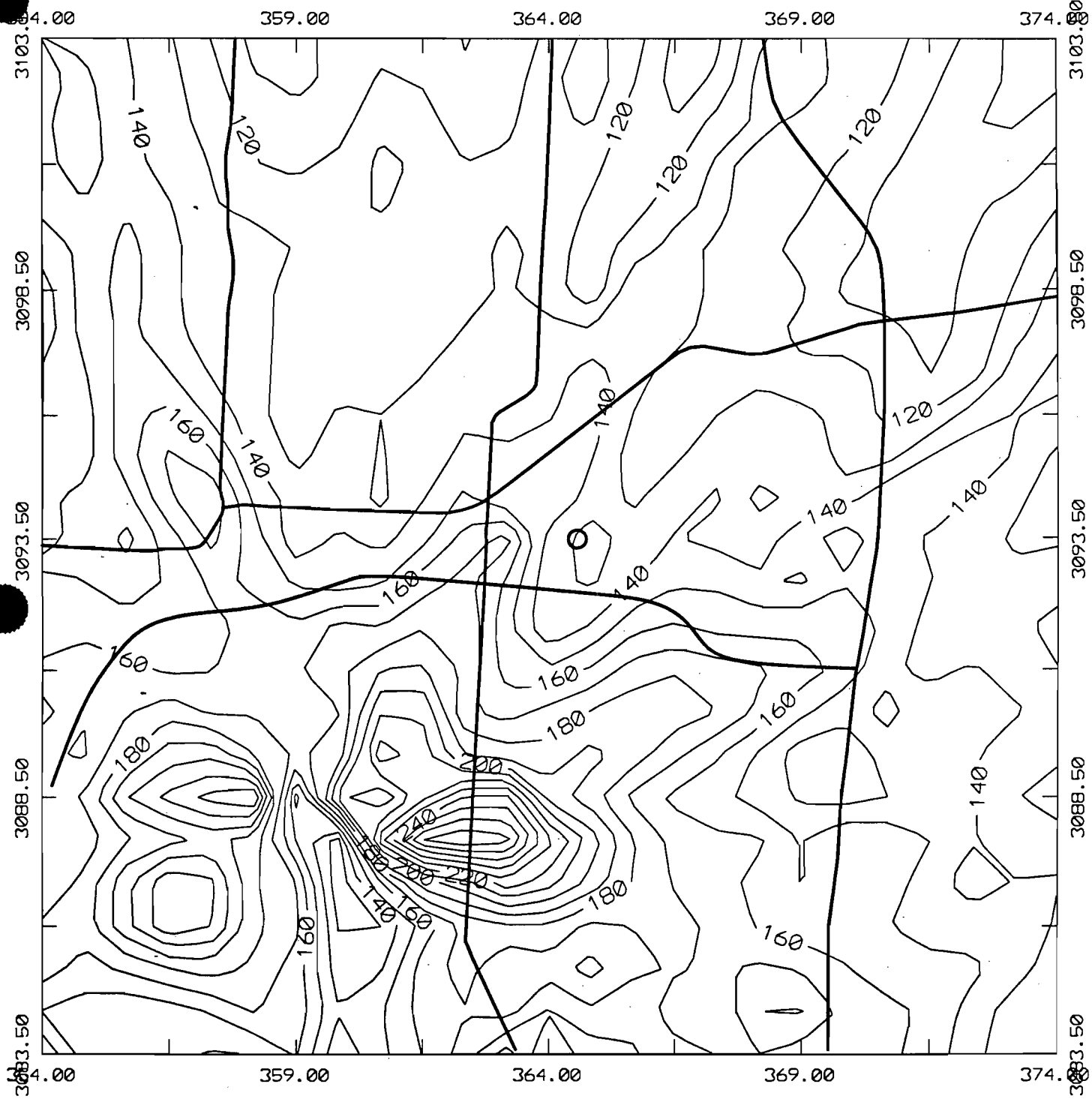
GULF COAST RECYCLING, INC. TAMPA, FL

SCALE: 1 INCH = 2.857 KM

(Isopleths in micrograms/cubic meter)

FIGURE 4.12

SO2 24-HR HIGH 2ND HIGH 1986



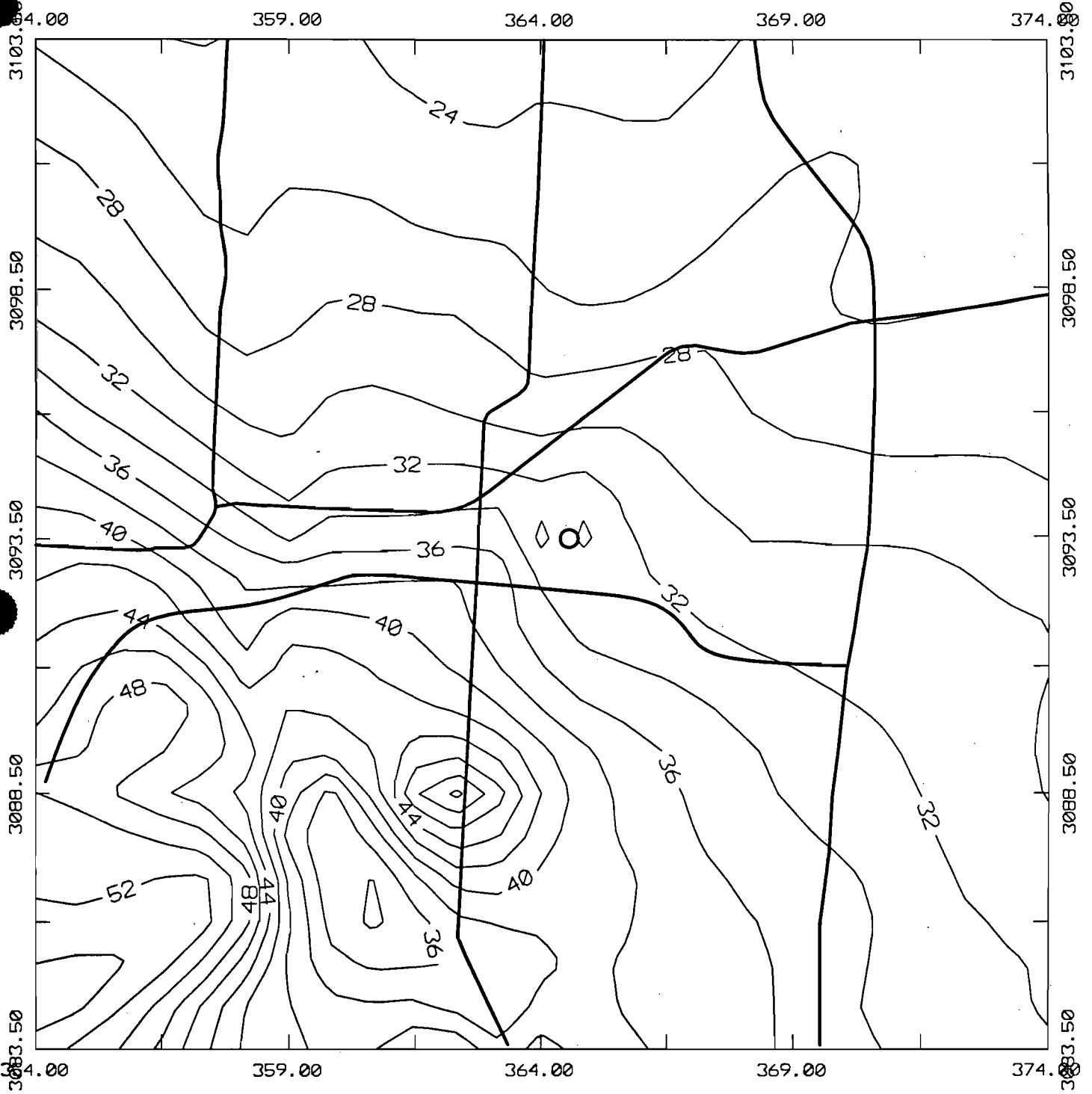
GULF COAST RECYCLING, INC. TAMPA, FL

SCALE: 1 INCH = 2.857 KM

(Isopleths in micrograms/cubic meter)

FIGURE 4.13

SO2 ANNUAL HIGH 1ST HIGH 1982



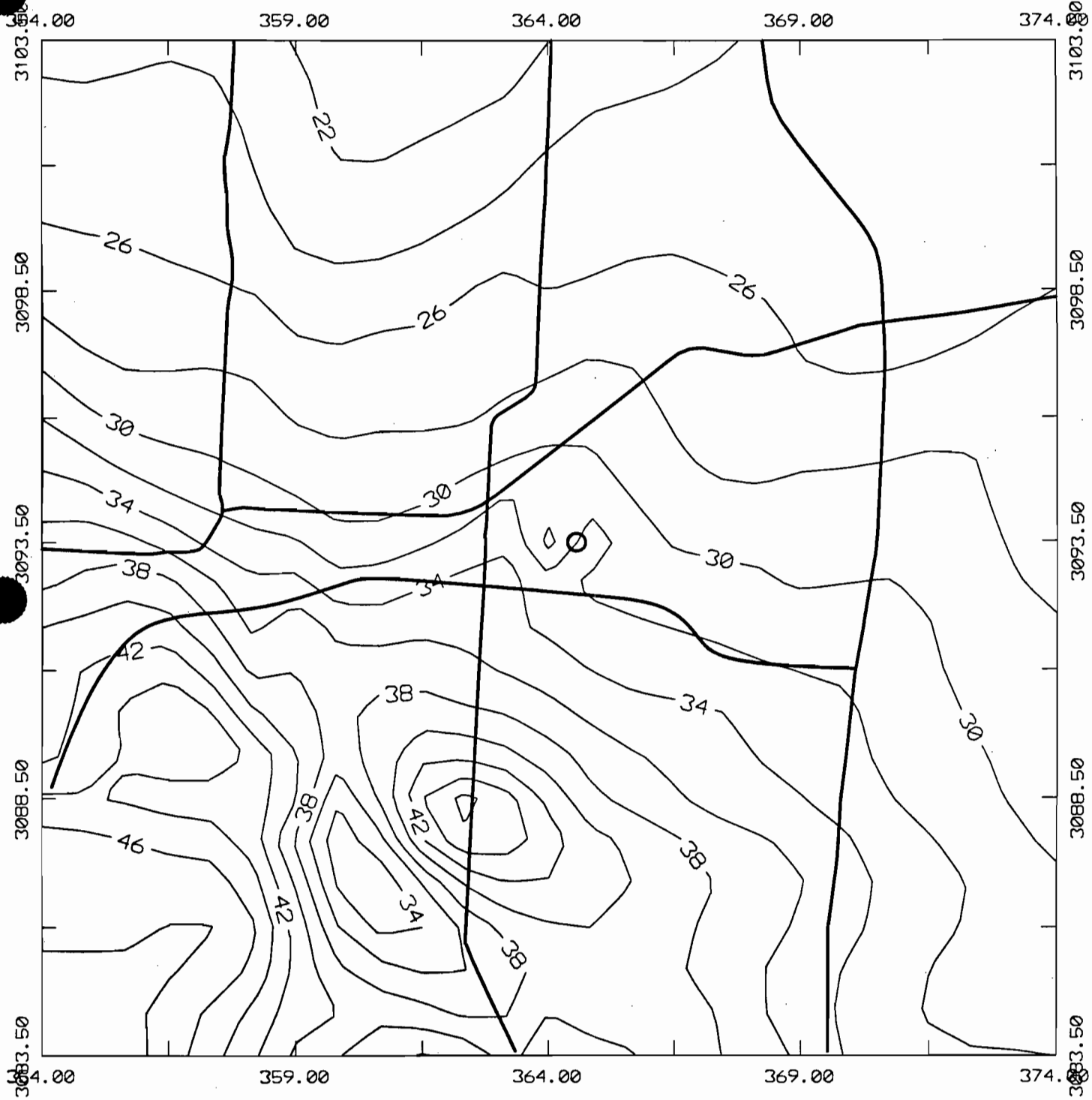
GULF COAST RECYCLING, INC. TAMPA, FL

SCALE: 1 INCH = 2.857 KM

(Isopleths in micrograms/cubic meter)

FIGURE 4.14

SO2 ANNUAL HIGH 1ST HIGH 1983



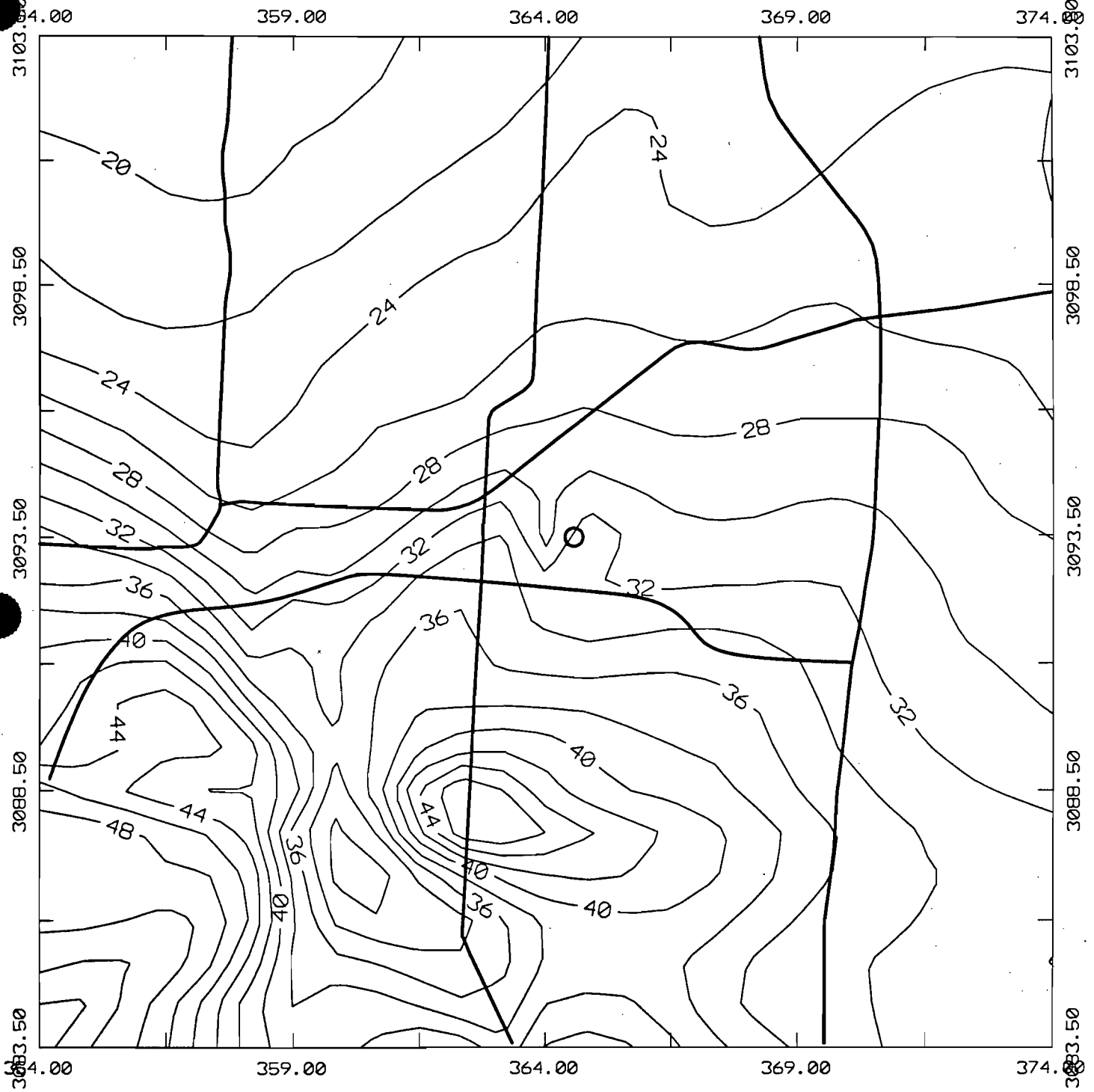
GULF COAST RECYCLING, INC. TAMPA, FL

SCALE: 1 INCH = 2.857 KM

(Isopleths in micrograms/cubic meter)

FIGURE 4.15

SO2 ANNUAL HIGH 1ST HIGH 1984



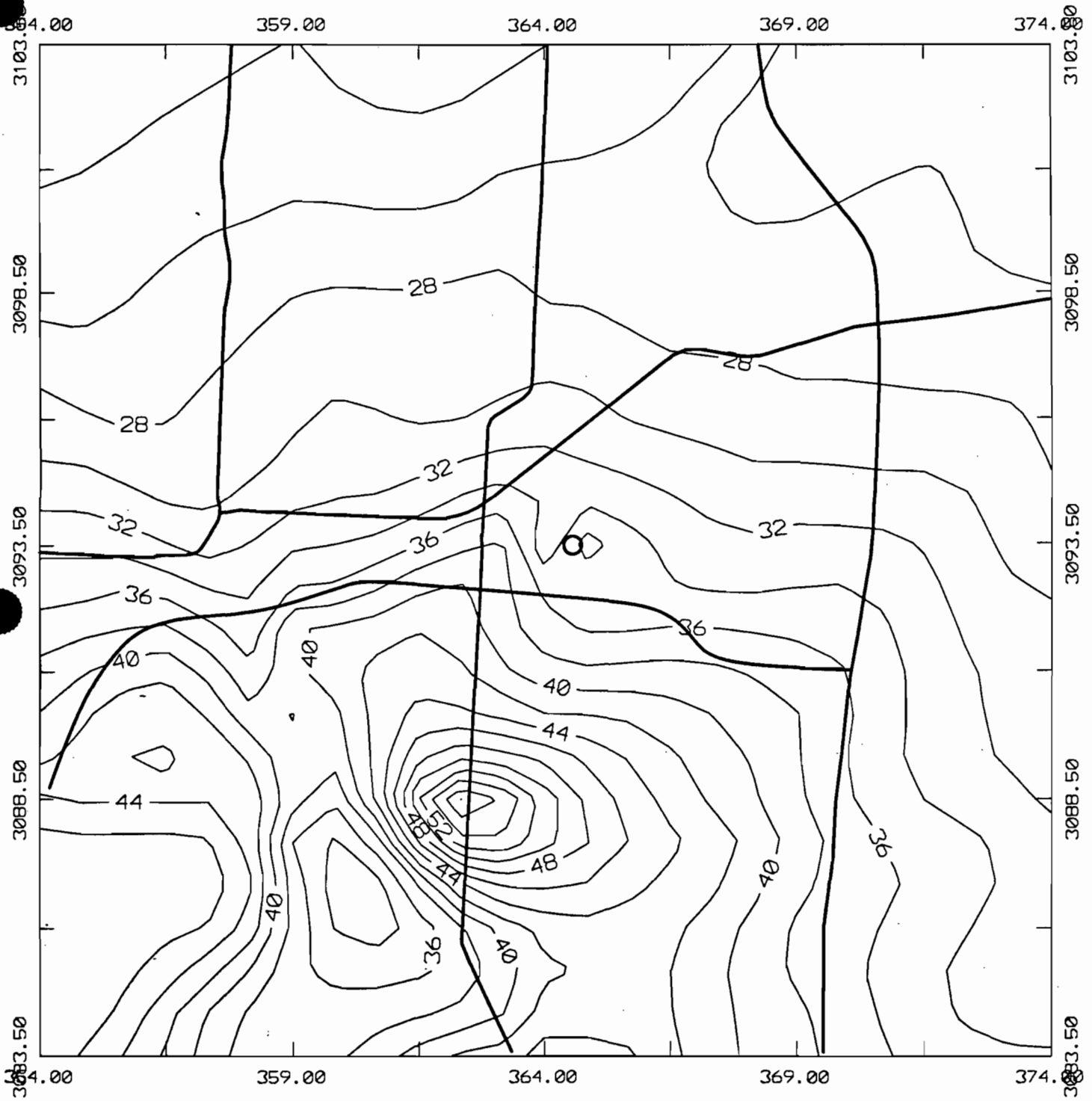
GULF COAST RECYCLING, INC. TAMPA, FL

SCALE: 1 INCH = 2.857 KM

(Isopleths in micrograms/cubic meter)

FIGURE 4.16

SO2 ANNUAL HIGH 1ST HIGH 1985



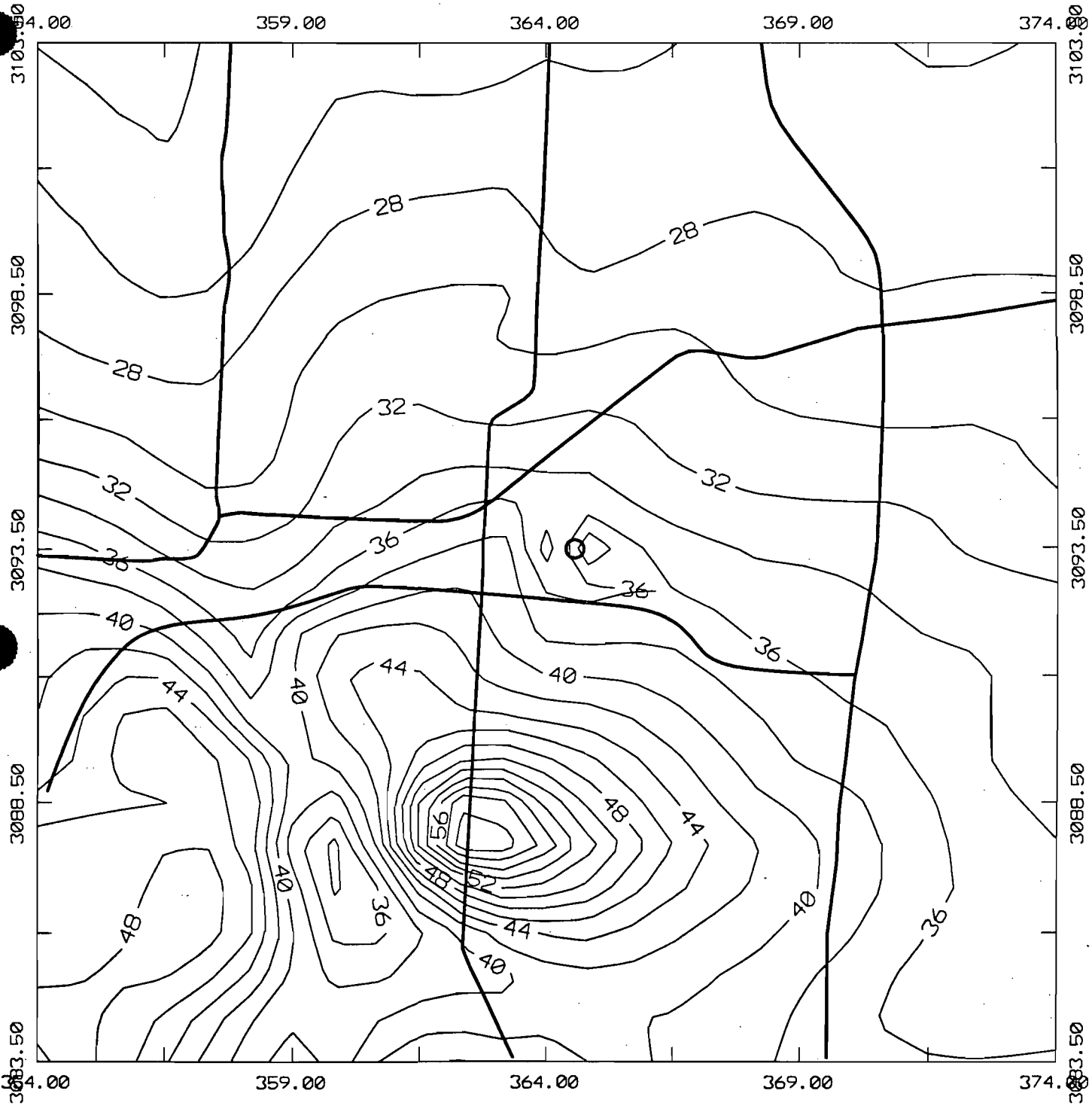
GULF COAST RECYCLING, INC. TAMPA, FL

SCALE: 1 INCH = 2.857 KM

(Isopleths in micrograms/cubic meter)

FIGURE 4.17

SO2 ANNUAL HIGH 1ST HIGH 1986

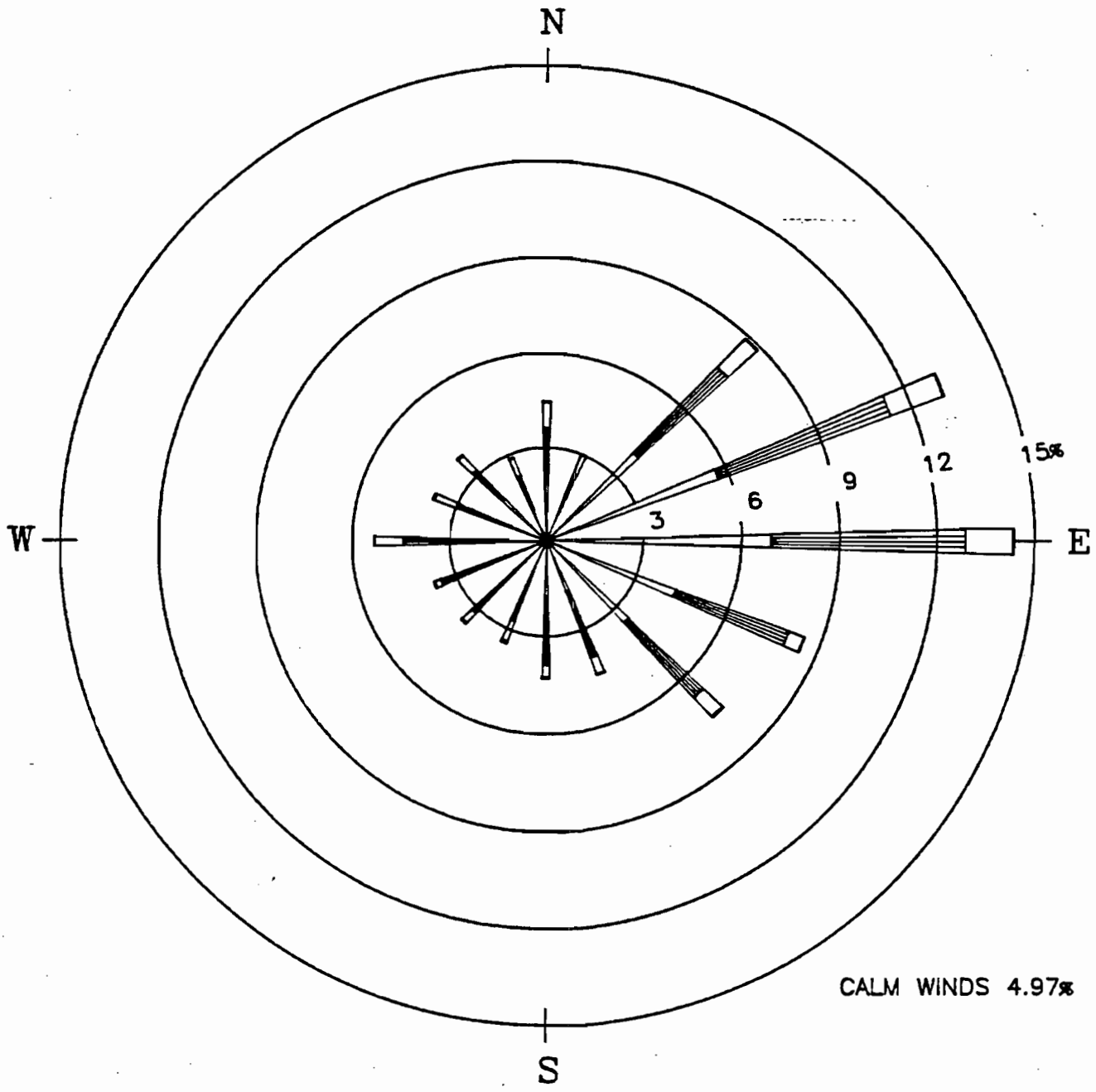


GULF COAST RECYCLING, INC. TAMPA, FL

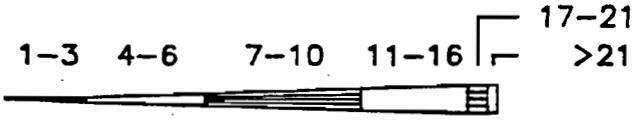
SCALE: 1 INCH = 2.857 KM

(Isopleths in micrograms/cubic meter)

FIGURE 4.18



CALM WINDS 4.97%



WIND SPEED CLASSES
(KNOTS)

NOTES:
DIAGRAM OF THE FREQUENCY OF OCCURRENCE FOR EACH WIND DIRECTION. WIND DIRECTION IS THE DIRECTION FROM WHICH THE WIND IS BLOWING. EXAMPLE – WIND IS BLOWING FROM THE NORTH 4.5 PERCENT OF THE TIME.

WINDROSE

STATION NO. 12842
TAMPA, FL
PERIOD: 1982

FIGURE 4.19

This scenario resulted in those sources' emissions apparently being double-counted, once in the model and once in the background values. Since the background values were required to be added, it was thought the requirement to include all of the 68 surrounding sources identified by DEP into the model was overly burdensome. A portion of the receptor grid placed six receptors within 1.2 kilometers of the Davis Island monitor. Due to the overly conservative requirements discussed above, the model was predicting values, as close as 400 meters from the Davis Island monitor, that were twice as high as those actually measured by the monitor.

By letter dated March 7, 1994 (see **Appendix J**) DEP recognized this problem and reconsidered the background values originally chosen. DEP identified another SO_2 monitor less likely to be impacted by sources included in the modeling, the TECO Big Bend Road monitor, number 1800-021-G02. The highest recorded annual value in the last three years at this monitor is 6 $\mu g/m^3$. The EPD stated this value could be used for all three averaging periods. The revised ambient impacts with the updated background values added are shown in **Table 4.2**.

TABLE 4.2

REVISED FAAQS ANALYSIS RESULTS [3]

values are in $\mu g/m^3$

AVG. PERIOD	FED. STND.	FLA. STND.	1982	1983	1984	1985	1986
3-hour [1]	1300	1300	1277	1071	1018	1269	**1404**
24-hour [1]	365	260	**410**	**287**	**278**	**277**	**299**
annual [2]	80	60	**61**	56	**61**	**66**	**68**

[1] Highest second-high modeled impacts

[2] Highest first-high modeled impacts

[3] Results include background value of 6 $\mu g/m^3$ for all averaging periods. Value recorded at the TECO Big Bend Road monitoring station, number 1800-021-G02.

The model was then re-run with two source groups, one with Gulf Coast's emissions only and one with the other 68 sources' emissions, for each year and averaging period that there was a predicted violation of the FAAQS. It was found that, even with Gulf Coast's emissions excluded, the model was showing exceedances of the standards. The model also showed that the maximum impacts with Gulf Coast's emissions excluded were no more than 1 $\mu g/m^3$ lower

than with Gulf Coast's emissions included. This tended to show that Gulf Coast was not contributing to the modeled FAAQS violations. These results are shown in **Table 4.3**.

TABLE 4.3
IMPACTS WITH AND WITHOUT GULF COAST [1]

values are in $\mu g/m^3$

AVG. PER.	FED. STND.	FLA. STND.	SOURCE GROUP	1982	1983	1984	1985	1986
3-hr [3]	1300	1300	ALL SOURCES	N/A [2]	N/A	N/A	N/A	1404
			GCR ONLY	N/A	N/A	N/A	N/A	240
			ALL OTHERS	N/A	N/A	N/A	N/A	1404
24-hr [3]	365	260	ALL SOURCES	410	287	278	277	299
			GCR ONLY	63	63	67	63	68
			ALL OTHERS	410	286	278	277	299
ann [4]	80	60	ALL SOURCES	61	N/A	61	66	68
			GCR ONLY	12	N/A	12	12	14
			ALL OTHERS	60	N/A	61	66	68

[1] Results include background values of 6 $\mu g/m^3$ for all averaging periods. Value recorded at TECO Big Bend Road monitoring station, number 1800-021-G02.

[2] N/A = No additional modeling was done since the AAQS were not exceeded for this year and averaging period

[3] Highest second-high modeled impacts

[4] Highest first-high modeled impacts

To prove that Gulf Coast was not contributing to the FAAQS violations, a further analysis was performed. A determination was made by DEP's modeling section that each FAAQS exceedance could be disregarded if the model showed Gulf Coast did not "significantly" contribute to the exceedance. An exceedance is a violation of the FAAQS for one averaging period (one year for the annual averaging period, one day for the 24-hour averaging period, and

one 3-hour period for the 3-hour averaging period at any one receptor) for any one of the 1,003 receptors . The SO_2 significance levels are 25 $\mu g/m^3$ for the 3-hour averaging period, 5 $\mu g/m^3$ for the 24-hour averaging period, and 1 $\mu g/m^3$ for the annual averaging period.

The "Maxi-file" output option in ISCST2 was used to create files listing all values that exceeded the respective FAAQS (eg. 82-24.ovr; 1982 met data, 24-hour averaging period), for modeling all sources, and files listing the values that exceeded the significance levels, for modeling Gulf Coast only (eg. G82-24.ovr; Gulf Coast, 1982 met data, 24-hour averaging period). The FAAQS-exceeding Maxi-files were set at a threshold 6 $\mu g/m^3$ below the respective FAAQS to account for the background value.

The FAAQS-exceeding files (all sources) for the 3-hour and 24-hour averaging periods were then analyzed to determine which values were first-highs, which were then disregarded (since the FAAQS can be exceeded once per year at each receptor except for the annual averaging period). Copies of the FAAQS-exceeding files (all sources) can be found in **Volume II** with the non-first-highs identified by arrows. Copies of the significance-level-exceeding values (Gulf Coast only) are not included on hard copy due to their volume (approximately 750 pages each). Copies of these files are included on diskette. Maxi-files can not be generated for the annual averaging period; therefore, the respective ".lst" files were used for that averaging period.

The remaining values, indicated by arrows, were then compared to the respective Maxi-file containing the values that exceeded the significance levels (Gulf Coast's emissions only) to determine if there were any duplications of receptors and time periods. In other words, they were compared to see if there were any receptors exceeding the FAAQS (all sources) that were also exceeding the significance levels (Gulf Coast only) on the same day during the same time period. If there were, that would mean that at that receptor on that day (and that time period for the 3-hour averaging period) Gulf Coast was significantly contributing to the FAAQS exceedance. This analysis showed no duplications, meaning Gulf Coast was not significantly contributing to any of the FAAQS violations predicted by the model.

4.1.2 Class I Increment Analysis

The Class I increment analysis predicted the consumption by Gulf Coast and all other surrounding PSD sources of the air quality increments associated with the nearest Class I area. Gulf Coast is located approximately 75 kilometers (47 miles) SSE from the Chassahowitzka National Wilderness Area, and was thus required to perform dispersion modeling to determine

the air quality impacts on the area. DEP identified 137 sources to be included in the modeling in addition to Gulf Coast. These additional sources, listed in **Appendix K**, were both *increment consuming*, meaning they were permitted after the baseline date, and *increment expanding*, meaning they had shut down since the baseline date and were thus entered into the model with the appropriate negative emission rate. The baseline date is that date after the implementation of the PSD regulations when the first PSD source was permitted in the respective area for the respective pollutant (December 27, 1977).

Class I modeling using ISCST2 showed slight exceedances of the Class I increments for the 3-hour and 24-hour averaging periods. Since Gulf Coast is located 75 kilometers from the Wildlife Area, exceeding the accepted limit of 50 kilometers for the ISCST2 model, a long-range transport analysis was performed by Jim Clary and Associates using the updated MESOPUFF II model. These results are summarized in **Table 4.4**. The complete protocol and results summary can be found in **Appendix L**. Model outputs can be found in **Volume III**.

TABLE 4.4

CLASS I INCREMENT ANALYSIS RESULTS [1]

values are in $\mu g/m^3$

AVERAGING PERIOD	ALLOWED INCREMENT	PREDICTED IMPACTS
3-hour	25	21.18
24-hour	5	7.32 [2]
annual	2	-0.81

[1] highest modeled impacts, 1986 met data

[2] Gulf Coast not significantly contributing

4.1.3 Class II Increment Analysis

The Class II increment analysis predicted the consumption of the air quality increments for the project impact area, which is classified as a Class II area, by Gulf Coast and all other surrounding PSD sources. DEP identified 106 sources to be included in the modeling in addition to Gulf Coast. These additional sources, listed in **Appendix M**, were both increment consuming, meaning they were permitted after the baseline date, and increment expanding,

meaning they had shut down since the baseline date and were thus entered into the model with the appropriate negative emission rate. These sources' locations are shown on **Figure 4.20**. The baseline date is that date after the implementation of the PSD regulations when the first PSD source was permitted in the respective area for the respective pollutant (December 27, 1977). These results are shown in **Table 4.5**. Model outputs can be found in **Volume II**.

TABLE 4.5

CLASS II INCREMENT ANALYSIS RESULTS

values are in $\mu g/m3$

AVERAGING PERIOD	ALLOWED INCREMENT	1982	1983	1984	1985	1986
3-hour [1]	512	262	278	262	251	256
24-hour [1]	91	66	73	76	51	61
annual [2]	20	0 [3]	0	0	0	0

[1] Highest second-high modeled impacts

[2] Highest first-high modeled impacts

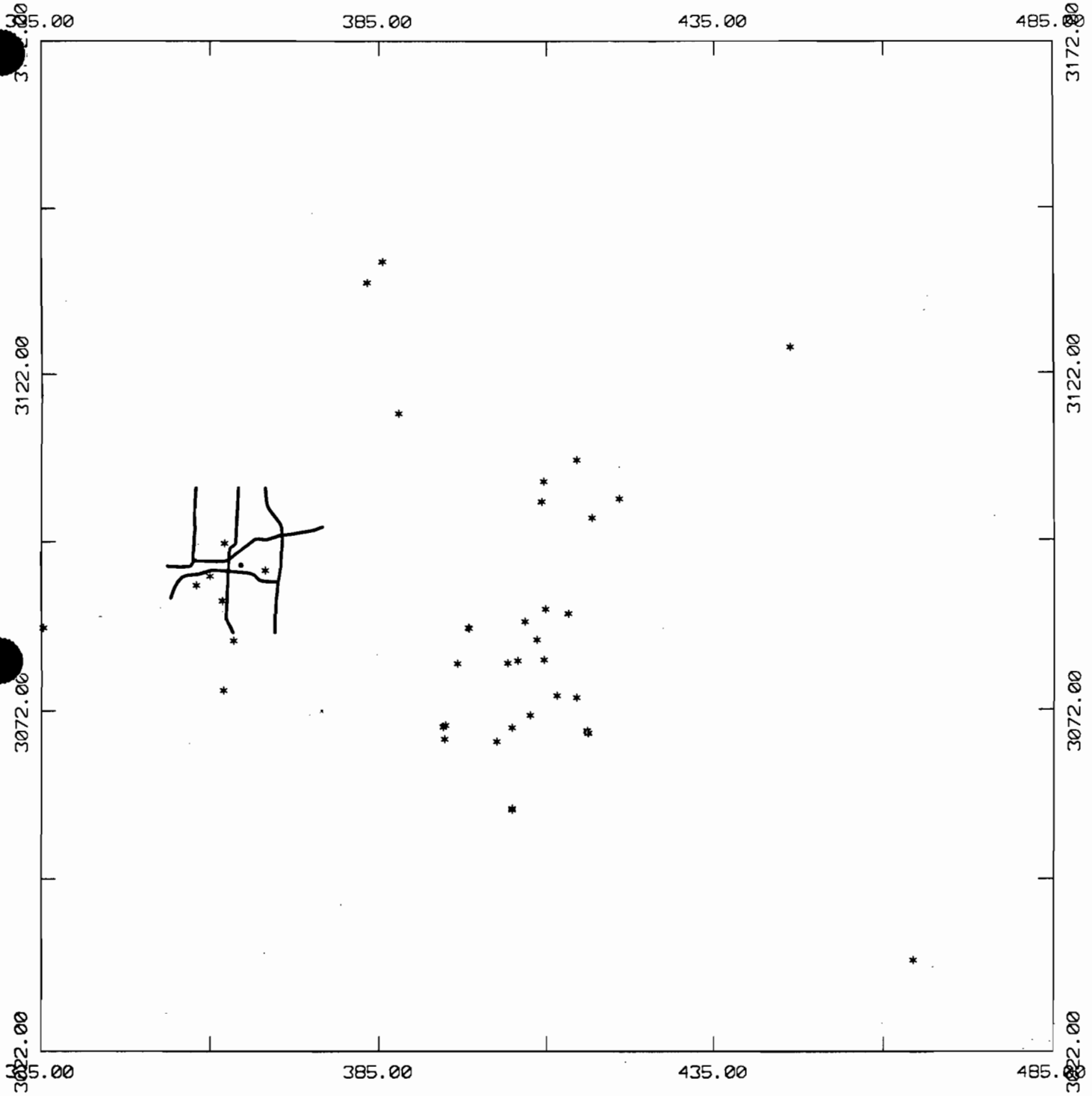
[3] Zero values are actually negative, ISCST2 reports negative values as zero

The 3-hr impacts for all five years are depicted in **Figures 4.21-4.25**; the 24-hr impacts are depicted in **Figures 4.26-4.30**; the annual averages are depicted in Figures **4.31-4.35**.

4.1.4 CO Screening Analysis

A screening model was performed for CO to determine if Gulf Coast exceeded the significance level of 575 $\mu g/m_3$, 8-hour averaging period, as outlined in 40 CFR 51.166 (i)(8)(i)(a). If this significance level was exceeded, a refined analysis would have to be done to include CO emissions from surrounding sources to determine compliance with the FAAQS and the Class I and II increments. The CO screening analysis used ISCST2 using the same default values and receptor grids as the SO_2 modeling. An emission rate of 69.5 lbs/hr was used, which is the emission rate with the afterburner installed. Even though the 8-hr standard may be exceeded once per year, the first-high value must be used in the screening analysis for conservative purposes. The results indicated a predicted maximum impact of 37.2 $\mu g/m^3$, less than seven percent of the 575 $\mu g/m^3$ significance level (see **Table 4.6**). No further analysis is therefore required. Model outputs can be found in **Volume II**.

CLASS II ANAL. SURROUND. SOURCE INVENTORY

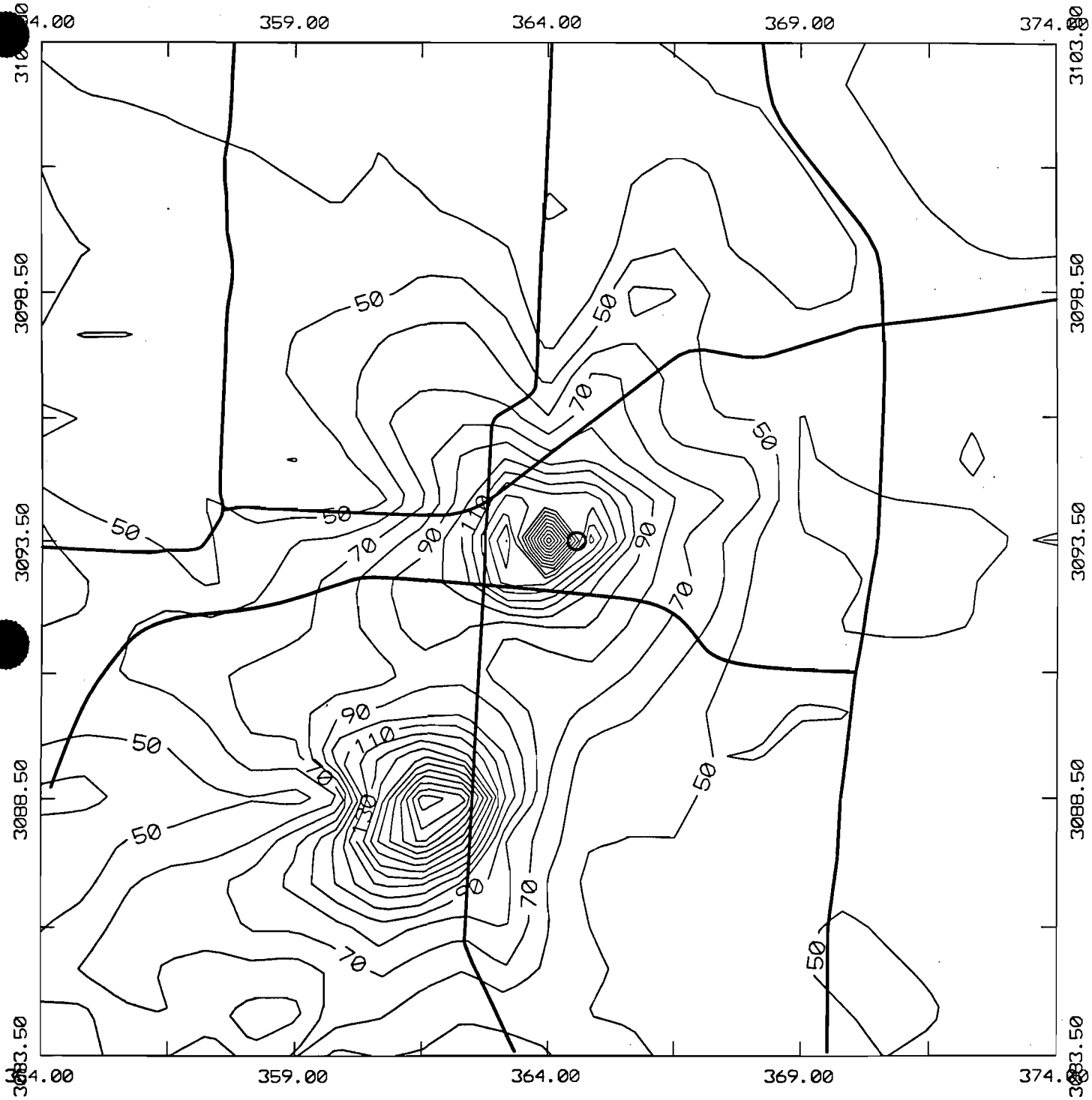


GULF COAST RECYCLING, INC. TAMPA, FL

SCALE: 1 INCH = 21.429 KM

FIGURE 4.20

SO2 3-HR HIGH 2ND HIGH 1982



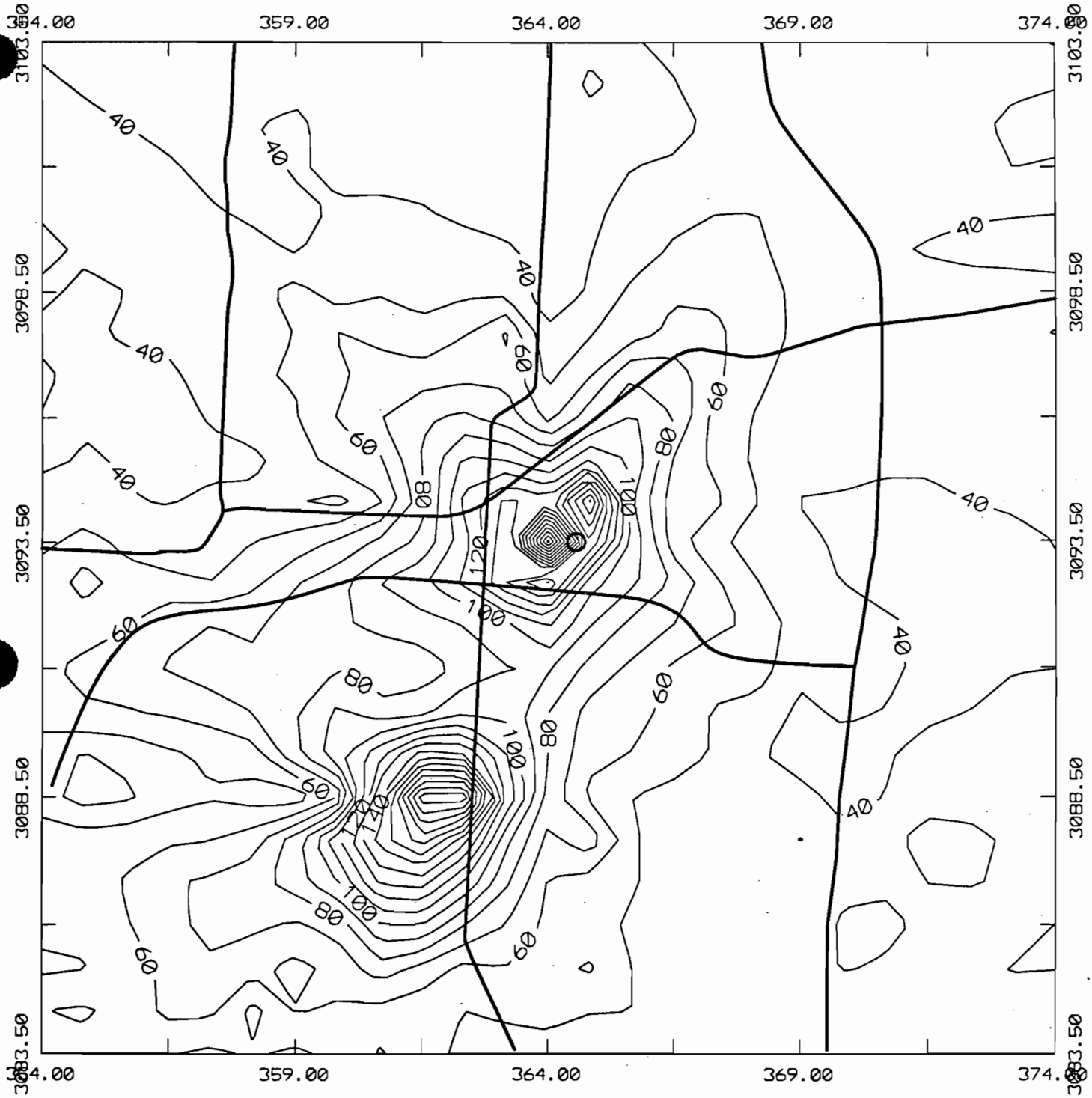
GULF COAST RECYCLING, INC. TAMPA, FL

SCALE: 1 INCH = 2.857 KM

(Isopleths in micrograms/cubic meter)

FIGURE 4.21

SO2 3-HR HIGH 2ND HIGH 1983



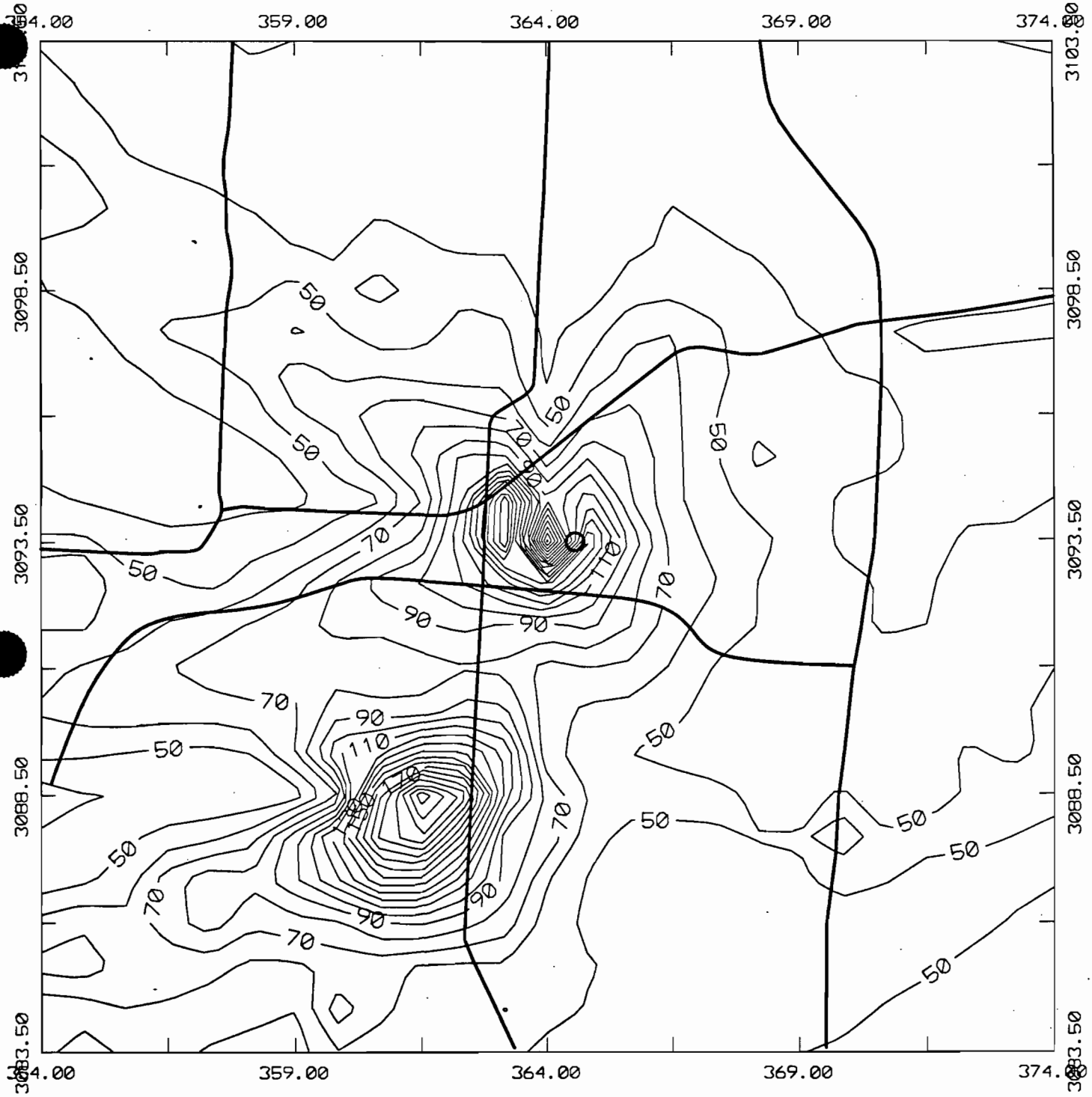
GULF COAST RECYCLING, INC. TAMPA, FL

SCALE: 1 INCH = 2.857 KM

(Isopleths in micrograms/cubic meter)

FIGURE 4.22

SO2 3-HR HIGH 2ND HIGH 1984



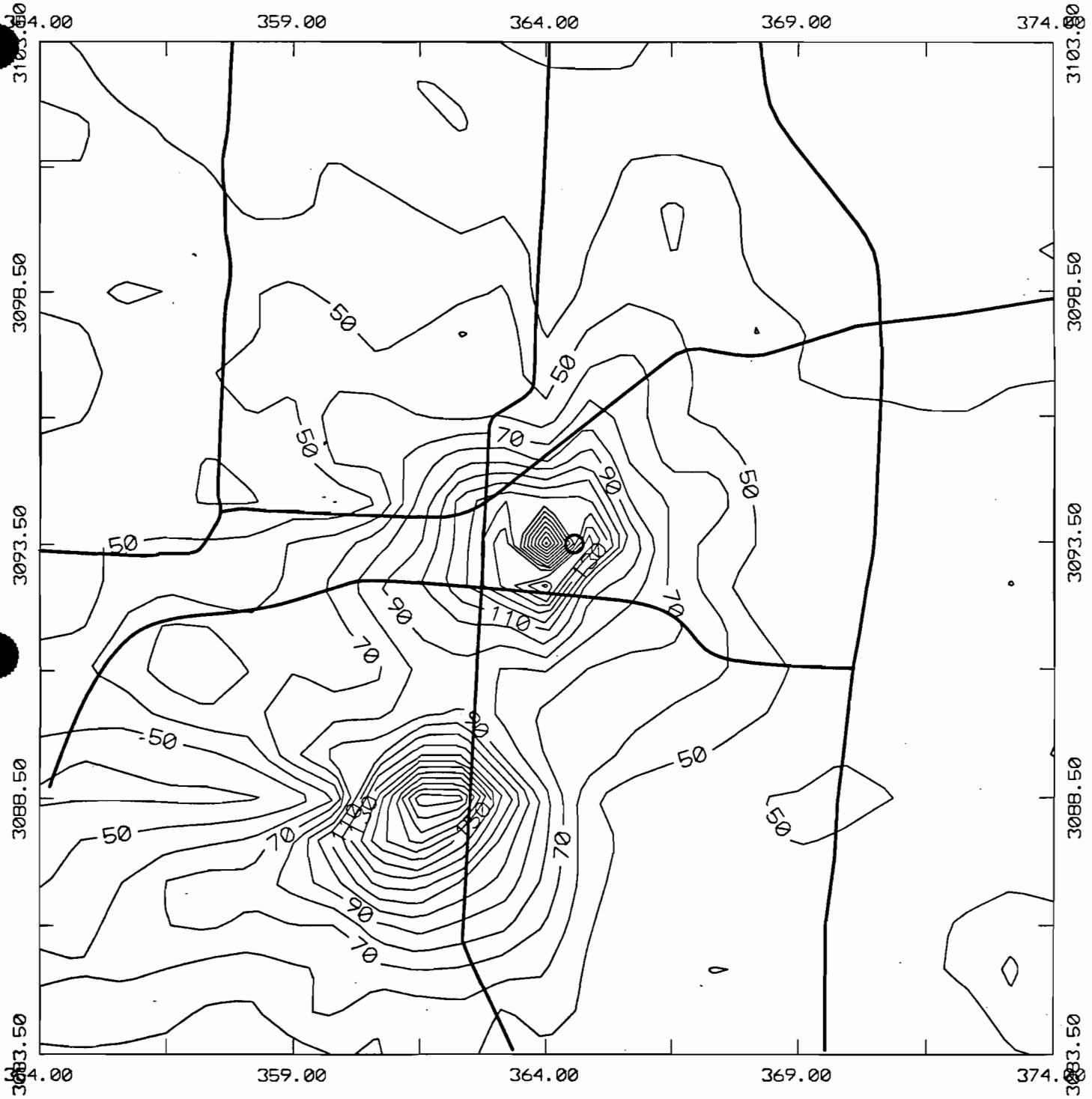
GULF COAST RECYCLING, INC. TAMPA, FL

SCALE: 1 INCH = 2.857 KM

(Isopleths in micrograms/cubic meter)

FIGURE 4.23

SO2 3-HR HIGH 2ND HIGH 1985



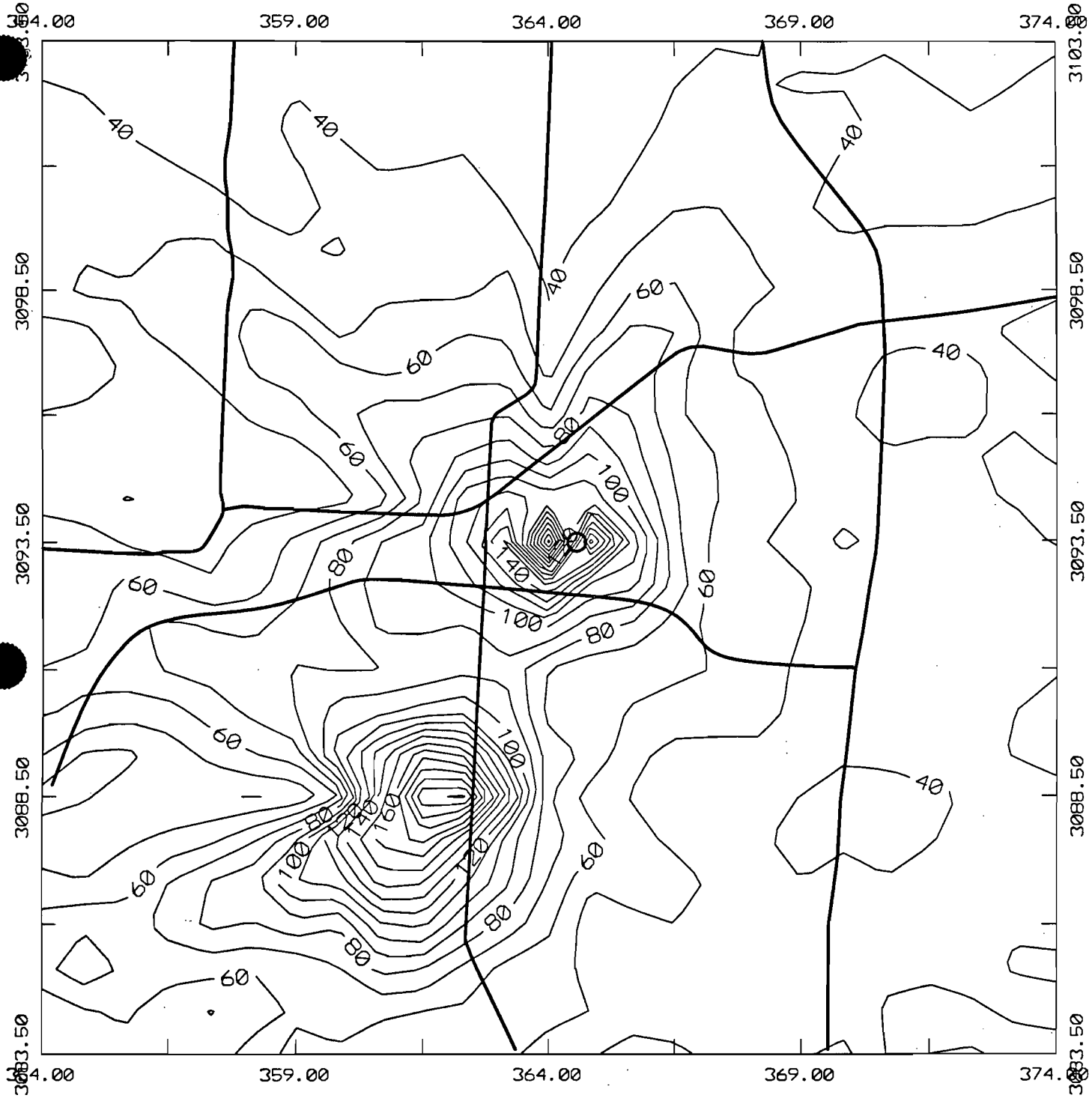
GULF COAST RECYCLING, INC. TAMPA, FL

SCALE: 1 INCH = 2.857 KM

(Isopleths in micrograms/cubic meter)

FIGURE 4.24

SO2 3-HR HIGH 2ND HIGH 1986



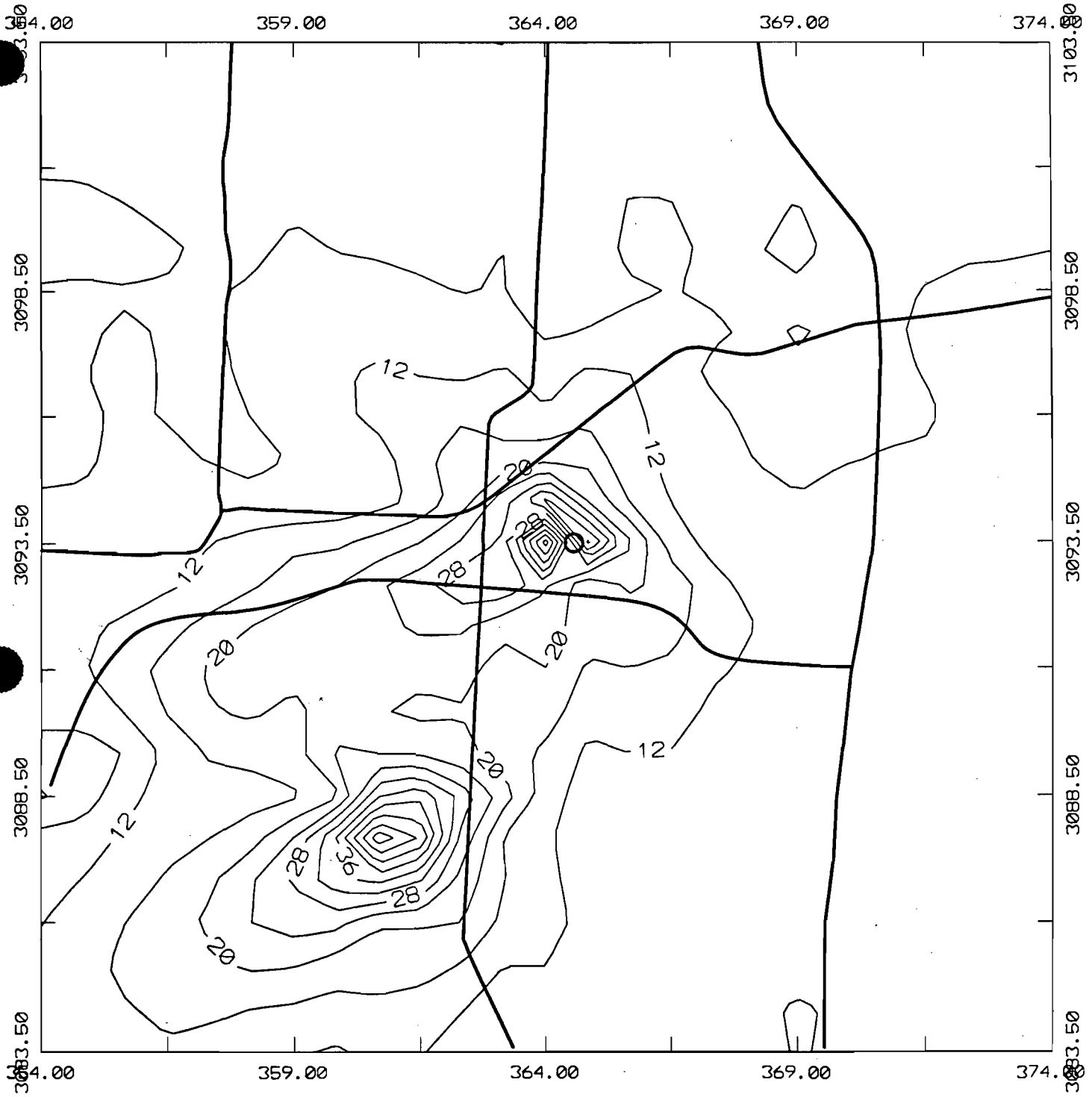
GULF COAST RECYCLING, INC. TAMPA, FL

SCALE: 1 INCH = 2.857 KM

(Isopleths in micrograms/cubic meter)

FIGURE 4.25

SO2 24-HR HIGH 2ND HIGH 1982



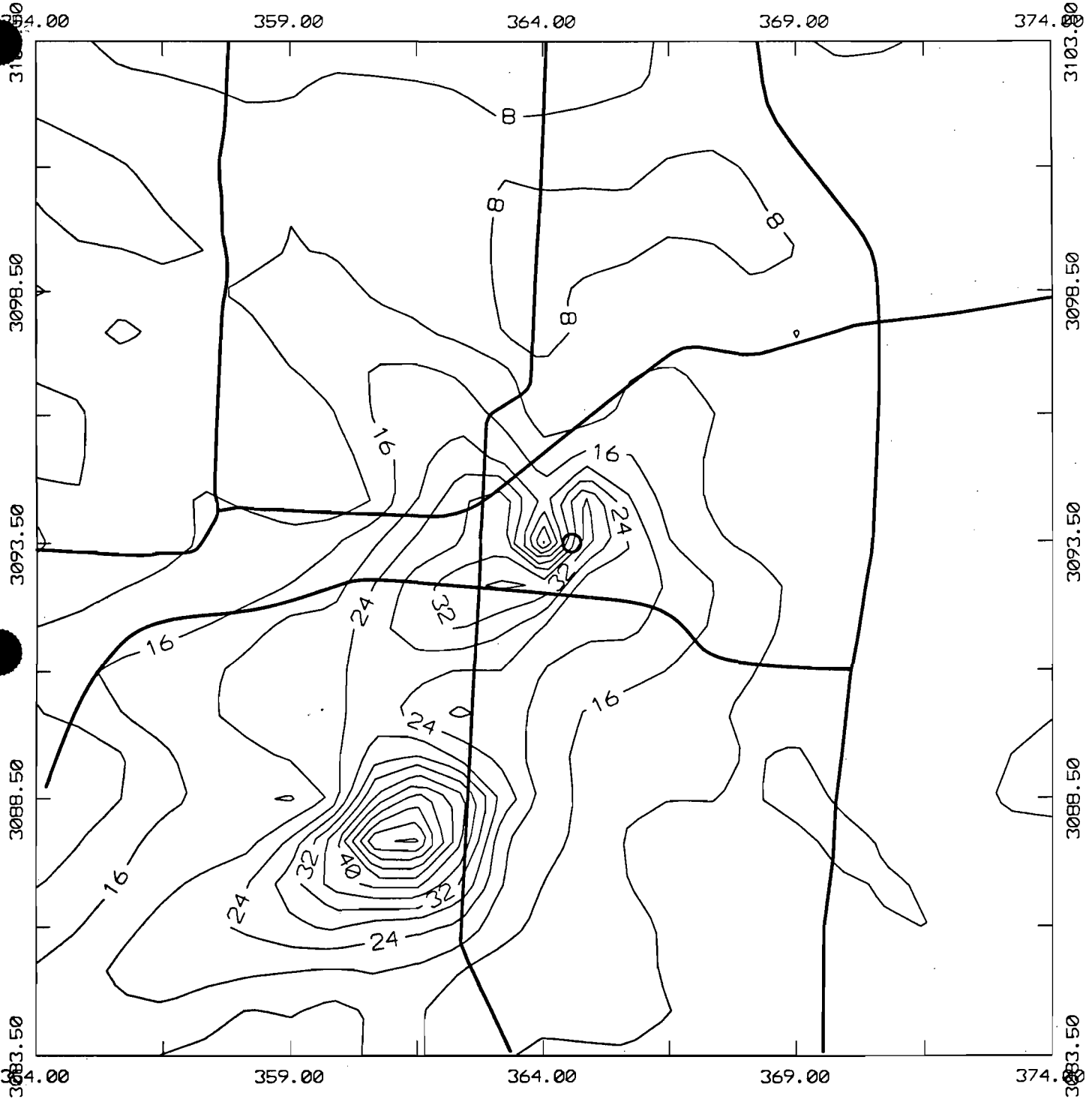
GULF COAST RECYCLING, INC. TAMPA, FL

SCALE: 1 INCH = 2.857 KM

(Isopleths in micrograms/cubic meter)

FIGURE 4.26

SO2 24-HR HIGH 2ND HIGH 1983



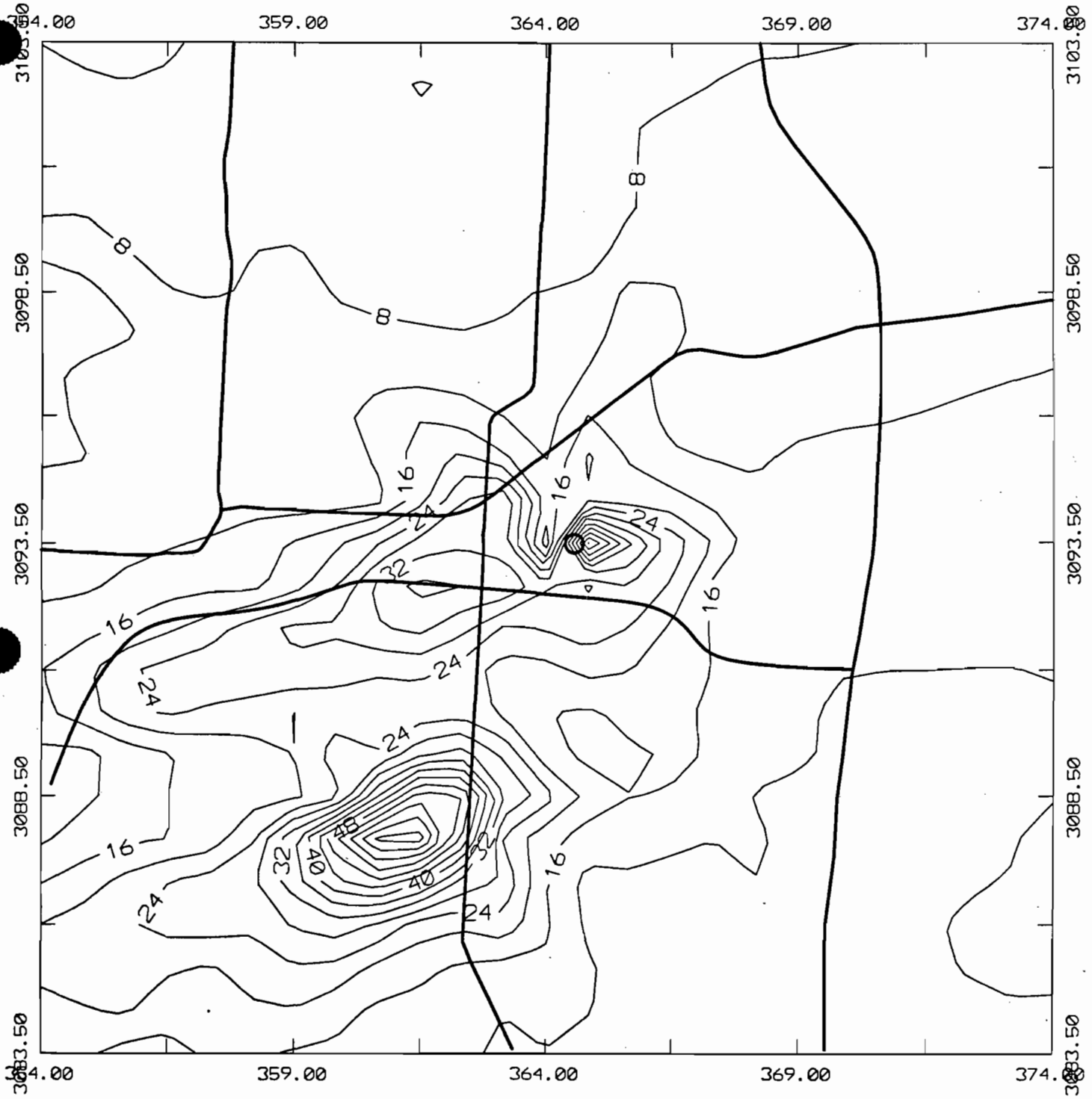
GULF COAST RECYCLING, INC. TAMPA, FL

SCALE: 1 INCH = 2.857 KM

(Isopleths in micrograms/cubic meter)

FIGURE 4.27

SO2 24-HR HIGH 2ND HIGH 1984



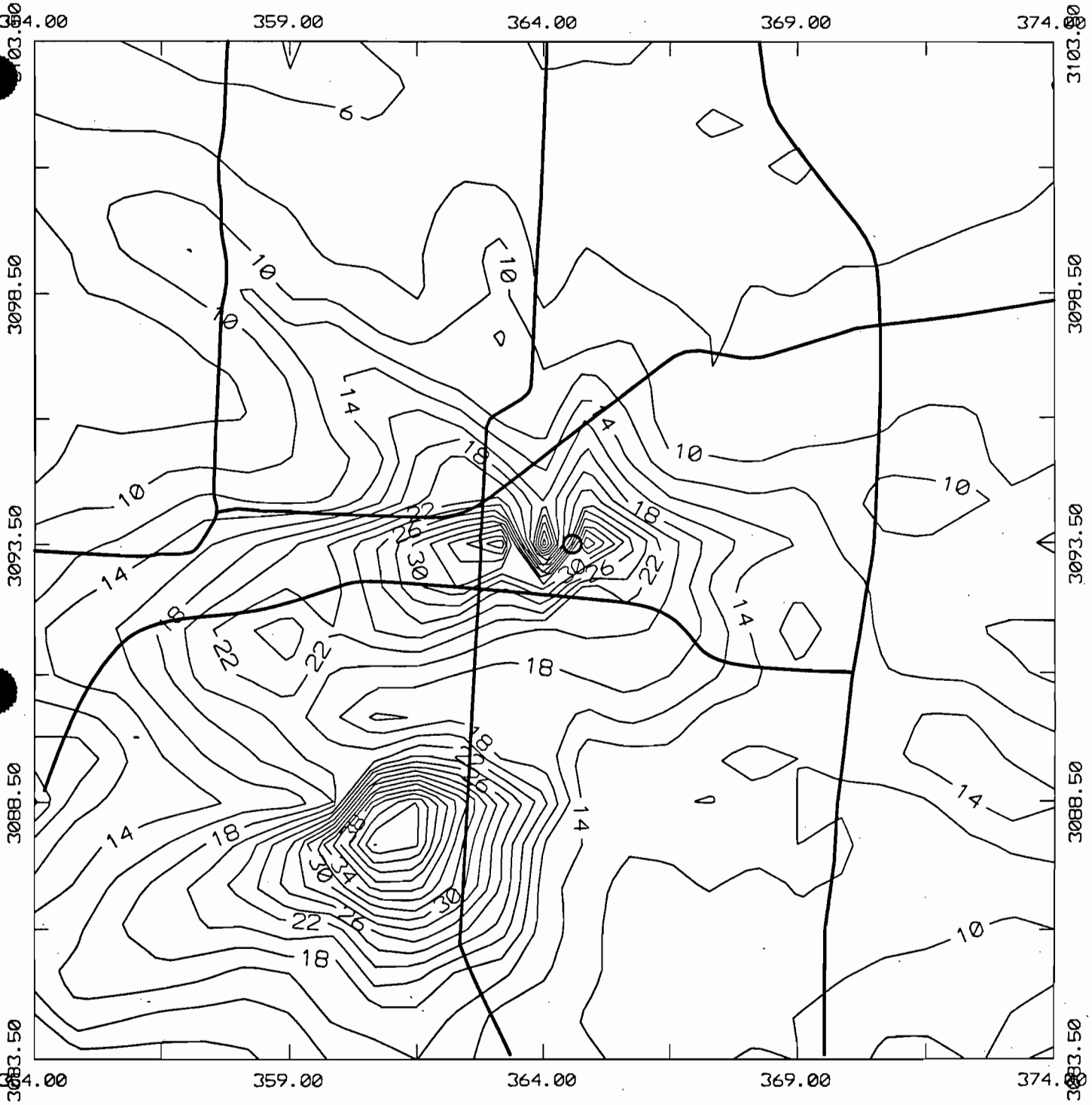
GULF COAST RECYCLING, INC. TAMPA, FL

SCALE: 1 INCH = 2.857 KM

(Isopleths in micrograms/cubic meter)

FIGURE 4.28

SO2 24-HR HIGH 2ND HIGH 1985



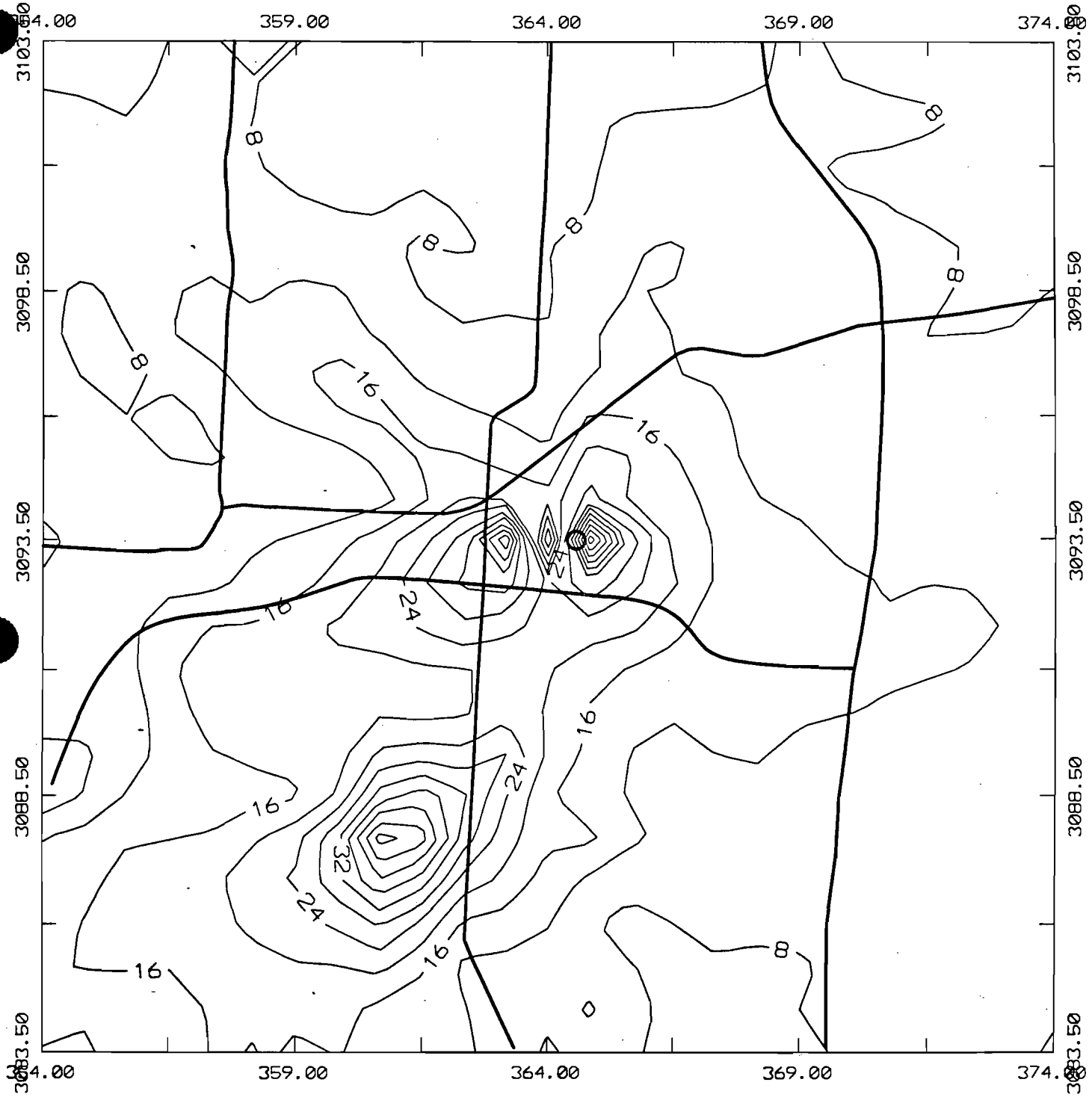
GULF COAST RECYCLING, INC. TAMPA, FL

SCALE: 1 INCH = 2.857 KM

(Isopleths in micrograms/cubic meter)

FIGURE 4.29

SO2 24-HR HIGH 2ND HIGH 1986



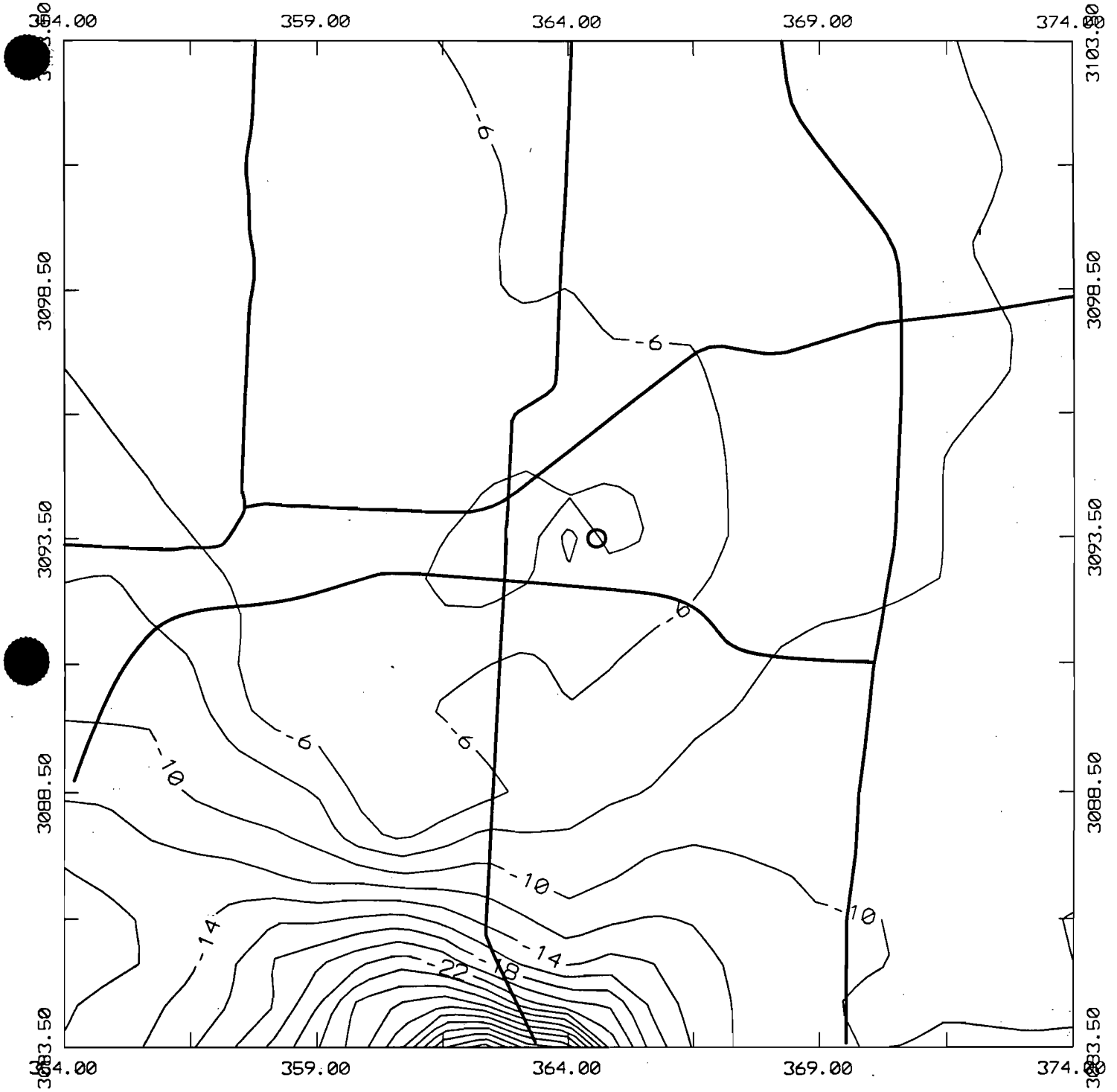
GULF COAST RECYCLING, INC. TAMPA, FL

SCALE: 1 INCH = 2.857 KM

(Isopleths in micrograms/cubic meter)

FIGURE 4.30

SO2 ANNUAL HIGH 1ST HIGH 1982



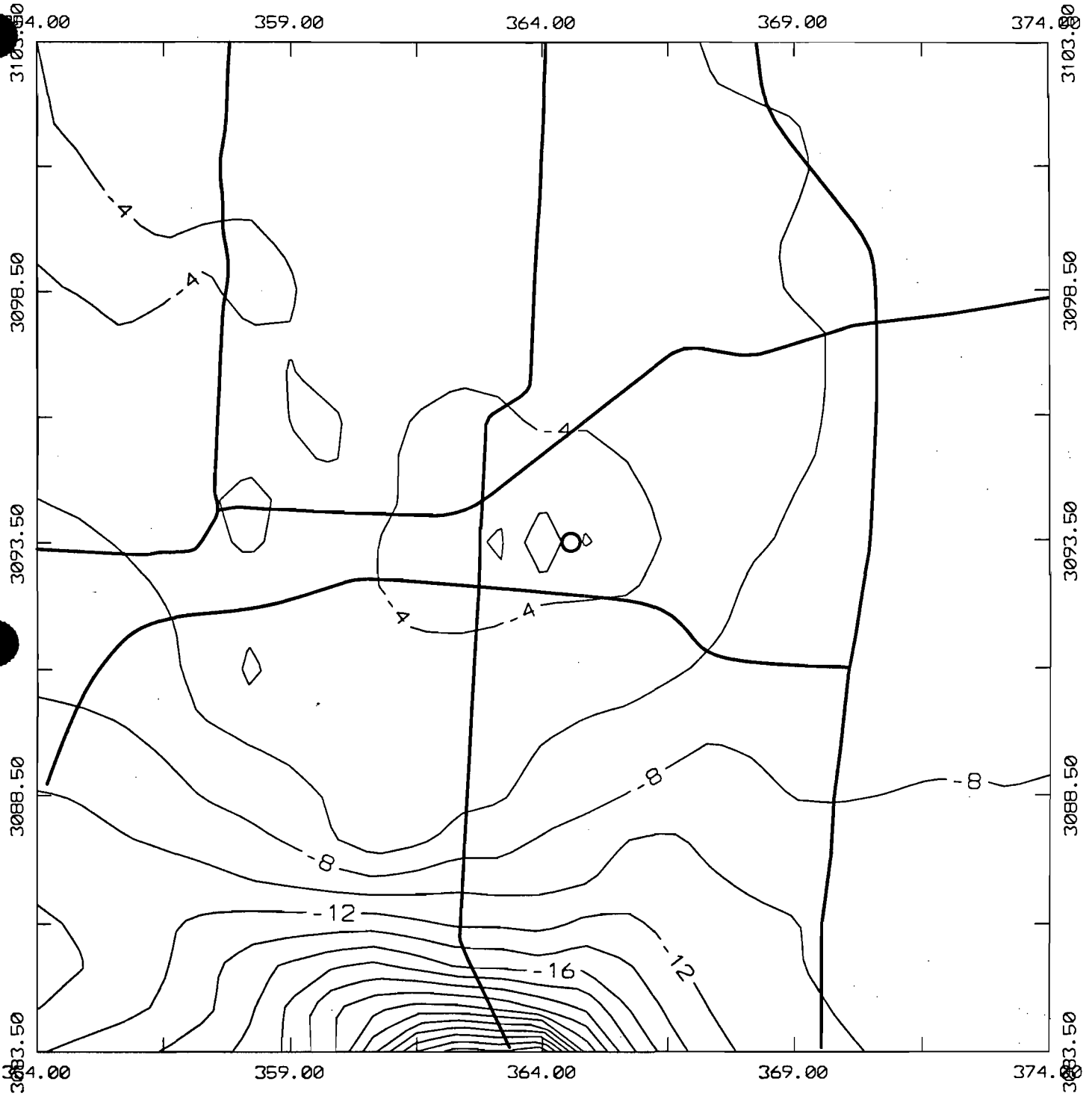
GULF COAST RECYCLING, INC. TAMPA, FL

SCALE: 1 INCH = 2.857 KM

(Isopleths in micrograms/cubic meter)

FIGURE 4.31

SO2 ANNUAL HIGH 1ST HIGH 1983



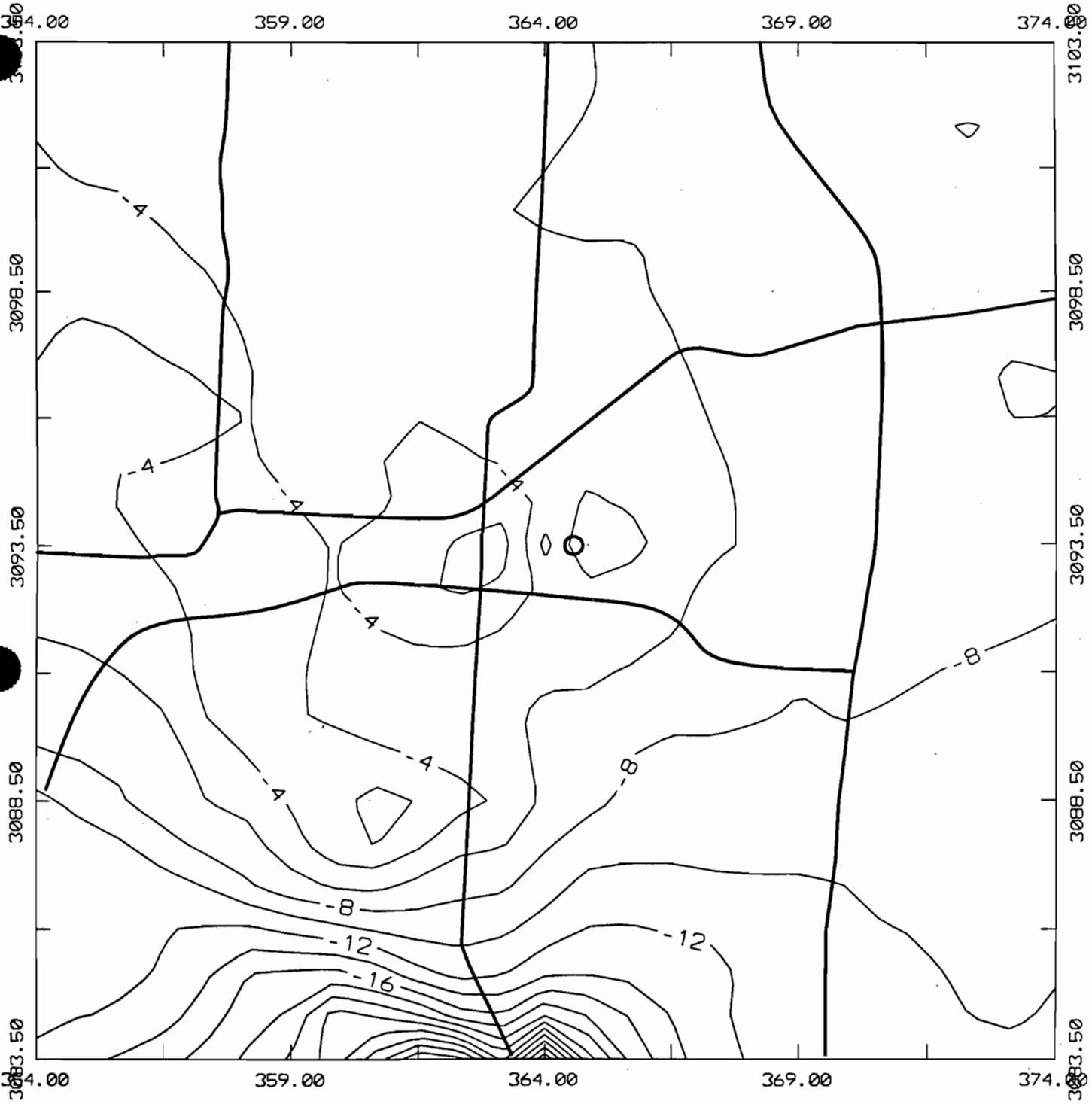
GULF COAST RECYCLING, INC. TAMPA, FL

SCALE: 1 INCH = 2.857 KM

(Isopleths in micrograms/cubic meter)

FIGURE 4.32

SO2 ANNUAL HIGH 1ST HIGH 1984



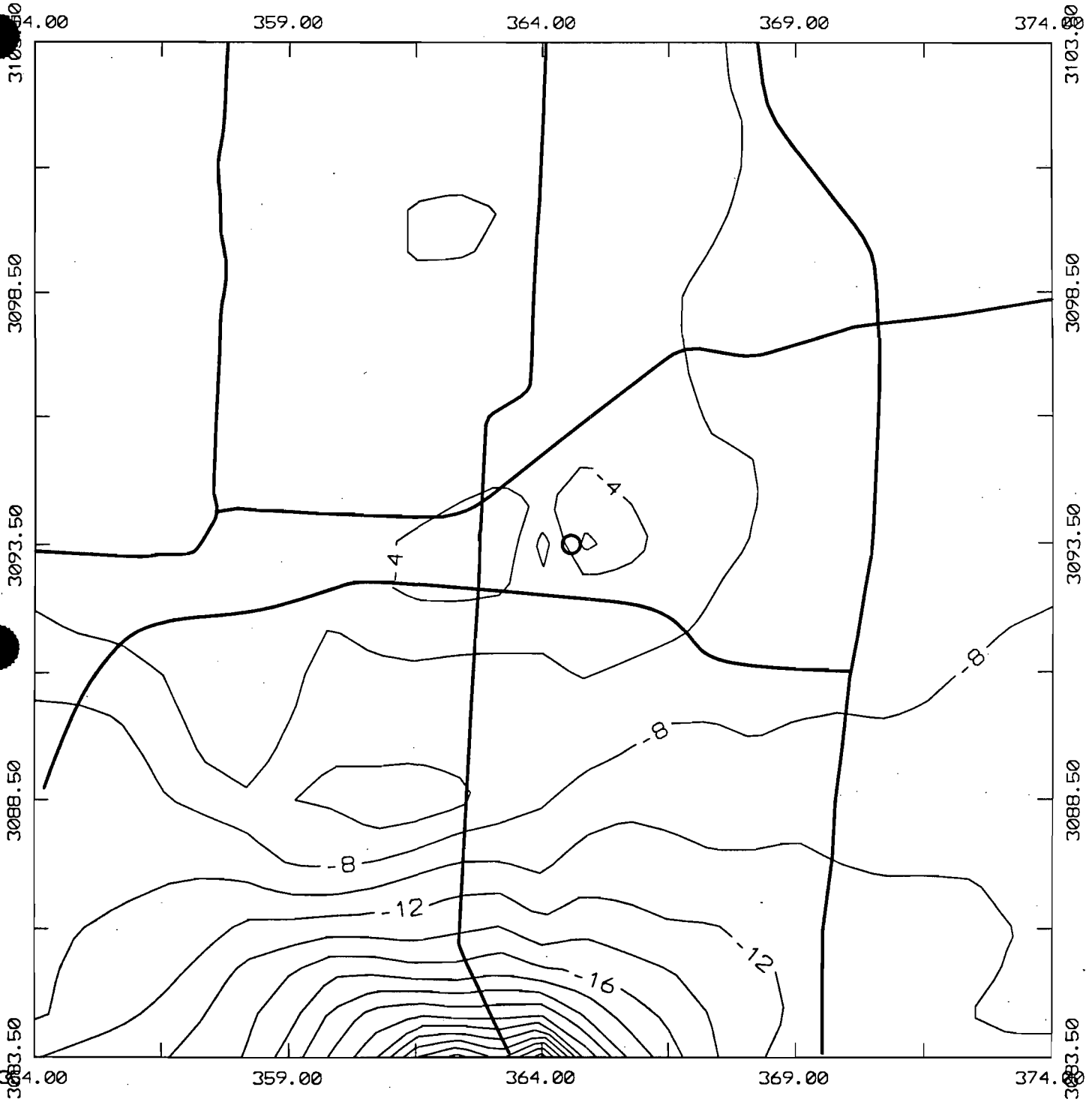
GULF COAST RECYCLING, INC. TAMPA, FL

SCALE: 1 INCH = 2.857 KM

(Isopleths in micrograms/cubic meter)

FIGURE 4.33

SO2 ANNUAL HIGH 1ST HIGH 1985



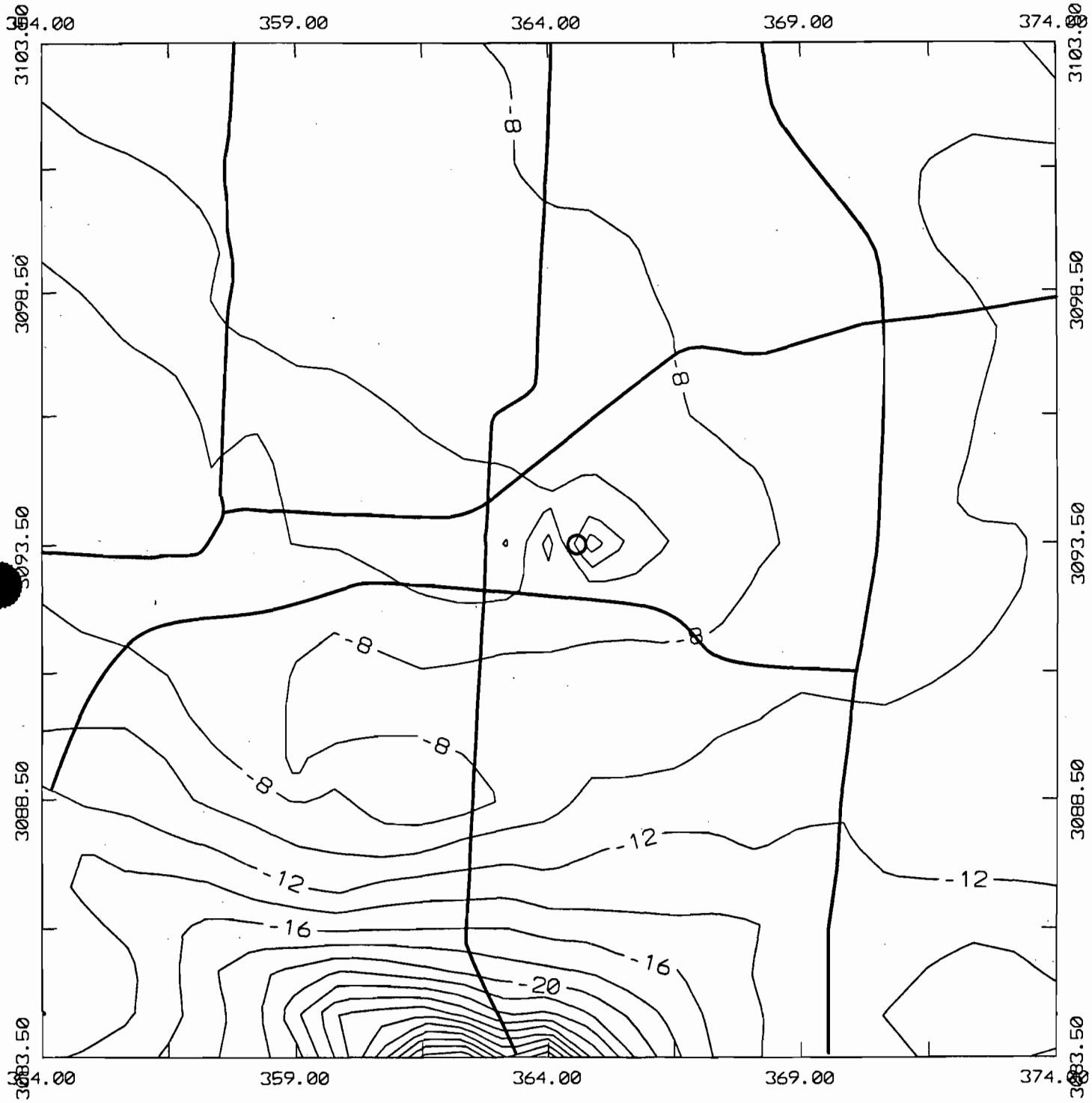
GULF COAST RECYCLING, INC. TAMPA, FL

SCALE: 1 INCH = 2.857 KM

(Isopleths in micrograms/cubic meter)

FIGURE 4.34

SO2 ANNUAL HIGH 1ST HIGH 1986



GULF COAST RECYCLING, INC. TAMPA, FL

SCALE: 1 INCH = 2.857 KM

(Isopleths in micrograms/cubic meter)

FIGURE 4.35

TABLE 4.6

CO SCREENING ANALYSIS RESULTS [1]

values are in μg/m3

AVERAGING PERIOD	FED. & FLA. STANDARD	1986
8-hour	575	37

1 Highest second-high modeled impact, 1986 met data

These results are depicted in **Figure 4.36.**

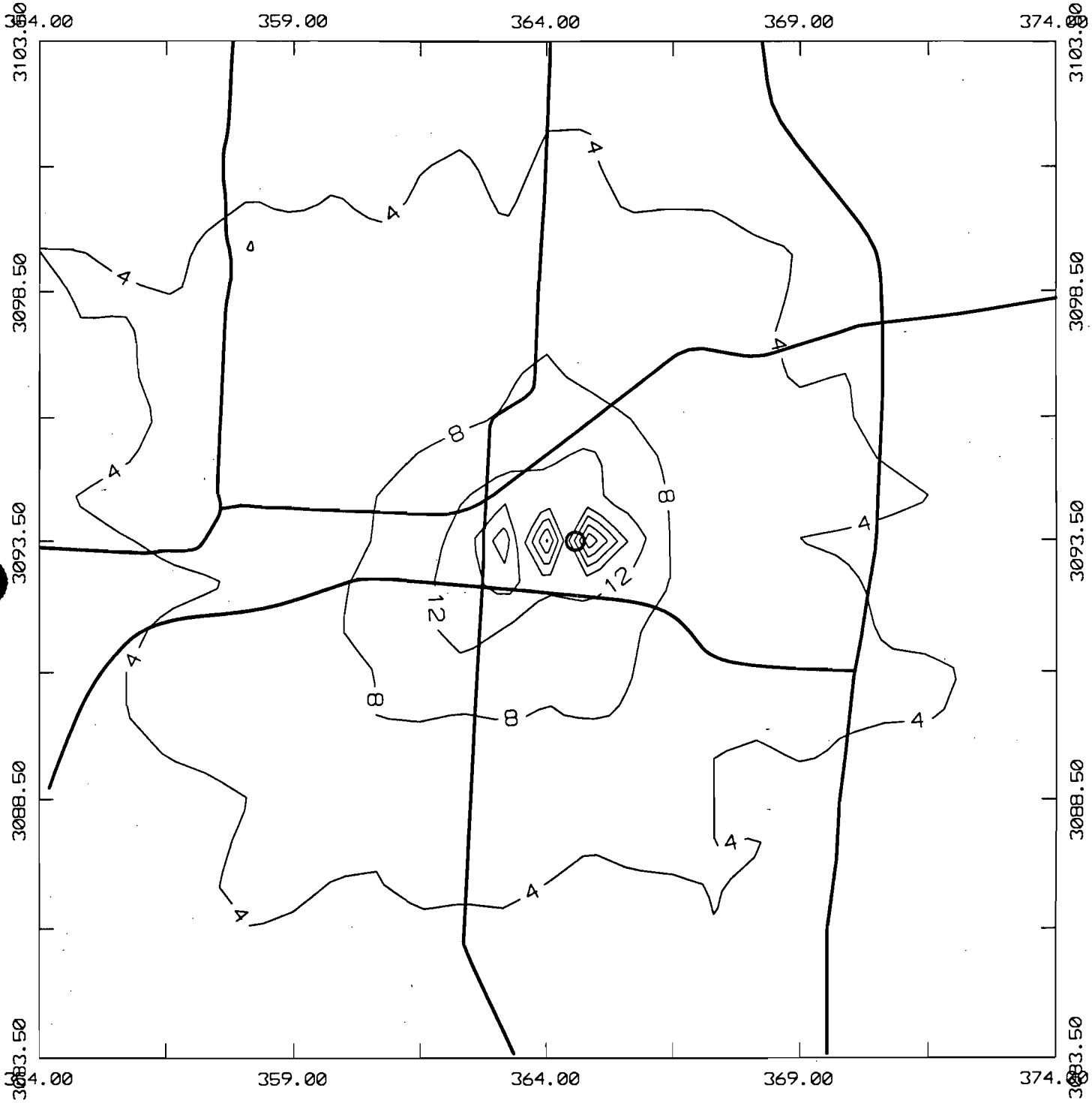
4.2 MODELING SUMMARY

The air dispersion modeling demonstrates that Gulf Coast will not cause or significantly contribute to a violation of the FAAQS or exceed the allowed increment consumption for all applicable areas and pollutants. The FAAQS analysis showed that although the model predicted a few violations of the Florida standards, Gulf Coast did not significantly contribute. The analysis also showed that this modeling protocol was very conservative, in that it predicted violations even with Gulf Coast's emissions excluded. To further show that Gulf Coast will not cause or contribute to a violation of the SO_2 FAAQS, DEP's closest monitor to Gulf Coast shows the area to be "unclassifiable" (cannot be classified as attainment or non-attainment) for SO_2 while Gulf Coast's "new" furnace has been operating for over nine years.

The Class I increment analysis showed that Gulf Coast, along with the applicable surrounding PSD sources, will not exceed the increment consumption allowed for the Chassahowitzka National Wilderness Area. The Class II increment analysis showed that Gulf Coast, along with the applicable surrounding PSD sources, will not exceed the increment consumption allowed for that area. The CO screening model showed that Gulf Coast will not exceed the significant level and therefore will not exceed the FAAQS or Class I or II increments.

The modeling results, which were based on 8,760 hrs/yr, supports Gulf Coast's request to increase the allowable operating hours from 7,800 to 8,760 hrs/yr.

CO 8-HR HIGH 1ST HIGH 1986



GULF COAST RECYCLING, INC. TAMPA, FL

SCALE: 1 INCH = 2.857 KM

(Isopleths in micrograms/cubic meter)

FIGURE 4.36

5.0 EFFECTS ON AIR QUALITY RELATED VALUES (AQRV)

This section discusses the predicted impacts by Gulf Coast on air quality-related aspects other than ambient concentrations of sulfur dioxide. Among these aspects are impacts on soils, vegetation, wildlife, aquatic resources, and visibility. In addition, the economic impact of Gulf Coast is discussed.

5.1 INDUCED GROWTH IMPACT

It is anticipated that no induced growth impacts will occur as a result of this project. This modification was simply a replacement of a piece of equipment with no additional employees needed to operate it or any long-term construction-related employment. Therefore, no additional local or industrial support factors will be needed. Further, no additional air pollution will occur from any permanent residential, commercial, or industrial growth, since none is anticipated.

5.2 IMPACTS ON SOILS AND VEGETATION

The response of plants to SO_2 exposure is a complex process that involves not only the pollutant concentration and duration of exposure, but also the genetic composition of the plant and the environmental factors under which the exposure occurs. This process involves entrance of SO_2 into the plant through leaf openings called stomata, and contact within the leaf with wet cellular membranes and subsequent liquid phase reactions resulting in the formation of sulfite and sulfate compounds. The formation of these compounds can initiate changes within plants' metabolic systems that will produce physiological dysfunctions. If sufficient physiological modifications occur, plant homeostasis or equilibrium is disturbed and visible symptoms of injury may or may not be manifested. Plant repair mechanisms can result in a return to homeostasis and recovery.

In general, plants have an inherent, and apparently species-dependent, capacity to absorb, detoxify, and metabolically incorporate SO_2, and may absorb low concentrations of SO_2 over long time periods without damage. Thomas et al., for example, exposed alfalfa to SO_2 continuously, at 520 $\mu g/m^3$ (0.20 ppm), for eight weeks without adverse effects. It is therefore

reasonable to expect that either no effects or beneficial effects may be associated with low-level SO_2 exposures.

Under certain conditions atmospheric SO_2 can have beneficial effects on agronomic vegetation. Sulfur is one of the elements required for plant growth and Coleman reported that crop deficiencies of sulfur have been occurring with increasing frequency throughout the world. Faller conducted a series of experiments to determine effects of varying atmospheric concentrations of SO_2 on sunflower, corn, and tobacco. Yields of leaves and stems increased by 80 percent in tobacco when exposed to atmospheric concentrations of 1490 $\mu g/m^3$ (0.57 ppm), sunflower and corn had their highest biomass at SO_2 concentrations of 1050 $\mu g/m^3$ (0.40 ppm) and 520 $\mu g/m^3$ (0.20 ppm), respectively. Nogales and Jones showed that cotton grown in specifically designed growth containers in the vicinity of certain coal-fired power plants accumulated significant amounts of atmospheric sulfur (as SO_2) and produced significantly more biomass than those grown at a location further from the industrial source of sulfur.

Limitations of space do not permit a listing here of all plants known to be sensitive to various doses of SO_2. Furthermore, in a listing of sensitive plants, the evidence collected should also indicate environmental, genetic, and cultural considerations that may in fact determine such sensitivities. In addition, general descriptions are difficult because plant responses to air pollutants vary at the genus, species, variety, and cultivar levels. **Table 5.1** is based on a 20-year study as conducted by Jones et al. This listing of sensitivity groupings is based on observations of 120 species growing in the vicinity of coal-fired power plants in the Southeast. From this table, it can be seen that the most sensitive vegetation showed visible signs of damage at exposure levels of 1310-2620 $\mu g/m^3$ (1-hour period) and 790-1570 $\mu g/m^3$ (3-hour period). The dispersion modeling results provided in this document revealed maximum ground level impacts of SO_2 in the Chassahowitzka Wilderness Area to be less than 10 $\mu g/m^3$ (3-hour period) which is well below the critical levels for the most sensitive plants.

Extensive efforts have been made to identify and develop certain sensitive plant species as potential bioindicators of ambient air SO_2 effects. Perhaps the most extensively examined plants for this use are the eastern white pine. **Table 5.2** indicates the degree of injury of the white pine at various distances from the Sudbury Smelters over a ten year period. As the distance from the smelters increases, the annual exposure concentrations decrease and the degree of foliable injury also decreases. It was observed that at an annual concentration of 21 $\mu g/m^3$ very little chronic injury resulted from the exposure. It should be noted here that the maximum allowable increase for SO_2 in a Class II area under the PSD regulations is 20 $\mu g/m^3$. The

SENSITIVITY GROUPINGS OF VEGETATION BASED ON VISIBLE INJURY AT DIFFERENT SO_2 EXPOSURES[a]

Sensitivity Grouping	SO_2 concentration, $\mu g/m^3$ (ppm), and duration time, hr			Plants
	Peak[b]	1-hr	3-hr	
Sensitive:	2620-3930 $\mu g/m^3$ (1.0 - 1.5 ppm)	1310-2620 $\mu g/m^3$ (0.5 - 1.0 ppm)	790-1570 $\mu g/m^3$ (0.3 - 0.6 ppm)	Ragweeds Legumes Blackberry Southern pines Red and black oaks White ash Sumacs
Intermediate:	3930-5240 $\mu g/m^3$ (1.5 - 2.0 ppm)	2620-5240 $\mu g/m^3$ (1.0 - 2.0 ppm)	1570-2100 $\mu g/m^3$ (0.6 - 0.8 ppm)	Maples Locust Sweetgum Cherry Elms Tuliptree Many crop and garden species
Resistant:	>5240 $\mu g/m^3$ (> 2.0 ppm)	>5240 $\mu g/m^3$ (> 2.0 ppm)	>2100 $\mu g/m^3$ (> 0.8 ppm)	White oaks Potato Upland cotton Corn Dogwood Peach

[a]Based on observations over a 20-year period of visible injury occurring on over 120 species growing in the vicinities of coal-fired power plants in the southeastern United States.

[b]Maximum 5 minute concentration.

Source: After Jones et al., 1974.

TABLE 5.1

THE DEGREE OF INJURY OF EASTERN WHITE PINE OBSERVED AT VARIOUS DISTANCES FROM THE SUDBURY SMELTERS FOR 1953-63

Forest Sampling Station[a] (Distance and Direction from Sudbury)	Trees with Current Year's Foliage Injured in August 1963 (%)	Trees with 1-Year-Old (1962) Foliage Injured		Trees with 2-Year Old Foliage		Net Annual Average Gain or Loss in Total Volume, 1953-1963 (%)	Annual Average Mortality 1953-1963 (%)	Degree of SO_2 Damage	Average SO_2 Concentration[b] for Total Measurement Period 1954-1963 $\mu g/m^3$ (ppm)
		June 1963 (%)	August 1963 (%)	Injured in June 1963 (%)	Lacking in August 1963 (%)				
West Bay (19 miles NE)	2.0	38.0	77.9	96.0	20.6	-1.3	2.6	Acute and chronic injury	115 (0.045)
Portage Bay (25 miles NE)	1.1	21.5	55.6	77.0	15.2	-0.5	2.5	Mostly chronic and little acute injury	45 (0.017)
Grassy to Emerald Lake (40-43 miles NE)	0.4	2.5	16.7	37.5	9.1	+1.0	1.4	Very little chronic injury	21 (0.008)
Lake Matinenda (93 miles W)	0.6	0.3	2.1	10.1	3.9	+2.1	0.5	Control: no SO_2 injury	3 (0.001)[c] (Sturgeon Falls)
Correlation Coefficient (r)	0.96	0.96	0.93**	0.90**	0.94**	0.90**	0.81		

[a] Linzon (1971) (Pollutants other than SO_2 were not measured and the monitoring was done several miles from the pine stands.)

[b] Dreisinger (1965)

[c] Data for 5-month growing season-1971

*$p < 0.05$

**$p < 0.10$

Derived from Linzon, 1980.

TABLE 5.2

dispersion modeling results provided in this document show the annual impacts for both the Class I and Class II areas to be negative.

5.3 IMPACTS ON VISIBILITY

"Atmospheric visibility" is a term often used by airport weather observers to connote visual range, which refers to the farthest distance at which a large, black object can be seen against the horizon sky in the daytime. Visibility relates to atmospheric clarity and the perceived characteristics of viewed surroundings, including the contrast and the color of objects and sky. Pollution affects visibility in two primary ways:

1) as coherent plumes or haze layers visible because of their contrast with background;
2) as widespread, relatively homogeneous haze that reduces contrast of viewed targets and reduces visual range.

The kind and degree of effects are determined largely by the distribution and characteristics of atmospheric particulate matter, which scatters and absorbs light.

Figure 5.1 places the typical visual range in the Tampa area at between 9 and 10 miles. This relatively poor visual range is attributable not only to air pollutants but largely to the predominant regional meteorological patterns that result in high relative humidity in the Tampa area for much of the year. Humidity plays such a key role in visibility that the method to measure visual range for air quality planning purposes is not valid when the relative humidity exceeds 70 percent.

Gulf Coast's emissions of particulate matter, the primary visibility-reducing pollutant, are below the significance level for PSD at 13.2 tons per year. This emission rate is below that which would significantly contribute to the deterioration of visibility. Another source of particulates which could reduce visibility is sulfur trioxide (SO_3), the anhydride of sulfuric acid. The factors governing formation of SO_3 are not fully understood but are recognized to occur principally in large combustion installations operated at high firebox temperatures, i.e., utility-size power boilers. In the firing chamber, most of the sulfur present is converted to sulfur dioxide on combustion. In some combustion processes, a small portion of the sulfur, usually no more than five percent of the total, is converted to SO_3. SO_3 is highly reactive and extremely hygroscopic as compared to SO_2.

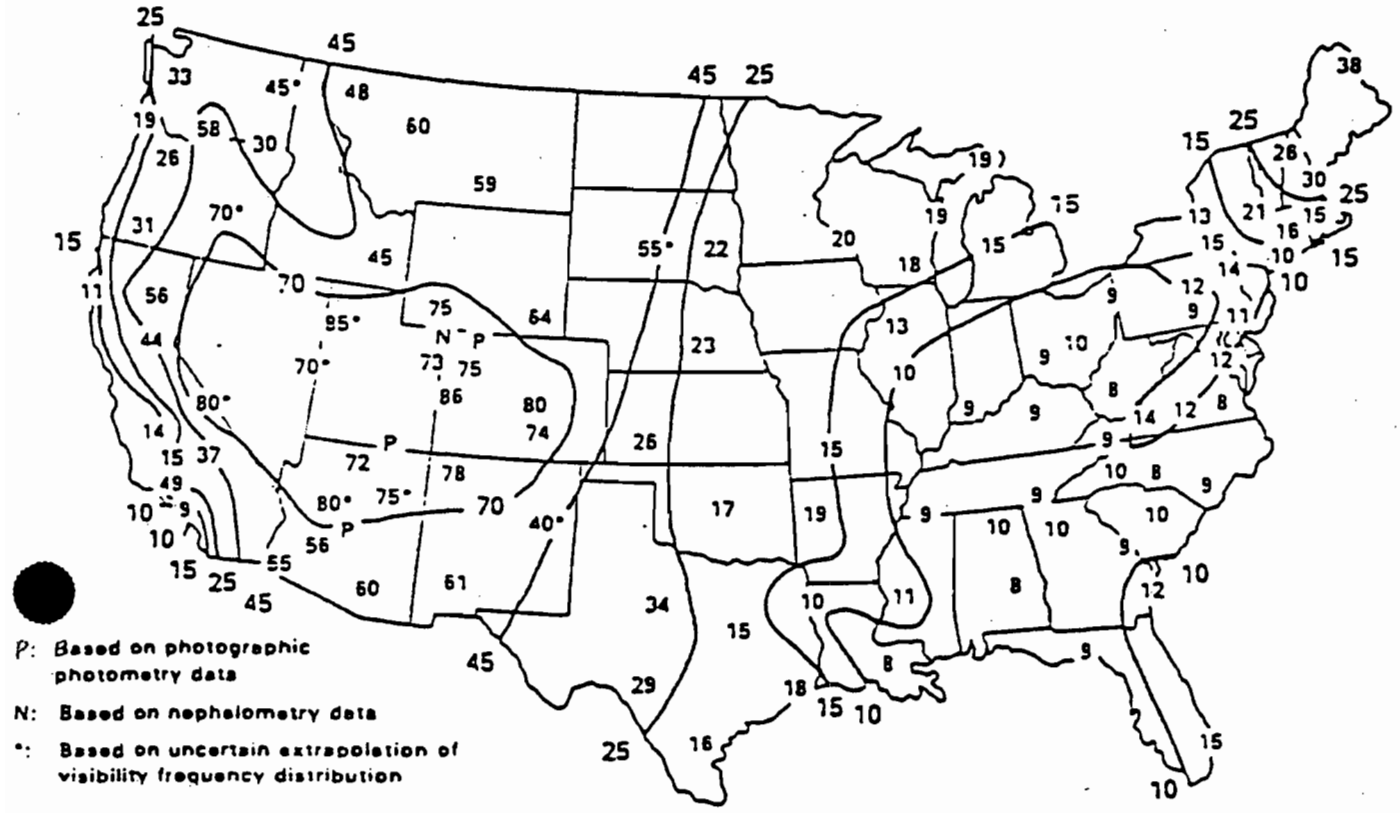


Figure .8. 1Median summer visual range (miles) and isopleths for suburban/nonurban areas, 1974-76.

Source: Trijonis and Shapland (1979).

FIGURE 5.1

The volume of SO_3 found in gases from power plant steam generators typically can range from 5 to 50 parts per million (ppm). As might be expected, the degree of sulfur trioxide formation in combustion equipment varies widely. Concentrations are negligible in small equipment. As sizes and firebox temperatures increase, SO_3 concentrations increase appreciably, though seldom exceeding 35 ppm. Due to the relatively low smelting zone temperature and size of the blast furnace compared to a utility-size boiler, it is believed that any emissions of SO_3 from Gulf Coast will be at a rate that will not contribute to visibility degradation.

Taking into account all of the factors outlined above and the area in which Gulf Coast is located (highly industrialized with many high-emitting utilities), it seems clear that Gulf Coast will not significantly affect visibility in the area, which is already reported in the summer as low as nine miles.

REFERENCES

Thomas et el., Coleman, Faller, Nogales and Jones, Jones et al. "Air Quality Criteria for Particulate Matter and Sulfur Oxides, Volume III." United States Environmental Protection Agency, EPA-600/8 - 82/029 c, December 1982

6.0
APPLICATION FORMS

The next 12 pages consist of the completed DEP application forms.

BEST AVAILABLE COPY

Florida Department of Environmental Regulation

Twin Towers Office Bldg. • 2600 Blair Stone Road • Tallahassee, Florida 32399-2400

Lawton Chiles, Governor

Carol M. Browner, Secretary

AC 29-209018
PSD-FL-215

$1500 pd.
5-31-94

APPLICATION TO OPERATE/CONSTRUCT AIR POLLUTION SOURCES Rcpt.#224232

SOURCE TYPE: Secondary Lead Smelter [ ] New[1] [X] Existing[1]

APPLICATION TYPE: [ ] Construction [ ] Operation [X] Modification

COMPANY NAME: Gulf Coast Recycling, Inc. COUNTY: Hillsborough

Identify the specific emission point source(s) addressed in this application (i.e. Lime Kiln No. 4 with Venturi Scrubber; Peaking Unit No. 2, Gas Fired) Blast Furnace

SOURCE LOCATION: Street 1901 N. 66th Street City Tampa

UTM: East 364048 North 3093548

Latitude 27 ° 57 ' 43 "N Longitude 82 ° 22 ' 49 "W

APPLICANT NAME AND TITLE: Willis M. Kitchen

APPLICANT ADDRESS: 1901 N. 66th Street, Tampa, Florida 33619

SECTION I: STATEMENTS BY APPLICANT AND ENGINEER

A. APPLICANT

I am the undersigned owner or authorized representative* of Gulf Coast Recycling

I certify that the statements made in this application for a PSD permit are true, correct and complete to the best of my knowledge and belief. Furt I agree to maintain and operate the pollution control source and pollution con facilities in such a manner as to comply with the provision of Chapter 403, Flo Statutes, and all the rules and regulations of the department and revisions thereof also understand that a permit, if granted by the department, will be non-transfer and I will promptly notify the department upon sale or legal transfer of the permi establishment.

*Attach letter of authorization

Signed: Willis M. Kitchen

Willis M. Kitchen, President
Name and Title (Please Type)

Date: 5/23/94 Telephone No. (813) 626-6151

B. PROFESSIONAL ENGINEER REGISTERED IN FLORIDA (where required by Chapter 471, F.S.)

This is to certify that the engineering features of this pollution control project been designed/examined by me and found to be in conformity with modern enginee principles applicable to the treatment and disposal of pollutants characterized in permit application. There is reasonable assurance, in my professional judgment,

[1] See Florida Administrative Code Rule 17-2.100(57) and (104)

the pollution control facilities, when properly maintained and operated, will discharge an effluent that complies with all applicable statutes of the State of Florida and the rules and regulations of the department. It is also agreed that the undersigned will furnish, if authorized by the owner, the applicant a set of instructions for the proper maintenance and operation of the pollution control facilities and, if applicable, pollution sources.

Signed _____

Michael L. Sappington
Name (Please Type)

Lake Engineering, Inc.
Company Name (Please Type)

35 Glenlake Pkwy., Suite 500, Atlanta, GA 30328
Mailing Address (Please Type)

Florida Registration No. 44212 Date: 5/27/94 Telephone No. 404-395-0464

SECTION II: GENERAL PROJECT INFORMATION

A. Describe the nature and extent of the project. Refer to pollution control equipment, and expected improvements in source performance as a result of installation. State whether the project will result in full compliance. Attach additional sheet if necessary.

Replacement of two blast furnaces with one larger furnace equipped with baghouses and a proposed afterburner. This replacement occurred in 1984. This project will be in full compliance with F.A.C. Chapter 17-2.

B. Schedule of project covered in this application (Construction Permit Application Only)

Start of Construction November 1984 Completion of Construction December 1984

C. Costs of pollution control system(s): (Note: Show breakdown of estimated costs only for individual components/units of the project serving pollution control purposes. Information on actual costs shall be furnished with the application for operation permit.)

N/A

D. Indicate any previous DER permits, orders and notices associated with the emission point, including permit issuance and expiration dates.

Refer to "After-the-Fact Construction Permit Application" submitted February 10, 1992 for permitting history. Current permit number A029-173310 issued 11/19/90, expires 11/15/95

E. Requested permitted equipment operating time: hrs/day 24 ; days/wk 7 ; wks/yr 52 ;

if power plant, hrs/yr _____; if seasonal, describe: _____

F. If this is a new source or major modification, answer the following questions. (Yes or No)

1. Is this source in a non-attainment area for a particular pollutant? Yes

   a. If yes, has "offset" been applied? Yes

   b. If yes, has "Lowest Achievable Emission Rate" been applied? No

   c. If yes, list non-attainment pollutants. Ozone, TSP

2. Does best available control technology (BACT) apply to this source? If yes, see Section VI. Yes

3. Does the State "Prevention of Significant Deterioriation" (PSD) requirement apply to this source? If yes, see Sections VI and VII. Yes

4. Do "Standards of Performance for New Stationary Sources" (NSPS) apply to this source? Yes

5. Do "National Emission Standards for Hazardous Air Pollutants" (NESHAP) apply to this source? No

H. Do "Reasonably Available Control Technology" (RACT) requirements apply to this source? Yes

   a. If yes, for what pollutants? Total Particulates

   b. If yes, in addition to the information required in this form, any information requested in Rule 17-2.650 must be submitted.

Attach all supportive information related to any answer of "Yes". Attach any justification for any answer of "No" that might be considered questionable.

F. 1. See Section 2.6
   2. See Sections 2.1 and 2.4
   3. See text
   4. See Section 2.3
   5. None emitted

H. See Section 2.3

SECTION III: AIR POLLUTION SOURCES & CONTROL DEVICES (Other than Incinerators)

A. Raw Materials and Chemicals Used in your Process, if applicable:

Description	Contaminants		Utilization Rate - lbs/hr	Relate to Flow Diagram
	Type	% Wt		
Lead Scrap	Pb, PM, Sulfur	5,45,55	8,550	
Coke	PM	100	1,145	
Limestone	PM	100	280	
Cast Iron	PM	100	400	
Rerun Slag	PM	100	1,600	

B. Process Rate, if applicable: (See Section V, Item 1)

1. Total Process Input Rate (lbs/hr): 11,975

2. Product Weight (lbs/hr): 6,000

C. Airborne Contaminants Emitted: (Information in this table must be submitted for each emission point, use additional sheets as necessary)

See Table 2.1

Name of Contaminant	Emission[1]		Allowed[2] Emission Rate per Rule 17-2	Allowable[3] Emission lbs/hr	Potential[4] Emission		Relate to Flow Diagram
	Maximum lbs/hr	Actual T/yr			lbs/yr	T/yr	
SO_2	374.00	1,638.1	N/A	N/A	N/A		
Pb	0.13	0.6	2.09 lb/hr[5]	2.09	120,000	60	
PM	3.20	14.0	0.022 gr/dscf	[6] 3.82	2,800,000	1,400	
CO	68.33	299.3	N/A	N/A	5,986,000	2,993	
NO_x	1.98	8.7	N/A	N/A	N/A		
VOC	1.7	7.25	N/A	N/A	290,000	145	

[2]Reference applicable emission standards and units (e.g. Rule 17-2.600(5)(b)2. Table II, E. (1) - 0.1 pounds per million BTU heat input)

[3]Calculated from operating rate and applicable standard.

[4]Emission, if source operated without control (See Section V, Item 3).

[5] 40 CFR 52.535 (c)(1)(i)

[6] NSPS Subpart L (40 CFR 60.120)

. Control Devices: (See Section V, Item 4)

	Name and Type (Model & Serial No.)	Contaminant	Efficiency	Range of Particles Size Collected (in microns) (If applicable)	Basis for Efficiency (Section V Item 5)
*	Baghouse-Wheelabrator	Particulate	99+%	1 micron	manuf. specs.
	Frye Model 126 or				
	Equivalent (patterened				
	after model 126 but				
	fabricated by GCR)				
**	Afterburner	CO/VOC	90-99%	N/A	vendor specs.

* Existing, ** To be applied for later

E. Fuels

Type (Be Specific)	Consumption*		Maximum Heat Input (MMBTU/hr)
	avg/hr	max./hr	
Coke	1,145	1,500	19.5

*Units: Natural Gas--MMCF/hr; Fuel Oils--gallons/hr; Coal, wood, refuse, other--lbs/hr.

Fuel Analysis:

Percent Sulfur: 0.58 Percent Ash: 5.4

Density: N/A lbs/gal Typical Percent Nitrogen: N/A

Heat Capacity: 13,000 BTU/lb N/A BTU/gal

Other Fuel Contaminants (which may cause air pollution): _____

F. If applicable, indicate the percent of fuel used for space heating.

Annual Average _____ Maximum _____

G. Indicate liquid or solid wastes generated and method of disposal.

Slag is disposed of in an approved and permitted landfill.

K069 - Returned to blast furnace.

Emission Stack Geometry and Flow Characteristics (Provide data for each stack):

Stack Height: 213 ft. Stack Diameter: 3 ft.

Gas Flow Rate: 24,354 ACFM 20,246 DSCFM Gas Exit Temperature: 154 °F.

Water Vapor Content: 3.5 % Velocity: 57 FPS

SECTION IV: INCINERATOR INFORMATION

TO BE APPLIED FOR LATER

Type of Waste	Type 0 (Plastics)	Type I (Rubbish)	Type II (Refuse)	Type III (Garbage)	Type IV (Pathological)	Type V (Liq.& Gas By-prod.)	Type VI (Solid By-prod.)
Actual lb/hr Incinerated							
Uncontrolled (lbs/hr)							

Description of Waste _____

Total Weight Incinerated (lbs/hr) _____ Design Capacity (lbs/hr) _____

Approximate Number of Hours of Operation per day 24 day/wk 7 wks/yr. 52

Manufacturer to be determined

Date Constructed _____ Model No. _____

	Volume $(ft)^3$	Heat Release (BTU/hr)	Fuel		Temperature (°F)
			Type	BTU/hr	
Primary Chamber			Nat. Gas		1400
Secondary Chamber					

Stack Height: _____ ft. Stack Diamter: _____ Stack Temp. _____

Gas Flow Rate: _____ ACFM _____ DSCFM* Velocity: _____ FPS

*If 50 or more tons per day design capacity, submit the emissions rate in grains per standard cubic foot dry gas corrected to 50% excess air.

Type of pollution control device: [ ] Cyclone [ ] Wet Scrubber [X] Afterburner

[ ] Other (specify) _____

Brief description of operating characteristics of control devices:

90% destruction of CO, 95% for VOCs, at 1,400°F and 0.5-2.0 seconds. Final design yet to be determined.

Ultimate disposal of any effluent other than that emitted from the stack (scrubber water, ash, etc.):

N/A

NOTE: Items 2, 3, 4, 6, 7, 8, and 10 in Section V must be included where applicable.

SECTION V: SUPPLEMENTAL REQUIREMENTS

Please provide the following supplements where required for this application.

1. Total process input rate and product weight -- show derivation [Rule 17-2.100(127)]

2. To a construction application, attach basis of emission estimate (e.g., design calculations, design drawings, pertinent manufacturer's test data, etc.) and attach proposed methods (e.g., FR Part 60 Methods 1, 2, 3, 4, 5) to show proof of compliance with applicable standards. To an operation application, attach test results or methods used to show proof of compliance. Information provided when applying for an operation permit from a construction permit shall be indicative of the time at which the test was made.

3. Attach basis of potential discharge (e.g., emission factor, that is, AP42 test).

4. With construction permit application, include design details for all air pollution control systems (e.g., for baghouse include cloth to air ratio; for scrubber include cross-section sketch, design pressure drop, etc.)

5. With construction permit application, attach derivation of control device(s) efficiency. Include test or design data. Items 2, 3 and 5 should be consistent: actual emissions = potential (1-efficiency).

6. An 8 1/2" x 11" flow diagram which will, without revealing trade secrets, identify the individual operations and/or processes. Indicate where raw materials enter, where solid and liquid waste exit, where gaseous emissions and/or airborne particles are evolved and where finished products are obtained.

7. An 8 1/2" x 11" plot plan showing the location of the establishment, and points of airborne emissions, in relation to the surrounding area, residences and other permanent structures and roadways (Example: Copy of relevant portion of USGS topographic map).

8. An 8 1/2" x 11" plot plan of facility showing the location of manufacturing processes and outlets for airborne emissions. Relate all flows to the flow diagram.

The appropriate application fee in accordance with Rule 17-4.05. The check should be made payable to the Department of Environmental Regulation.

10. With an application for operation permit, attach a Certificate of Completion of Construction indicating that the source was constructed as shown in the construction permit.

SECTION VI: BEST AVAILABLE CONTROL TECHNOLOGY

A. Are standards of performance for new stationary sources pursuant to 40 C.F.R. Part 60 applicable to the source?

[X] Yes [ ] No

Contaminant	Rate or Concentration
Particulates	0.022 gr/dscf, 20% opacity

B. Has EPA declared the best available control technology for this class of sources (If yes, attach copy)

[ ] Yes [X] No

Contaminant	Rate or Concentration

C. What emission levels do you propose as best available control technology?

Contaminant	Rate or Concentration

D. Describe the existing control and treatment technology (if any).

1. Control Device/System: Baghouse
2. Operating Principles:
3. Efficiency: 99+%
4. Capital Costs:

Explain method of determining

5. Useful Life:

6. Operating Costs:

7. Energy:

8. Maintenance Cost:

9. Emissions:

Contaminant	Rate or Concentration

10. Stack Parameters

a. Height: 213 ft.

b. Diameter: 3 ft.

c. Flow Rate: 24,354 ACFM

d. Temperature: 154 °F.

e. Velocity: 57 FPS

E. Describe the control and treatment technology available (As many types as applicable, use additional pages if necessary).

1. See Sections 2.1 and 2.4

a. Control Device:

b. Operating Principles:

c. Efficiency:[1]

d. Capital Cost:

e. Useful Life:

f. Operating Cost:

g. Energy:[2]

h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

j. Applicability to manufacturing processes:

k. Ability to construct with control device, install in available space, and operate within proposed levels:

2.

a. Control Device:

b. Operating Principles:

c. Efficiency:[1]

d. Capital Cost:

e. Useful Life:

f. Operating Cost:

g. Energy:[2]

h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

[1] Explain method of determining efficiency.
[2] Energy to be reported in units of electrical power - KWH design rate.

j. Applicability to *manufacturing processes*:

k. Ability to construct with control device, install in available space, and operate within proposed levels:

3.

a. Control Device:

b. Operating Principles:

c. Efficiency:[1]

d. Capital Cost:

e. Useful Life:

f. Operating Cost:

g. Energy:[2]

h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

j. Applicability to manufacturing processes:

k. Ability to construct with control device, install in available space, and operate within proposed levels:

4.

a. Control Device:

b. Operating Principles:

c. Efficiency:[1]

d. Capital Costs:

e. Useful Life:

f. Operating Cost:

g. Energy:[2]

h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

j. Applicability to manufacturing processes:

k. Ability to construct with control device, install in available space, and operate within proposed levels:

F. Describe the control technology selected:

1. Control Device:

2. Efficiency:[1]

3. Capital Cost:

4. Useful Life:

5. Operating Cost:

6. Energy:[2]

7. Maintenance Cost:

8. Manufacturer:

9. Other locations where employed on similar processes:

a. (1) Company:

(2) Mailing Address:

(3) City:

(4) State:

[1]Explain method of determining efficiency.
[2]Energy to be reported in units of electrical power - KWH design rate.

(5) Environmental Manager:

(6) Telephone No.:

(7) Emissions:[1]

Contaminant	Rate or Concentration

(8) Process Rate:[1]

b. (1) Company:

(2) Mailing Address:

(3) City: (4) State:

(5) Environmental Manager:

(6) Telephone No.:

(7) Emissions:[1]

Contaminant	Rate or Concentration

(8) Process Rate:[1]

10. Reason for selection and description of systems:

[1]Applicant must provide this information when available. Should this information not be available, applicant must state the reason(s) why.

SECTION VII - PREVENTION OF SIGNIFICANT DETERIORATION

A. Company Monitored Data

1. _____ no. sites _____ . TSP _____ ( ) SO^{2}* _____ . Wind spd/dir

Period of Monitoring _____/_____/_____ to _____/_____/_____
month day year month day year

Other data recorded _____

Attach all data or statistical summaries to this application.

*Specify bubbler (B) or continuous (C).

2. Instrumentation, Field and Laboratory

a. Was instrumentation EPA referenced or its equivalent? [ ] Yes [ ] No

b. Was instrumentation calibrated in accordance with Department procedures?

[ ] Yes [ ] No [ ] Unknown

B. Meteorological Data Used for Air Quality Modeling

1. 5 Year(s) of data from 01 / 01 / 82 to 12 / 31 / 86
month day year month day year

2. Surface data obtained from (location) Tampa #12842, Gainesville, Orlando

3. Upper air (mixing height) data obtained from (location) Tampa, Station #12842

4. Stability wind rose (STAR) data obtained from (location) N/A

C. Computer Models Used

1. ISCST2 Modified? No If yes, attach description.

2. MESOPUFF II Modified? No If yes, attach description.

3. _____ Modified? If yes, attach description.

4. _____ Modified? If yes, attach description.

Attach copies of all final model runs showing input data, receptor locations, and principle output tables.

Applicants Maximum Allowable Emission Data

Pollutant	Emission Rate	
TSP	0.403	grams/sec
SO_2	47.124	grams/sec

E. Emission Data Used in Modeling

Attach list of emission sources. Emission data required is source name, description of point source (on NEDS point number), UTM coordinates, stack data, allowable emissions, and normal operating time. See Appendices I, K, M

F. Attach all other information supportive to the PSD review.

G. Discuss the social and economic impact of the selected technology versus other applicable technologies (i.e., jobs, payroll, production, taxes, energy, etc.). Include assessment of the environmental impact of the sources. See Sections 2.1 and 2.4.

H. Attach scientific, engineering, and technical material, reports, publications, journals, and other competent relevant information describing the theory and application of the requested best available control technology.

7.0 SUMMARY AND CONCLUSIONS

The information contained in this document supports the issuance of the Prevention of Significant Deterioration construction and operating permit for Gulf Coast Recycling, Inc. located in Tampa, Florida. Air dispersion modeling, along with current operating permits and ambient monitoring data, have shown that Gulf Coast currently is and will continue to be in compliance with all applicable local, state, and federal air quality regulations. The BACT analysis showed that further control of SO_2 emissions is not cost-effective and not necessary to protect the health and welfare of all flora and fauna possibly affected. The control technology currently in place at Gulf Coast is considered to be state-of-the-art for most facilities of comparable type, size, and age.

Gulf Coast has committed to installing an afterburner to control VOC and CO emissions that will also reduce SO_2 formation. However, requiring additional SO_2 controls at this point will not only have severe economic consequences but also raises environmental concerns that would offset any benefit obtained from additional controls. As mentioned earlier, Gulf Coast is the only lead-acid battery recycler in the state of Florida. A shutdown of this facility will require the transport of approximately 1.1 million batteries per year 425 miles to the nearest recycling facility in Columbus, Georgia, thus increasing mobile-source air emissions to the region.

APPENDIX A

CURRENT OPERATING PERMIT
NO. AO29-173310

Florida Department of Environmental Regulation

Southwest District • 4520 Oak Fair Boulevard • Tampa, Florida 33610-7347 • 813-623-5561

Bob Martinez, Governor Dale Twachtmann, Secretary John Shearer, Assistant Secretary
Dr. Richard Garrity, Deputy Assistant Secretary

PERMITTEE:
Gulf Coast Recycling, Inc.
1901 North 66th Street
Tampa, FL 33619

PERMIT/CERTIFICATION
Permit No: AO29-173310
County: Hillsborough
Amendment Date: 11/19/90
Expiration Date: 11/15/95
Project: Blast Furnace and Agglomeration Furnace

This amended permit is issued under the provisions of Chapter 403, Florida Statutes, and Florida Administrative Code Rules 17-2 & 17-4. The above named permittee is hereby authorized to perform the work or operate the facility shown on the application and approved drawing(s), plans and other documents, attached hereto or on file with the department and made a part hereof and specifically described as follows:

For the operation of a secondary lead blast furnace and a flue dust agglomeration furnace. At the facility leadbearing scrap materials (LSM's), coke, lime rock, cast iron and slag are loaded into a skip-hoist and charged into the blast furnace (60 ton capacity). Lead in the liquid form collects at the base of the blast furnace. In this process lime rock is added to displace the lead in any lead silicate which might have been formed, while cast iron (iron oxide) binds with any sulfur to produce iron sulfide thus reducing sulfur dioxide emissions. The lead is tapped from the blast furnace and cast into buttons. Emissions generated by the charging (Point 06), the blast furnace exhaust (Point 01) and the tapping (Point 04) are controlled by three (3) sets of baghouses which vent separately. Flue dust collected by the baghouses is conveyed to an agglomeration furnace fired on natural gas. The blast furnace is subject to the New Source Performance Standards of 40 CFR 60, Subpart L, Standards of Performance for Secondary Lead Smelters and the Federal Implementation Plan contained in 40 CFR 52.535.

Location: 1901 North 66th Street, Tampa

UTM: 17-364.0 E 3093.6 N NEDS NO: 0057 Point ID: 01 - Furnace Exhaust
04 - Tapping
06 - Charging

Replaces Permit No.: AO29-95366

PERMITTEE:
Gulf Coast Recycling, Inc.

PERMIT/CERTIFICATION NO.: AO29-173310
PROJECT: Blast Furnace and Agglomeration Furnace

SPECIFIC CONDITIONS:

1. A part of this permit is the attached 15 General Conditions.

2. Pursuant to Rule 17-2.650(2)(b)1., F.A.C., this facility qualifies for an exemption of the Reasonably Available Control Technology (RACT) requirements since, at the request of the permittee, the total allowable emissions of the facility shall not exceed 4.4 pounds per hour and 14.9 tons per year. (PM)

3. Pursuant to 40 CFR 60.122(a)(1), the permittee shall not discharge from the baghouses particulate emissions greater than 0.022 grains per dry standard cubic foot. METHOD 5

4. In order to insure compliance with Specific Condition No. 2, the maximum allowable particulate matter emissions* and hours of operation of the sources authorized to operate under this permit shall be:

Source	Emission Limitations	Hours of Operation
Blast Furnace Charging	0.65 lbs./hr. (2.54 TPY)	7800
Blast Furnace	2.15 lbs./hr. (8.38 TPY)	7800
Blast Furnace Tapping	0.40 lbs./hr. (1.56 TPY)	7800
	3.20	12.48

* Prior to initiating any actions to increase the capture efficiency of the system, the permittee shall request written authorization from the Environmental Protection Commission of Hillsborough County.

5. Pursuant to 40 CFR 52.535(c)(1)(i), the maximum allowable lead emissions from the sources authorized to operate under this permit shall be:

Source	Emissions Limitations
Blast Furnace Charging	0.22 lbs./hr. (0.86 TPY)
Blast Furnace	1.81 lbs./hr. (7.06 TPY)
Blast Furnace Tapping	0.06 lbs./hr. (0.23 TPY)
	2.09 (8.15)

6. Pursuant to 40 CFR 52.535(c)(1)(ii), visible emissions from the closed charge doors on the blast furnace shall not exceed five (5) percent opacity during furnace operation.

7. Pursuant to 40 CFR 52.535(c)(1)(iii), visible emissions from the charge doors on the blast furnace shall not exceed ten (10) percent opacity during charging operations.

PERMITTEE:
Gulf Coast Recycling, Inc.

PERMIT/CERTIFICATION NO.: AO29-173310
PROJECT: Blast Furnace and Agglomeration Furnace

SPECIFIC CONDITIONS: (continued)

8. Pursuant to 40 CFR 52.535(c)(1)(iv), visible emissions from all other sources authorized to operate under this permit shall not exceed five (5) percent opacity.

9. Sulfur dioxide (SO_2) emissions shall not exceed 384.2 pounds per hour. If testing indicates that SO_2 emissions exceed 384.2 (374 lbs./hr. base line + 40 tons/yr., 12/83) then the permittee shall immediately reapply for a new permit under the provisions of Section 17-2.500, F.A.C.

10. Test emissions from the blast furnace charging, blast furnace, and blast furnace tapping operations for the following pollutants at intervals of twelve (12) months from February 14, 1990 and submit 2 copies of test data to the Environmental Protection Commission of Hillsborough County within forty-five (45) days of such testing pursuant to Section 17-2.700, F.A.C.:

(X)	Particulates	(X)	Sulfur Oxides*
(X)	Opacity	(X)	Lead

* Applies only to the blast furnace emissions.

11. Compliance with the emission limitations of Specific Conditions Nos. 3, 4, 5, 6, 7 and 8 shall be determined using EPA Methods 1, 2, 3, 4, 6, 9 and 12 contained in 40 CFR 60, Appendix A and adopted by reference in Section 17-2.700, F.A.C. In the case of the Method 9, Section 2.5 shall be excluded, pursuant to 40 CFR 52.535(b)(5).; thus waiving the six minute averaging period and establishing an instantaneous standard. The annual sulfur oxide test will be conducted by the same method used in the December, 1983 test. The minimum requirements for stack sampling facilities, source sampling and reporting, shall be in accordance with Section 17-2.700, F.A.C. and 40 CFR 60, Appendix A.

12. The visible emission test on the blast furnace shall be sixty (60) minutes in duration pursuant to Section 17-2.700, F.A.C., and shall be conducted concurrent with one of the Method 12 runs.

13. The visible emission tests on the blast furnace charging operation shall each be sixty (60) minutes in duration, pursuant to Rule 17-2.700(1)(d)1.b.i., F.A.C. Readings shall be taken on the :

A) Charge doors on the blast furnace during charging (closest potential emission point).
B) Closed charge doors on the blast furnace during furnace operation (closest potential emission point).
C) Baghouse exhaust during blast furnace operation.

PERMITTEE:
Gulf Coast Recycling, Inc.

PERMIT/CERTIFICATION NO.: AO29-173310
PROJECT: Blast Furnace and Agglomeration Furnace

SPECIFIC CONDITIONS: (continued)

14. The visible emission test on the blast furnace tapping shall be sixty (60) minutes in duration pursuant to Rule 17-2.700(1)(d)1.b.i., F.A.C. Readings shall be taken only during product tapping.

15. The maximum process input rate shall be 4.58 tons per hour of raw materials. Raw material charging rates on a daily basis shall be consistent with the following percentages based on the February, 1990 test.

Raw Material	Percentage
Lead Scrap and Re-Run Slag	88% - 4.03
Coke	7% - 0.32
Lime Rock	2.5% - 0.11
Cast Iron	2.5% - 0.11

16. Testing of emissions must be accomplished at approximately the maximum process weight rate of 4.58 tons per hour of raw materials. The actual charging rate and type of materials charged during the test shall be specified in each test result. Failure to include the actual process or production rate in the results may invalidate the test [Rule 17-4.070(3), F.A.C.].

17. Pursuant to 40 CFR 52.535(b)(2), non-process fugitive emissions (road dust, stockpiles, plant grounds, etc.) shall be minimized. Minimization efforts shall include such fugitive dust suppression activities as chemical stabilization, water spraying with appropriate runoff collection, resurfacing, sweeping, revegetation, and other EPA approved methods.

18. Pursuant to 40 CFR 52.535(b)(4), the permittee shall maintain continuous records of plant process and emission control operations as necessary to determine continuous compliance. Such records shall include reports of all process operations and control equipment operating parameters. Such records shall also include reports of all types of process upsets and emission control equipment malfunction, detailing the nature and duration of the upset or malfunction, the expected effects on emissions, and the corrective actions taken or planned to avoid recurrences. Such records shall be available at the plant site for inspection for a period of at least two (2) years.

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PERMITTEE:
Gulf Coast Recycling, Inc.

PERMIT/CERTIFICATION NO.: AO29-173310
PROJECT: Blast Furnace and Agglomeration Furnace

SPECIFIC CONDITIONS: (continued)

19. Pursuant to Rule 1-1.04.1 of the Rules of the Environmental Protection Commission of Hillsborough County and consistent with Specific Condition No. 15, the permittee shall maintain daily records on the number of charges to the blast furnace and the make-up of each charge (i.e., groups, coke, limerock, etc.). The permittee shall also maintain monthly inventory records showing types and quantities of materials charged to the furnace during the month.

20. Pursuant to Chapter 1-3.22(3) of the Rules of the Environmental Protection Commission of Hillsborough County, the permittee shall not allow the discharge of air pollutants which contribute to an objectionable odor.

21. The Environmental Protection Commission of Hillsborough County shall be notified in writing 15 days in advance of any compliance test to be conducted on this source.

22. Submit for this facility, each calendar year, on or before March 1, an emission report for the preceding calendar year containing the following information pursuant to Subsection 403.061(13), Florida Statutes:

(A) Annual amount of materials and/or fuels utilized.
(B) Annual emissions (note calculation basis).
(C) Any changes in the information contained in the permit application.

Duplicate copies of all reports shall be submitted to the Environmental Protection Commission of Hillsborough County.

23. Pursuant to Section 17-4.090, F.A.C., an application for renewal of permit to operate this source, completed in quadruplicate, shall be submitted to the Environmental Protection Commission of Hillsborough County at least 60 days prior to its expiration date.

Originally Issued: July 17, 1990
Amended this 19 day of 1992.

STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL REGULATION

ATTACHMENT - GENERAL CONDITIONS:

1. The terms, conditions, requirements, limitations and restrictions set forth in this permit, are "permit conditions" and are binding and enforceable pursuant to Sections 403.141, 403.161, 403.727, or 403.859 through 403.861, Florida Statutes. The permittee is placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of these conditions.

2. This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.

3. As provided in subsections 403.087(6) and 403.722(5), F.S., the issuance of this permit does not convey any vested rights or any exclusive privileges. Neither does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, State, or local laws or regulations. This permit is not a waiver of or approval of any other Department permit that may be required for other aspects of the total project which are not addressed in this permit.

4. This permit conveys no title to land or water, does not constitute State recognition or acknowledgement of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the State. Only the Trustees of the Internal Improvement Trust Fund may express State opinion as to title.

5. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, or plant life, or property caused by the construction or operation of this permitted source, or from penalties therefore; nor does it allow the permittee to cause pollution in contravention of Florida Statutes and Department rules, unless specifically authorized by an order from the Department.

6. The permittee shall properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed and used by the permittee to achieve compliance with the conditions of this permit, are required by Department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by Department rules.

7. The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, upon presentation of credentials or other documents as may be required by law and at reasonable times, access to the premises where the permitted activity is located or conducted to:

(a) Have access to and copy any records that must be kept under conditions of the permit;

(b) Inspect the facility, equipment, practices, or operations regulated or required under this permit; and

(c) Sample or monitor any substances or parameters at any location reasonably necessary to assure compliance with this permit or Department rules.

Reasonable time may depend on the nature of the concern being investigated.

8. If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately provide the Department with the following information:

(a) A description of and cause of noncompliance; and

(b) The period of noncompliance, including dates and times; or, if not corrected, the anticipated time the noncompliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the noncompliance.

The permittee shall be responsible for any and all damages which may result and may be subject to enforcement action by the Department for penalties or for revocation of this permit.

9. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source which are submitted to the Department may be used by the Department as evidence in any enforcement case involving the permitted source arising under the Florida Statutes or Department rules, except where such use is prescribed by Sections 403.111 and 403.73, F.S. Such evidence shall only be used to the extent it is consistent with the Florida Rules of Civil Procedure and appropriate evidentiary rules.

10. The permittee agrees to comply with changes in Department rules and Florida Statutes after a reasonable time for compliance; provided, however, the permittee does not waive any other rights granted by Florida Statutes or Department rules.

11. This permit is transferable only upon Department approval in accordance with Rule 17-4.120 and 17-730.300, Florida Administrative Code, as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the Department.

12. This permit or a copy thereof shall be kept at the work site of the permitted activity.

13. This permit also constitutes:

( ) Determination of Best Available Control Technology (BACT)

( ) Determination of Prevention of Significant Deterioration (PSD)

( ) Certification of compliance with State Water Quality Standards (Section 401, PL 92-500)

( ) Compliance with New Source Performance Standards

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The permittee shall comply with the following:

(a) Upon request, the permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records will be extended automatically unless otherwise stipulated by the Department.

(b) The permittee shall hold at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation) required by the permit, copies of all reports required by this permit, and records of all data used to complete the application for this permit. These materials shall be retained at least three years from the date of the sample, measurement, report, or application unless otherwise specified by Department rule.

(c) Records of monitoring information shall include:

1. the date, exact place, and time of sampling or measurements;
2. the person responsible for performing the sampling or measurements;
3. the dates analyses were performed;
4. the person responsible for performing the analyses;
5. the analytical techniques or methods used;
6. the results of such analyses.

When requested by the Department, the permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the permittee becomes aware the relevant facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be corrected promptly.

APPENDIX B

EPA MEMO REGARDING PSD APPLICABILITY

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IV
345 COURTLAND STREET, N.E.
ATLANTA, GEORGIA 30365

MEMORANDUM

DATE: JUN 19 1991

SUBJECT: PSD Determination of Gulf Coast Recycling, Inc.

FROM: Brian L. Beals, Chief
Source Evaluation Unit

TO: Mark A. Armentrout, Chief
Northern Compliance Unit

This determination concerns the operations at Gulf Coast Recycling, Inc. and is in response to your memorandum dated April 26, 1991. Our determinations with respect to PSD are as follows:

(1) Gulf Coast Recycling is classified as a major stationary source, as defined in CFR 51.166, therefore, when notification was made of impending construction of a new 60 ton blast furnace, the PSD application process should have been initiated. This furnace qualified as a major modification as defined in CFR 51.166, due to the fact that construction would result in a significant net emissions increase and potential to emit increase in pollutants. Based on the emissions sampling data from 1979-90, there was a 43.7% increase in actual SO2 emissions from the pre-construction to post-construction periods. From 1979-84, actual SO2 emissions averaged 208.7 pounds per hour. After completion of the 60 ton blast furnace, actual SO2 emissions from 1985-90 averaged 300.0 pounds per hour. Based on Gulf Coast's annual operating level of 7800 hours per year, the actual emissions increase for SO2 rose from 814 tons per year in 1979-84 to 1170 tons per year in 1985-90. The significant rate of emissions for SO2 is defined as being 40 tons per year or more of that pollutant.

(2) The preconstruction requirements as outlined in Section 165 of the Clean Air Act should have been met. This would have included obtaining a construction permit for the 60 ton blast furnace prior to its fabrication, instead of obtaining one 6 years after the fact.

(3) The source is classified as a secondary lead smelter and due to the expected increases in pollutants, PSD review would subject all pollutants in the category to review. This would broaden the scope to include PM, Pb, CO, SO2, NOx, sulfuric acid mist, and hydrogen sulfide.

(4) Best Available Control Technology (BACT) analysis would be applicable for any pollutants subject to PSD review (from determination (3) above) which exceed their respective significant emissions rate.

(5) Further investigation is warranted into whether VOC emissions from the 60 ton blast furnace exceeds the 40 tons per year limit for NSR. If NSR is applicable, then LAER and emissions offsets would have to be taken into consideration.

(6) A final concern with respect to the operations at Gulf Coast pertains to the 50-ton refining kettle built and operated with no construction permit, designated as kettle #3. A valid construction permit should have addressed the operating limitations of kettle #3, specifically with reference to the simultaneous operation of more than two 50-ton kettles. Federally enforceable permit limits should have been incorporated into the construction permit, as they were in the eventual operating permit. According to Gulf Coast, kettle #1 operates independently; kettle #2 (calcium lead formation) is dependent upon the operations of kettle #3 (lead softening). The only impediment to simultaneous operation of all three kettles is manpower constraints, not design features; therefore, it is physically possible for all three 50-ton refining kettles to be operating simultaneously. The potential lead emissions for kettle #3 were 0.874 tons per year - an amount above the significance level of 0.6 tons per year; consequently, a PSD application was required for refining kettle #3.

Should you have any questions, please contact either Dennis Beauregard or Scott Davis at x5014.

APPENDIX C

LETTER FROM CITY OF TAMPA TO GULF COAST REGARDING SEWER CAPACITY

CITY OF TAMPA

Sandra W. Freedman, Mayor

Department of Sanitary Sewers

Ralph L. Metcalf, II, P.E.
Director

August 3, 1993

Joyce Morales-Caramela
Gulf Coast Recycling, Inc.
1901 North 66th Street
Tampa, Florida 33619

Re: Allocation of capacity for additional wastewater streams at Gulf Coast Recycling Plant.

Dear Joyce:

Due to other service commitment allocations and capacity limitations in our downstream gravity collection system, capacity is not presently available in our manifold force main system in 62nd Street to accept all the additional flows specified in your May 14, 1993 letter.

We have no plans to upgrade the collection system prior to calendar year 1998; however, some limited capacity should become available in approximately two (2) years because one of our prior service commitment allocations is only temporary.

Your letter mentioned the need to resume operation of the groundwater recovery system. Please be advised that any flows from this source will need to be controlled so that our present 20 GPM restriction on the total flow from your plant is not exceeded.

In addition, prior to your resuming operation of the groundwater recovery system, we will need groundwater samples from your monitoring wells analyzed to determine the level of Molybdenum. EPA Test Method 246.2 is to be used. Certified test results should be submitted for our review at your earliest convenience.

Permission to resume pumping of groundwater will be contingent on the determination of the Molybdenum concentration and the installation of pretreatment facilities if deemed necessary.

In addition, we request that the analysis of the effluent samples from your existing pretreatment facilities be expanded to include Molybdenum.

If possible, the test results should be included in the next report to John Daily of our Industrial Waste Division. This will assist us in the review of your plant's annual Industrial Wastewater Discharge Permit Application.

We trust this letter will meet your present needs. Please contact Bill Schafer at 223-8053 or me at 223-8040 if you have any question regarding this matter.

Sincerely,

DEPARTMENT OF SANITARY SEWERS

Michael A. Salgado, Engineer
Planning Division

MAS/pa

xc: John Daily
Executive
Planning
Engineering

APPENDIX D

1991 LEAD SOURCE TEST

STACK SAMPLING EMISSION REPORT
and
VISIBLE EMISSION TESTS

GULF COAST RECYCLING

Tampa, Florida
October 21 - 25, 1991

STEVENSON & ASSOCIATES
333 Falkenburg Road, Suite B-214
Tampa, Florida 33619

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APPENDICES

1.0 INTRODUCTION

1.0 INTRODUCTION

On October 21, 22, 23, 24 & 25, 1991, Stevenson & Associates, represented by Lynne Stevenson, Ron Oliver and Tim Capelle, conducted emission sampling (EPA Methods 1, 2, 4, 5, 6, and 12) and visible emission (EPA Method 9) tests for Gulf Coast Recycling, 1901 North 66th Street, Tampa, Florida.

These tests were performed to meet compliance test specifications of Permits Nos.: AO29-130736/Keel Cast Baghouse; AO29-173310/Furnace Tapping, Furnace Charging and Blast Furnace; and, AC29-184883/Refining Baghouse; and, to determine if these sources were operating within the limits of said permits as per requirements of the Hillsborough County Environmental Protection Commission and the State of Florida Department of Environmental Regulation.

2.0 SOURCE DESCRIPTION

2.0 SOURCE DESCRIPTION

Gulf Coast Recycling recovers lead from damaged or spent lead-acid batteries. Battery groups and posts are removed from the batteries and resmelted in a blast furnace. The blast lead is cast into 3,700 pound "buttons". These buttons are then remelted and cast into boat keels or the lead is refined or alloyed to customer specifications. These operations are controlled with five (5) separate collection and discharge systems.

Dust and fumes from the blast furnace and the slagging furnace are collected, routed through a series of cooling loops and forced through a fabric baghouse collector system (10 modules) prior to discharge through a stack. The stack is 36 inches in diameter, 150 feet high with two (2) sample ports located at 45 feet. The sampling ports are located 8 stack diameters upstream and 28 diameters downstream of any flow disturbances. The sulfur dioxide sampling port is located at the same sampling ports.

The blast furnace charging operation is vented through a double module baghouse.

Exhaust hoods covering the blast furnace, lead and slag taps and the slag tap from the slag furnace are vented through a single module baghouse collector and exhausted through a 13-inch square stack that is 45 feet tall. This process is called blast furnace tapping.

The refining kettle ventilation system consists of exhaust hoods enclosing each of three (3) melting kettles and lead drossing bins. The exhaust from these hoods is routed through a two module baghouse and vented through a 22-inch diameter stack that is 25 feet tall.

The keel cast melt kettle is enclosed with a hood that is exhausted to a single module baghouse and vented through a 14.5 inch diameter stack that is 25 feet tall.

3.0 SUMMARY OF RESULTS

3.0 SUMMARY OF RESULTS

The results of the emission testing are presented in the following Tables. The average emission rates for all parameters for all sources were below the allowable rates as specified in the current operating permits. Therefore, these sources wer oeprating within the limits of compliance during the testing on October 21 through October 25, 1991.

The visible emission highest six minute average for all sources was 0%.

No problems were encountered in accomplishing this assignment.

TABLE II

TEST SUMMARY - LEAD

GULF COAST RECYCLING - BLAST FURNACE

October 24, 1991

RUN NO.	LEAD (LBS/HR)	CONCNTRTN (GR/DSCF)	GAS FLOW (ACFM)	GAS FLOW (DSCFM)	VOLM. AIR (VMSTD)	ISOKENET. (%)
1	0.007	0.000039	24,335	20,308	40.06	100.41%
2	0.005	0.000031	24,485	20,321	39.57	99.14%
3	0.007	0.000039	24,243	20,108	39.17	99.17%
AVG.	0.006	0.000036	24,354	20,246	39.60	99.57%

APPENDIX E

1991 NO_x, VOC, AND CO SOURCE TEST

SOURCE TEST REPORT
for
OXIDES OF NITROGEN, VOLATILE ORGANIC COMPOUNDS
AND CARBON MONOXIDE

BLAST FURNACE OUTLET
GULF COAST RECYCLING
TAMPA, FLORIDA

OCTOBER 21 & NOVEMBER 4, 1991

Prepared for:

STEVENSON & ASSOCIATES
333 FALKENBURG ROAD N, UNIT A-115
TAMPA, FLORIDA 33619

Prepared by:

AIR CONSULTING AND ENGINEERING, INC.
2106 N.W. 67TH PLACE, SUITE 4
GAINESVILLE, FLORIDA 32606
(904) 335-1889

289-91-07

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ACE
AIR CONSULTING
& ENGINEERING, INC.

2106 N.W. 67th Place • Suite 4 • Gainesville, Florida • 32606
(904) 335-1889 FAX (904) 335-1891

REPORT CERTIFICATION

To the best of my knowledge, all applicable field and analytical procedures comply with Florida Department of Environmental Regulation requirements and all test data and plant operating data are true and correct.

Dagmar Neck

Dagmar Neck

11/22/91

Date

1.0 INTRODUCTION

On October 21, 1991, Air Consulting and Engineering, Inc. (ACE), conducted oxides of nitrogen (NO_X), Carbon Monoxide (CO), and Volatile Organic Compound (VOC) testing on the Blast Furnace Outlet at Gulf Coast Recycling in Tampa, Florida.

Testing was performed using United States Environmental Protection Agency (EPA) Method 7E for NO_X emission determination, EPA Method 10 for CO and EPA Method 25A for VOC. The CO, CO2, and O2 tests were repeated by orsat analysis (EPA Method 3) on November 4, 1991.

This work was done as a subcontract to Stevenson & Associates of Tampa, Florida.

2.0 SUMMARY AND DISCUSSION OF RESULTS

The emission results are summarized in Table 1.

Oxides of nitrogen and VOC emissions averaged 1.98 and 33.10 pounds per hour (lbs/Hr), respectively.

Carbon monoxide testing was repeated by orsat on November 4, 1991, since the CO analyzer results were off scale during the scheduled testing. CO emission averaged 8440 ppm or 683.32 lbs/Hr.

Flow calculations, emission summary with strip chart copies and orsat results are presented in Appendices A, B, and C, respectively.

Table 1 Emission Summary
Blast Furnace Outlet
Gulf Coast Recycling
Tampa, Florida
October 21, 1991 & November 4, 1991

Run Number	Flow Rate SCFMD	NOx Emissions ppm	NOx Emissions lbs/Hr	VOC Emissions as propane ppm	VOC Emissions as propane lbs/Hr	CO Emissions %	CO Emissions ppm	CO Emissions lbs/Hr
1	18676	17.5	2.34	303	38.77	--	---	-----
2	17974	14.3	1.84	237	29.18	--	---	-----
3	19062	12.8	1.75	240	31.34	--	---	-----
AVERAGE	18571	14.9	1.98	260	33.10	0.844	8440	683.32

lbs/Hr = ppm (2.595×10^{-9}) MW (SCFMD) 60

MW NO_x = 46

MW C_3H_8 = 44

MW CO = 28

10^6 ppm = 100%

APPENDIX F

SCAQMD CO BACT DETERMINATION

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

Best Available Control Technology (BACT) Guideline

Equipment or Process: Lead Melting Furnace - Cupola, Secondary Melting Operations

Revision:

Equipment Rating: All

Date: 10/07/88

	ROG	NOx	SOx	CO	PART.
BACT Technologically Feasible[1]				Afterburner (≥ 0.3 Sec. Retention Time at ≥ 1400 °F)	
BACT Achieved in Practice or Contained in EPA Approved SIP[2]			Scrubber and ≤ 1% Sulfur in Coke	Afterburner (≥ 0.3 Sec. Retention Time at ≥ 1200 °F)	Baghouse
BACT For Small Business[1,3]			1. Scrubber and ≤ 1% Sulfur in Coke 2. Scrubber 3. ≤ 1% Sulfur in Coke	1. Afterburner (≥ 0.3 Sec. Retention Time at ≥ 1400 °F) 2. Afterburner (≥ 0.3 Sec. Retention Time at ≥ 1200 °F)	1. Baghouse 2. Venturi Scrubber
Alternate Basic Equipment or Process[1]					

1. Requires Economic Analysis
2. No Economic Analysis
3. Control technologies are in descending order of efficiency. The most efficient control technology must be considered first when conducting an economic analysis.

APPENDIX G

MODELING PROTOCOL

LAKE
ENGINEERING, INC.

August 17, 1993

Mr. Cleve Holiday
Florida Department of
Environmental Regulation
2600 Blair Stone Road
Twin Towers Office Building
Tallahassee, Florida 32399-2400

VIA TELEFAX

RE: Modeling Protocol for Gulf Coast Recycling
Permit Number AO29-173310

Dear Mr. Holiday:

Gulf Coast Recycling, Inc., located in Tampa (Hillsborough County), is a lead-acid battery recycler that operates a blast furnace which was installed and brought on line in late 1984. It was determined in June 1991 that this furnace installation should have been subject to the Federal Prevention of Significant Deterioration (PSD) regulations. By letter dated April 22, 1993 the Florida Department of Environmental Regulation (FDER) notified Gulf Coast that a PSD application needs to be submitted. In addition to the application, the PSD regulations require computer modeling to be performed to determine the anticipated ambient air quality impacts resulting from the proposed project. On behalf of Gulf Coast Recycling, Inc., Lake Engineering, Inc. is submitting the following proposed air dispersion modeling protocol for this project.

The Gulf Coast facility is located at 1901 North 66th Street, UTM coordinates 364048 East, 3093548 North. The facility is located in a mixed-use area that is considered rural for modeling purposes. The topography within 50 km of the site is predominantly flat with no extreme terrain features. Sulfur dioxide has been established as the only pollutant that is required to be modeled. The SO_2 emissions will be emitted from one source, one stack with dimensions of 150 ft. tall and 3 ft. diameter.

SUITE 500, 35 GLENLAKE PARKWAY
ATLANTA, GEORGIA 30328
(404) 395-0464 FAX: (404) 395-0474

The latest ISCST2 model, currently approved by the EPA, will be used to determine impacts during 3-hr, 24-hr, and annual averaging periods. The five years of met data selected are 1982-1986 from surface and upper air station number 12842 located in Tampa. The regulatory default option will be used with no decay coefficient allowed, resulting in conservative concentrations. Building downwash will not be calculated due to the sufficient height of the stack as determined by Good Engineering Practice (GEP).

Two model runs will be used to determine ambient impacts attributable to Gulf Coast alone. An overall 10 km receptor grid will be used, one run with 100 m spacing out to 1 km and the other run with 1000 m spacing out to 10 km. These concentrations, when added to the ambient background concentration, will be compared to the Florida Ambient Air Quality Standards (FAAQS) of 1300 ug/m^3, 3-hr; 260 ug/m^3, 24-hr; and 60 ug/m^3, annual. The background concentration for the subject area and the last full year of monitoring data, including the location/number of the monitor at which it was measured, is hereby being requested to assist us in our dispersion modeling analysis.

Two additional model runs, utilizing the same receptor grids as above, will be used to determine the increment consumption of Gulf Coast and all major increment consuming SO_2 sources within 30 km. Emissions from Gulf Coast and the appropriate surrounding sources will be modeled together to determine the cumulative ambient concentration for the three averaging periods. These concentrations will then be compared to the Class II increment amounts of 512 ug/m^3, 3-hr; 91 ug/m^3, 24-hr; and 20 ug/m^3, annual.

Attached is a list of 23 surrounding major sources and their respective emission and stack data. This list was taken from a 361-page APIS report obtained from the FDER that listed a total of 325 facilities and 990 sources within a 30 km radius of Gulf Coast. On guidance from you, the "20 by D" rule, developed in North Carolina, was used to determine which sources were required to be used in the modeling:

sources located 0 to 5 km from Gulf Coast: all are to be modeled
sources located 05 to 10 km: ignore those < 100 tons/yr
sources located 10 to 15 km: ignore those < 200 tons/yr
sources located 15 to 20 km: ignore those < 300 tons/yr
sources located 20 to 25 km: ignore those < 400 tons/yr
sources located 25 to 30 km: ignore those < 500 tons/yr

This list is being submitted for verification of accuracy and completeness. Please identify which sources are increment consuming and which are not. Also, please advise if any listed sources may be omitted from modeling and/or if any sources need to be added. Particularly, many of the smaller sources have an emission rate listed in tons/year but not pounds/hr. It is hereby being requested that the smaller sources be omitted from the modeling,

due to their very low emission rate (< 1 ton/yr). Their cumulative emissions are insignificant compared to that of the major sources. If they are required to be modeled, guidance is being sought on how many hours/year are to be assumed to determine an emission rate in pounds/hour.

An additional analysis will be performed to determine impacts on the Chassahowitzka National Wildlife Refuge. The significance levels for this area are 0.48 ug/m^3, 0.07 ug/m^3, and 0.025 ug/m^3 for the 3-hr, 24-hr, and annual averaging periods, respectively. Discrete receptors will be placed on a line from Gulf Coast to the closest boundary of the refuge indicating the concentration trend along the line and the concentration at the boundary of the refuge. The distance from Gulf Coast to the refuge is approximately 75 km, exceeding the accepted limit of the ISC models of 50 km. Please advise if a different modeling method should be utilized.

We would appreciate an expeditious review of this protocol due to the time commitments Gulf Coast has with the FDER permitting section. If you have any questions or require any additional information please contact me at (404) 395-0464.

Sincerely,

LAKE ENGINEERING, INC.

Larry G. Carlson

Larry G. Carlson
Air Pollution Compliance Specialist

LGC:cml
Enclosures

cc: Joyce Morales-Caramella, GCR

460.2

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APPENDIX H

APPROVED MODELING PROTOCOL

Florida Department of
Environmental Protection

Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Lawton Chiles
Governor

Virginia B. Wetherell
Secretary

September 24, 1993

Mr. Larry Carlson
Lake Engineering, Inc.
Suite 500, 35 Glenlake Parkway
Atlanta, Georgia 30328

Re: Department's Review of Modeling Protocol for Gulf Coast Recycling Permit Number AO29-173310

Dear Mr. Carlson:

The Department has reviewed your modeling protocol and we have the following comments:

1. The "Guideline on Air Quality Models" (EPA, 1986a) including Supplements A (1987) and B (1993), the New Source Workshop Manual (Draft, EPA, 1990), and Chapters 17-212.400 and 17-210.500, F.A.C., provide EPA and FDEP modeling guidance. In addition, for determining impacts on PSD Class I areas, the department follows the recommendations of the Interagency Workgroup on Air Quality Modeling (IWAQM). These recommendations are contained in the "Interagency Workgroup on Air Quality Modeling (IWAQM) Phase I Report: Interim Recommendation for Modeling Long Range Transport and Impacts on Regional Visibility (EPA-454/R-93-015). This document can be downloaded from the EPA's Support Center for Regulatory Air Models Bulletin Board System (SCRAM BBS). The SCRAM BBS phone number is (919)-541-5742. The applicant must also evaluate the impacts of all toxic emissions due to the project for comparison with the Florida Air Toxics Reference Concentrations (formerly called "No Threat Levels" or "NTL's"). We have attached a copy of the "Florida Air Toxics Permitting Strategy" along with the most recent table of Florida Air Reference Concentrations for various toxic chemicals to aid you in this evaluation.

2. Based on guidance contained in the above mentioned documents, the required air quality analyses for the national ambient air quality standards (AAQS) and prevention of significant (PSD) increments are carried out in the proposed project's significant impact area (SIA). The SIA is a circular area with a radius extending from the source to (1) the most distant point where approved dispersion modeling predicts a significant impact from the project will occur, or (2) a modeling receptor distance of 50 km,

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whichever is less. The highest modeled pollutant concentration for each averaging time is used to determine whether the source will have a significant ambient impact for that pollutant. The SIA used for the air quality analysis of a particular pollutant is the largest of these averaging time areas determined for that pollutant.

The model runs to determine ambient impacts and PSD increment consumption will be based on the size of the SIA. Your suggested receptor network is satisfictory out to 10 km for the screening phase. However, if your SIA is greater than 10 km, the network should be expanded beyond 10 km to fill in the SIA. Refined modeling should be performed using a finer mesh receptor grid centered over any critical receptors identified in the screening phase and using a full year's meteorological data for the year containing the meteorological conditions which impacted the critical receptors. Because the dimensions of the Class I areas are fixed, the Department has established the use of specified receptor networks in the Class I areas. The receptor network for the Chassahowitzka Wilderness Area is attached.

3. The Department has identified the SO2 sources that need to be modeled for this application. These sources are included in the attachment. There are three inventories of sources: one for the AAQS analysis, one for the PSD Class II increment analysis, and one for the PSD Class I increment analysis. The PSD increment inventories include both increment consuming PSD sources and increment expanding PSD sources.

4. Since the Department is following the IWAQM guidelines for evaluating air quality impacts on PSD Class I areas, the applicant must evaluate the project's impact on the Chassahowitzka Wilderness Area even though this project is greater than 50 km from the Class I area. This evaluation includes a cumulative PSD Class I increment impact analysis, if necessary, and an air quality related values (AQRV) analysis.

Because of the IWAQM guidelines, the Class I source inventory is more extensive than the Class II inventory. In addressing the Class I increment impacts, the applicant must first model the project's impact on the Class I receptors provided in the attachment. The highest impacts are compared to the National Park Service's (NPS) recommended significance levels of 0.48 ug/m3, 0.07 ug/m3, and 0.025ug/m3 for the 3-hour, 24-hour and annual averaging times, respectively. If the project's impacts are less than the NPS significance levels, then the increment analysis is concluded. If the impacts are greater, then a cumulative PSD Class I increment impact analysis is done using the inventory provided and inputting it into ISCST2. If exceedances of the PSD Class I increments are modeled using this method, then the project impacts alone may be modeled with ISCST2 at the exceedance receptors during the periods which the exceedances occurred. If the project's impact on the exceedance receptors are all less than the NPS significant levels, then the analysis is concluded. If not, then modeling must be performed using the long-range transport model MESOPUFF II. The impacts from this modeling are then compared with the PSD Class I increments. If exceedances of the PSD Class I increments are modeled using MESOPUFF II, the

project's impacts alone may again be modeled for comparison with the NPS significance levels at the exceeedance receptors during the periods when the exceedances occurred. If the project's impact are greater than the significance levels, then projected emissions from the project must be reduced.

The AQRV analysis evaluates potential effects of the project on vegetation, wildlife, soils, aquatic resources, and visibility. This analysis must be performed regardless of whether the project's impacts are less than the NPS significance levels. Depending upon the project's predicted impacts, the analysis may, however, require at the simplest level only a literature review or at the most complex level a deposition analysis using MESOPUFF II in addition to the literature review.

5. The Davis Island SO2 monitor (4360-0350-G02) is the closest monitor to this project. The data collected from this monitor can be used to establish background SO2 concentrations to be used with the modeling results to determine compliance with the AAQS. Based on 1992 data from this monitor, the Department has recommended that the SO2 background concentrations to be used in the AAQS analysis are the following: 21 ug/m3, annual average; 93 ug/m3, 24-hour average (second highest 24-hour monitored value in 1992); 304 ug/m3, 3-hour average (second highest 3-hour monitored value in 1992). These concentrations should be added to the modeled impacts for the appropriate averaging times.

The remainder of the modeling protocol as outlined in your letter is satisfactory. If you have any further modeling questions, please call Cleve Holladay at 904-488-1344.

Sincerely,

C.H. Fancy, P.E.
Chief
Bureau of Air Regulation

Attachments

CHF/cgh

cc: Jerry Kissel, HCEPC
Bill Thomas, DEP/SWD
Doug Beason, DEP/OGC
John Bunyak, NPS
Jewell Harper, USEPA

APPENDIX I

AAQS SO_2 MODELING SOURCE INVENTORY

Gulf Coast SO2 AAQS Inventory

Model Source no.	Owner	Co	Dist from GCR (km)	UTME (km)	UTMW (km)	SO2 (g/s)	Height (m)	Temp (K)	Velocity (m/s)	Diam (m)
	Gulf Coast Recycling	HI	0.0	364.0	3093.5	47.12	45.72	344.1	37.49	0.61
1	Griffin	HI	2.6	364.1	3096.4	0.06	15.24	505.2	6.71	0.85
2	Couch Construction	HI	3.4	362.1	3096.7	2.14	12.50	449.7	20.12	1.25
3	Cargill/Nutrena	HI	3.6	360.8	3095.8	0.05	4.88	483.0	8.84	0.30
4	Hills Co RRF	HI	4.3	368.2	3092.7	21.40	50.00	491.0	18.30	1.80
5	Tampa McKay Bay	HI	4.3	360.0	3091.9	21.42	45.70	449.7	21.30	1.34
6	Weyerhauser	HI	4.6	362.8	3098.3	0.55	7.62	463.6	5.49	0.61
7	Royster	HI	4.7	362.8	3098.4	0.55	7.62	533.0	8.53	0.76
8	Nitram	HI	4.9	362.5	3089.0	3.11	27.43	399.7	10.67	1.37
9	CLM Chloride Metals	HI	5.7	361.8	3088.3	21.02	30.00	375.0	20.00	0.61
10	TECO Hooker's Pt	HI	6.5	358.0	3091.0	41.33	85.34	419.1	6.10	3.44
11	TECO Hooker's Pt	HI	6.5	358.0	3091.0	41.33	85.34	438.0	5.49	3.44
12	TECO Hooker's Pt	HI	6.5	358.0	3091.0	57.04	85.34	434.1	7.92	3.66
13	TECO Hooker's Pt	HI	6.5	358.0	3091.0	56.95	85.34	421.9	7.32	3.66
14	TECO Hooker's Pt	HI	6.5	358.0	3091.0	84.55	85.34	448.0	10.97	1.42
15	TECO Hooker's Pt	HI	6.5	358.0	3091.0	107.86	85.34	434.1	22.25	2.87
16	TECO Gannon	HI	7.4	360.0	3087.5	760.28	93.27	415.8	28.65	3.05
17	TECO Gannon	HI	7.4	360.0	3087.5	483.59	93.27	419.6	38.40	3.23
18	TECO Gannon	HI	7.4	360.0	3087.5	567.25	93.27	426.9	22.86	3.05
19	TECO Gannon	HI	7.4	360.0	3087.5	690.73	93.27	423.6	23.16	4.45
20	TECO Gannon	HI	7.4	360.0	3087.5	1148.49	93.27	433.0	24.69	5.36
21	TECO Gannon	HI	7.4	360.0	3087.5	1.38	10.67	816.3	136.55	1.52
22	Cargill/Gardinier	HI	11.3	363.4	3082.4	9.60	38.40	328.0	11.56	2.44
23	Cargill Fertilizer	HI	11.3	362.9	3082.5	98.70	45.72	339.7	9.20	2.44
24	Cargill Fertilizer	HI	11.3	362.9	3082.5	54.61	21.34	344.1	11.28	2.74
25	Cargill Fertilizer	HI	11.3	362.9	3082.5	4.01	40.54	315.2	15.24	2.13
26	TECO Big Bend	HI	18.9	361.9	3075.0	9949.35	149.35	404.7	12.80	7.32
27	TECO Big Bend	HI	18.9	361.9	3075.0	654.00	149.35	341.9	17.98	7.32
28	TECO Big Bend	HI	18.9	361.9	3075.0	79.18	22.86	770.8	18.59	4.27
29	TECO Big Bend	HI	18.9	361.9	3075.0	11.30	10.67	816.3	136.20	1.50
30	FPL Bartow	PI	24.2	342.4	3082.6	882.44	91.44	424.7	31.09	2.74
31	FPL Bartow	PI	24.2	342.4	3082.6	729.04	91.44	408.0	34.44	3.35
32	FPL Bartow	PI	24.2	342.4	3082.6	1.81	9.14	541.3	5.18	0.91
33	FPL Bartow	PI	24.2	342.4	3082.6	196.55	13.72	771.9	22.25	5.27
34	FPL Higgins	PI	27.7	336.5	3098.4	322.30	53.00	423.0	7.30	3.80
35	FPL Higgins	PI	27.7	336.5	3098.4	25.20	16.76	727.4	7.47	3.80
36	Cons. Minerals	HI	29.9	393.8	3096.3	27.00	46.33	298.0	12.14	1.77
37	Pinellas RRF	PI	30.3	335.2	3084.1	94.40	49.07	504.7	26.82	2.38
38	CF Ind-Plant City	HI	32.9	388.0	3116.0	19.98	7.62	560.8	17.74	1.07
39	CF Ind-Plant City	HI	32.9	388.0	3116.0	88.28	33.53	316.3	19.69	1.52
40	CF Ind-Plant City	HI	32.9	388.0	3116.0	109.20	60.35	353.0	16.40	2.44
41	CF Ind-Plant City	HI	32.9	388.0	3116.0	2.97	28.65	326.3	7.93	3.05
42	CF ind-Plant City	HI	32.9	388.0	3116.0	39.57	54.86	313.6	8.18	2.80
43	FPL Bayboro	PI	33.6	338.8	3071.3	197.80	12.20	755.0	6.40	7.00
44	Mobil Nichols	PO	35.5	398.3	3084.3	27.90	25.90	342.0	14.10	2.29
45	IMC New Wales	PO	35.6	396.6	3078.9	315.00	60.70	350.0	15.31	2.60
46	Conserve Nichols	PO	35.6	398.4	3084.2	52.50	45.70	352.0	12.00	2.30
47	Royster, Piney Point	MA	39.4	348.7	3057.3	49.40	60.98	328.0	8.08	2.36
48	FPL Manatee	MA	39.7	367.2	3054.1	1587.60	152.10	425.8	23.61	7.92

49	Royster Mulberry	PO	43.6	406.7	3085.2	36.82	61.00	360.0	12.20	2.13
50	CF Ind-Bartow	PO	45.8	408.5	3082.5	11.90	36.40	339.0	16.11	2.13
51	CF Ind-Bartow	PO	45.8	408.5	3082.5	142.80	63.41	361.0	7.28	2.13
52	Lakeland Larsen	PO	46.2	409.3	3102.8	112.08	50.29	444.1	6.86	3.05
53	Lakeland Larsen	PO	46.2	409.3	3102.8	29.11	30.48	783.2	28.22	5.79
54	W.R. Grace-Seminole	PO	46.4	409.8	3087.0	143.77	60.96	347.0	34.00	1.52
55	Evans Boiler	PA	46.5	383.3	3135.8	28.70	12.20	505.0	11.90	1.00
56	Evans Dryer	PA	46.5	383.3	3135.8	34.00	25.90	346.0	17.30	1.00
57	TECO Polk	PO	46.5	402.5	3067.4	49.68	45.72	400.0	16.76	5.79
58	TECO Polk	PO	46.5	402.5	3067.1	17.64	45.72	389.0	16.15	4.42
59	TECO Polk	PO	46.5	402.5	3066.8	38.82	22.86	785.0	27.43	5.49
60	TECO Polk	PO	46.5	402.3	3067.5	8.20	60.70	1033.0	10.70	1.40
61	Lakeland MacIntosh	PO	46.9	409.2	3106.1	367.24	45.72	402.4	21.29	2.74
62	Lakeland MacIntosh	PO	46.9	409.3	3102.8	500.10	76.20	350.0	19.70	4.88
63	Farmland	PO	47.3	409.5	3080.1	67.16	30.48	355.0	9.27	2.29
64	Farmland	PO	47.3	409.5	3080.1	50.40	45.72	355.0	11.55	2.44
65	Agrico So.Pierce	PO	48.8	407.5	3071.3	130.09	45.73	350.0	39.06	1.60
66	FPC Polk	PO	53.7	414.4	3073.9	49.44	34.40	400.0	40.50	4.10
67	Hardee PS	HA	54.5	404.8	3057.4	277.60	22.90	389.0	23.90	4.88
68	USSAC	PO	57.5	416.1	3068.6	126.00	53.40	355.0	15.91	2.59

APPENDIX J

LETTER FROM DEP TO LAKE ENGINEERING REGARDING BACKGROUND VALUES

Florida Department of
Environmental Protection

Lawton Chiles
Governor

Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Virginia B. Wetherell
Secretary

March 7, 1994

Mr. Larry Carlson
Lake Engineering, Inc.
Suite 500, 35 Glenlake Parkway
Atlanta, Georgia 30328

Re: Department's Review of Preapplication Modeling Results for Gulf Coast Recycling's PSD Permit Application

Dear Mr. Carlson:

The Department has reviewed your December 29, 1993, letter and the accompanying computer diskettes containing preapplication sulfur dioxide (SO_2) Ambient Air Quality Standards (AAQS) modeling results for Gulf Coast Recycling's PSD permit application. This letters responds to preapplication information only and does not constitute a PSD completeness review. That review begins only after Gulf Coast Recycling submits a PSD application to the Department along with the appropriate processing fee. We are providing the following comments as guidance for submitting the AAQS portion of your PSD application.

1. In order for a modeling analysis to show attainment of the AAQS, you must add a representative background concentration to the modeled concentrations. You did not include this concentration in your analysis. This background concentration should be representative of the overall air quality entering the region and of any sources which were not explicitly modeled (i.e., natural and unidentified sources). Normally, this concentration is a nonzero value and is based on air quality monitoring data collected in the vicinity of a proposed project or source. You have not provided sufficient evidence that this background concentration should be zero. In our November 24, 1993, letter to you responding to your proposed modeling protocol, you were advised to use a background concentration based on an annual average concentration taken from the Davis Island monitor near Gulf Coast Recycling. You were to add this value of 24 ug/m^3 to your modeled impacts for all averaging times. Therefore, the argument that your modeling results indicate that Gulf Coast Recycling does not significantly contribute to modeled exceedances of the SO_2 AAQS in Gulf Coast's impact area is only partially correct. Since the modeling considered only the impacts from Gulf Coast Recycling and other modeled sources, your analysis would not be fully correct until the effects of an added background concentration are included.

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2. However, based upon your concern with double counting of source impacts and our review of the modeling information you have provided us, we have reconsidered the background concentration value for this project. In order to minimize double counting of source impacts, we have chosen a background concentration value obtained from another monitor some distance away from Gulf Coast Recycling and most of the sources input into the modeling. This monitor located in the southwestern portion of the county (TECO Big Bend Road SO_2 monitor 1800-021-G02) would less likely be impacted by sources included in the modeling. The background concentration obtained from this monitor is 6 ug/m^3 and is the highest annual average reported during the past three years. You should add this value to the modeled concentrations for all averaging times or else follow the alternative procedure given below.

3. If you believe the background concentration given above is still not representative of an appropriate background concentration for use in Gulf Coast's air quality analysis, you may try to further refine this estimate by using the procedure given in Sections 9.2.2 and 9.2.3 of the "Guideline on Air Quality Models (Revised)" (EPA-450/2/-78-027R), (1986), supplement A (1987) and supplement B (1993) to obtain an alternative background concentration to add to the modeled results.

If you have any further modeling questions, please call Cleve Holladay at 904-488-1344.

Sincerely,

C.H. Fancy, P.E.
Chief
Bureau of Air Regulation

CHF/cgh

cc: Jerry Campbell, EPCHC
Bill Thomas, DEP/SWD
Doug Beason, DEP/OGC
John Bunyak, NPS
Joyce Morales-Caramella, GCR

APPENDIX K

CLASS I SO_2 MODELING SOURCE INVENTORY

County	Facility	UTM East	UTM North	SO2 (g/s)	Height (m)	Temperature (K)	Velocity (m/s)	Diameter (m)
Hardee	Hardee Power Station	404.8	3,057.4	92.53	22.90	389.0	23.90	4.88
Hardee	Hardee Power Station	404.8	3,057.3	92.53	22.90	389.0	23.90	4.88
Hardee	Hardee Power Station	404.8	3,057.5	92.53	22.90	389.0	23.90	4.88
Hillsborough	CF Industries	388.0	3,116.0	88.20	33.50	316.0	19.50	1.50
Hillsborough	CF Industries proposed D	388.0	3,116.0	54.60	60.35	353.0	17.77	2.44
Hillsborough	CF Industries proposed C	388.0	3,116.0	54.60	60.35	353.0	17.77	2.44
Hillsborough	CF Industries baseline C	388.0	3,116.0	−50.40	60.35	353.0	16.40	2.44
Hillsborough	CF Industries baseline D	388.0	3,116.0	−50.40	60.35	353.0	16.40	2.44
Hillsborough	CF Industries	388.0	3,116.0	−105.00	18.80	316.0	18.80	1.52
Hillsborough	Cargill Fertilizer (Gardinier) SAP #7	363.4	3,082.4	46.20	45.72	355.0	9.20	2.29
Hillsborough	Cargill Fertilizer (Gardinier) SAP #8	363.4	3,082.4	52.50	45.72	355.0	8.63	2.44
Hillsborough	Cargill Fertilizer (Gardinier) SAP #9	363.4	3,082.4	54.60	45.72	344.0	12.50	2.74
Hillsborough	Cargill Fertilizer (Gardinier) dryer	363.4	3,082.4	−28.89	20.73	310.0	13.12	1.07
Hillsborough	Cargill Fertilizer (Gardinier) SAP #4, 5, 6	363.4	3,082.4	−196.30	22.60	322.0	19.51	1.52
Hillsborough	Cargill Fertilizer (Gardinier) SAP #7	363.4	3,082.4	−50.71	45.72	355.0	9.20	2.29
Hillsborough	TECO Big Bend – Unit 4	361.9	3,075.0	654.70	149.40	342.2	19.81	7.32
Hillsborough	TECO Big Bend – Units 1 & 2	361.9	3,075.0	−2,436.00	149.40	422.0	28.65	7.32
Hillsborough	TECO Big Bend – Unit 3	361.9	3,075.0	−1,218.00	149.40	418.0	14.33	7.32
Hillsborough	Mobil Big–4 boiler (AMAX)	394.8	3,067.7	0.60	8.20	505.0	7.57	0.41
Hillsborough	Mobil Big–4 dryer (AMAX)	394.9	3,069.8	1.90	30.50	334.0	7.26	1.82
Osceola	FPC/Intercession City prop turbines/7 EA	446.3	3,126.0	124.40	15.24	819.8	56.21	4.21
Osceola	FPC/Intercession City prop turbines/7 FA	446.3	3,126.0	110.40	15.24	880.8	32.07	7.04
Pinellas	Pinellas Co Resource Recovery Facility	335.3	3,084.4	62.24	49.10	522.0	27.72	2.74
Polk	Lakeland City Power CT (Larsen)	409.2	3,102.8	29.11	30.48	783.2	28.22	5.79
Polk	Lakeland McIntosh 3	409.5	3,105.8	500.10	76.20	350.0	19.70	4.88

Emission Inventory for PSD Class 1 Analysis for SO2

County	Facility	UTM East	UTM North	SO2 (g/s)	Height (m)	Temperature (K)	Velocity (m/s)	Diameter (m)
Polk	WR Grace/Seminole SAP #3	409.8	3,087.0	143.77	60.96	347.0	34.00	1.52
Polk	WR Grace/Seminole SAP #4	409.8	3,087.0	−40.32	60.96	347.0	25.10	1.52
Polk	WR Grace/Seminole SAP #5	409.8	3,087.0	−40.32	60.96	347.0	25.10	1.52
Polk	WR Grace/Seminole SAP #6	409.8	3,087.0	−40.32	60.96	347.0	25.10	1.52
Polk	WR Grace/Seminole dryer	409.8	3,087.0	−39.66	15.24	327.0	17.32	2.04
Polk	WR Grace/Seminole SAP #1	409.8	3,087.0	−108.00	45.72	352.0	16.50	1.37
Polk	WR Grace/Seminole SAP #2	409.8	3,087.0	−108.00	45.72	352.0	16.50	1.37
Polk	WR Grace/Seminole SAP #3	409.8	3,087.0	−52.50	45.72	311.0	16.70	1.52
Polk	Mobil Mining & Minerals SR 676 #4 dryer	398.3	3,084.3	2.44	25.90	339.0	15.20	2.29
Polk	Mobil Mining & Minerals SR 676 boiler	398.3	3,084.3	−13.89	28.40	340.0	19.24	1.09
Polk	Mobil Mining & Minerals SR 676 boiler	398.3	3,084.3	−0.87	4.00	522.0	1.80	0.80
Polk	Royster #1	406.7	3,085.2	−152.70	51.00	356.0	9.90	2.13
Polk	Royster #2	406.7	3,085.2	35.70	61.00	360.0	12.20	2.13
Polk	US Agri−Chem Hwy 60 dryer	413.2	3,086.3	−3.41	15.80	332.0	10.01	1.83
Polk	US Agri−Chem Hwy 60 SAP	413.2	3,086.3	−42.00	28.96	305.0	7.50	2.12
Polk	US Agri−Chem Hwy 630 H2SO4 1	416.1	3,068.6	63.00	53.40	355.0	15.91	2.59
Polk	US Agri−Chem Hwy 630 H2SO4 2	416.1	3,068.6	63.00	53.40	355.0	15.91	2.59
Polk	US Agri−Chem Hwy 630 H2SO4 X	416.2	3,068.7	−78.80	29.00	314.0	6.77	3.02
Polk	US Agri−Chem Hwy 630 GTSP	416.0	3,069.0	−18.27	28.35	330.0	17.60	1.52
Polk	CF Industries DAP 1−3	408.5	3,082.5	3.97	36.40	339.0	16.11	2.13
Polk	CF Industries H2SO4 5	408.5	3,082.5	50.40	63.41	361.0	10.88	2.13
Polk	CF Industries H2SO4 6	408.5	3,082.5	50.40	63.41	370.0	7.28	2.13
Polk	CF Industries H2SO4 7	408.5	3,082.5	42.00	67.10	351.0	9.80	2.40
Polk	CF Industries H2SO4 1	408.5	3,082.5	−60.90	30.49	350.0	12.20	1.37
Polk	CF Industries H2SO4 2	408.5	3,082.5	−110.25	30.49	350.0	10.37	1.68

County	Facility	UTM East	UTM North	SO2 (g/s)	Height (m)	Temperature (K)	Velocity (m/s)	Diameter (m)
Polk	CF Industries H2SO4 3	408.5	3,082.5	−107.10	30.49	364.0	4.27	2.74
Polk	CF Industries H2SO4 4	408.5	3,082.5	−174.83	30.49	358.0	7.93	2.13
Polk	CF Industries H2SO4 5	408.5	3,082.5	−226.80	63.41	358.0	10.67	2.13
Polk	CF Industries H2SO4 6	408.5	3,082.5	−170.10	63.41	359.0	10.37	2.13
Polk	Farmland Industries 3, 4 H2SO4	409.5	3,079.5	67.16	30.48	355.0	9.27	2.29
Polk	Farmland Industries 5 H2SO4	409.5	3,079.5	41.96	45.72	355.0	9.65	2.44
Polk	Farmland Industries 1, 2 H2SO4	409.5	3,079.5	−83.98	30.48	311.0	20.18	1.37
Polk	Agrico Pierce dryers 1, 2	404.1	3,079.0	−24.32	24.38	339.0	12.94	1.52
Polk	Agrico Pierce dryers 3, 4	404.1	3,079.0	−23.00	24.38	339.0	18.82	2.43
Polk	Agrico South Pierce H2SO4	407.5	3,071.3	−75.60	45.73	350.0	26.40	1.60
Polk	Agrico South Pierce H2SO4	407.5	3,071.3	113.50	45.73	350.0	39.06	1.60
Polk	Agrico South Pierce DAP plant	407.5	3,071.3	4.41	38.10	328.0	14.60	3.10
Polk	Conserve Inc. rock dryer	398.4	3,084.2	−3.88	24.40	339.0	12.90	1.52
Polk	Conserve Inc.	398.4	3,084.2	42.00	45.70	352.0	10.30	2.30
Polk	Conserve Inc.	398.4	3,084.2	−54.60	30.50	308.0	18.90	1.80
Polk	IMC New Wales DAP	396.6	3,078.9	5.54	36.60	319.1	20.15	1.83
Polk	IMC New Wales multiphos	396.6	3,078.9	4.80	52.40	314.0	15.80	1.40
Polk	IMC New Wales SAP #1, 2, 3 projected	396.6	3,078.9	189.00	61.00	350.0	15.31	2.60
Polk	IMC New Wales SAP #4, 5 projected	396.6	3,078.9	126.00	60.70	350.0	15.31	2.60
Polk	IMC New Wales rock dryer	396.6	3,078.9	−34.27	21.00	347.0	18.60	2.13
Polk	IMC New Wales SAP #1, 2, 3 baseline	396.6	3,078.9	−146.00	61.00	350.0	14.28	2.60
Polk	IMC New Wales AFI Plant	396.6	3,078.9	0.20	52.40	322.0	13.10	2.40
Polk	Mobil−Electrophos boiler	405.6	3,079.4	−6.53	7.32	464.0	3.23	0.91
Polk	Mobil−Electrophos boiler	405.6	3,079.4	−10.05	6.10	464.0	7.71	0.91
Polk	Mobil−Electrophos rock dryer	405.6	3,079.4	−21.81	18.29	350.0	6.79	1.83

County	Facility	UTM East	UTM North	SO2 (g/s)	Height (m)	Temperature (K)	Velocity (m/s)	Diameter (m)
Polk	Mobil–Electrophos calciner	405.6	3,079.4	−7.11	25.61	306.0	6.97	2.13
Polk	Mobil–Electrophos coke dryer	405.6	3,079.4	−3.17	18.29	322.0	22.87	0.70
Polk	Mobil–Electrophos furnace	405.6	3,079.4	−47.25	29.27	314.0	8.52	2.13
Polk	Auburndale Cogeneration	420.8	3,103.3	6.35	48.80	411.0	14.30	5.49
Hillsborough	Hillsborough Co Resource Recovery Facility	368.2	3,092.7	21.40	50.00	491.0	18.30	1.80
Pasco	Proposed Pasco Co Cogeneration Facility	385.6	3,139.0	5.04	30.48	384.3	17.13	3.35
Polk	Ridge Cogeneration	416.7	3,100.4	13.80	99.10	350.0	14.54	3.05
Hillsborough	Tampa City McKay Bay Refuse–to–Energy	360.0	3,091.9	21.42	45.70	449.7	21.30	1.34
Hernando	Asphalt Pavers No. 3	359.9	3,162.4	2.25	12.20	377.0	10.58	1.37
Hernando	Asphalt Pavers No. 4	361.4	3,168.4	1.76	8.50	357.4	10.95	1.08
Hillsborough	CLM Chl	361.8	3,088.3	21.02	30.00	375.0	20.00	0.61
Pasco	Couch Construction – Odessa (asphalt)	340.7	3,119.5	7.25	9.14	436.0	22.30	1.40
Pasco	Couch Construction – Zephyrhills (asphalt)	390.3	3,129.4	3.54	6.10	422.0	21.00	1.38
Pasco	Dris Paving (Asphalt)	340.6	3,119.2	0.23	12.20	339.0	6.47	3.05
Hernando	ER Jahna (lime dryer)	386.7	3,155.8	0.82	10.67	327.0	8.99	1.83
Pasco	Evans Packing	383.3	3,135.8	0.20	12.30	466.2	9.20	0.40
Hernando	FDOC boiler #3	382.2	3,166.1	2.99	9.14	478.0	4.57	0.61
Hernando	Florida Mining & Materials kiln 2	356.2	3,169.9	1.45	32.01	394.2	9.90	4.27
Hernando	Florida Crushed Stone kiln 1	360.0	3,162.4	98.40	97.60	442.0	23.23	4.88
Citrus	Crystal River 4	334.2	3,204.5	1,008.80	182.90	398.0	21.00	6.90
Citrus	Crystal River 5	334.2	3,204.5	1,008.80	182.90	398.0	21.00	6.90
Citrus	Crystal River 1	334.2	3,204.5	−314.00	152.00	422.0	42.10	4.57
Citrus	Crystal River 2	334.2	3,204.5	−1,859.00	153.00	422.0	42.10	4.88
Volusia	FPC/DeBary prop turbines	465.7	3,197.2	466.40	15.24	819.8	56.21	4.21
Pinellas	Hospital Corp of AM boiler #1	333.4	3,141.0	0.08	10.98	533.0	4.00	0.31
Hillsborough	Couch Construction	362.1	3,096.7	2.14	12.50	449.7	20.12	1.25

County	Facility	UTM East	UTM North	SO2 (g/s)	Height (m)	Temperature (K)	Velocity (m/s)	Diameter (m)
Pinellas	Hospital Corp of AM boiler #2	333.4	3,141.0	0.08	10.98	533.0	4.00	0.31
Osceola	Kissimmee Util Exist	460.1	3,129.3	32.10	18.30	422.0	38.00	3.66
Lake	Proposed Lake Co Cogeneration Facility	434.0	3,198.8	5.04	30.48	384.3	17.13	3.35
Pasco	New Port Richey Hospital boiler #1	331.2	3,124.5	0.06	10.98	544.0	3.88	0.31
Pasco	New Port Richey Hospital boiler #2	331.2	3,124.5	0.03	10.98	544.0	3.88	0.31
Hernando	Oman Construction (Asphalt)	359.8	3,164.9	2.09	7.62	347.0	6.29	1.83
Orange	Orlando Util Stanton 1	483.5	3,150.6	601.00	167.60	325.7	21.60	5.80
Orange	Orlando Util Stanton 2	483.5	3,150.6	91.80	167.60	324.2	23.50	5.80
Pasco	Overstreet Paving (Asphalt)	355.9	3,143.7	3.67	9.14	408.0	16.00	1.30
Pasco	Pasco County Resource Recovery Facility	347.1	3,139.2	14.10	83.82	394.3	15.70	3.05
Hillsborough	Borden dryer	394.6	3,069.6	−6.48	30.48	344.0	14.79	1.82
Polk	Borden dryer	414.5	3,109.0	−5.29	17.07	333.0	8.26	2.34
Polk	Brewster Imperial dryer	404.8	3,069.5	−19.26	27.44	339.0	15.25	2.29
Polk	Dolime dryer	404.8	3,069.5	−5.68	27.43	333.0	20.67	1.52
Polk	Dolime boiler	404.8	3,069.5	−4.52	27.43	494.1	7.25	0.61
Polk	Estech/Swift dryer	411.5	3,074.2	−23.94	18.29	339.0	8.47	2.95
Polk	Estech/Swift dryer	411.5	3,074.2	−22.80	18.75	340.0	5.06	2.95
Polk	Estech/Swift SAP	411.5	3,074.2	−92.87	30.79	358.0	3.90	2.13
Hillsborough	Gen. Port Cement kiln 4	358.0	3,090.6	−62.99	35.97	505.2	17.61	2.74
Hillsborough	Gen. Port. Cement kiln 5	358.0	3,090.6	−69.30	45.42	494.1	5.80	3.81
Hillsborough	Stauffer boiler	325.6	3,116.7	−4.86	7.32	464.0	3.23	0.91
Hillsborough	Stauffer dryer	325.6	3,116.7	−1.50	18.29	322.0	22.87	0.70
Hillsborough	Stauffer furnace	325.6	3,116.7	−50.93	49.00	335.0	3.60	1.20
Hillsborough	Stauffer kiln	325.6	3,116.7	−7.36	25.61	306.0	6.97	2.13
Hillsborough	Stauffer roaster	325.6	3,116.7	−0.45	25.61	322.0	6.97	0.91

County	Facility	UTM East	UTM North	SO2 (g/s)	Height (m)	Temperature (K)	Velocity (m/s)	Diameter (m)
Highlands	TECO Sebring Airport	464.3	3,035.4	55.62	45.72	441.3	24.17	1.83
Highlands	TECO Sebring Airport	464.3	3,035.4	55.62	45.72	449.7	24.35	1.83
Osceola	Kissimmee Cane Island	447.7	3,127.9	29.40	12.20	654.0	29.10	3.05
Polk	FPC Polk	414.4	3,073.9	12.36	34.40	400.0	40.50	4.10
Polk	FPC Polk	414.4	3,073.9	12.36	34.40	400.0	40.50	4.10
Polk	FPC Polk	414.4	3,073.9	12.36	34.40	400.0	40.50	4.10
Polk	FPC Polk	414.4	3,073.9	12.36	34.40	400.0	40.50	4.10
Polk	TECO Polk	402.5	3,067.4	49.68	45.72	400.0	16.76	5.79
Polk	TECO Polk	402.5	3,067.4	17.64	45.72	389.0	16.15	4.42
Polk	TECO Polk	402.5	3,067.4	38.82	22.86	785.0	27.43	5.49
Polk	TECO Polk	402.5	3,067.4	8.20	60.70	1033.0	10.70	1.40

ATTACHMENT 2

PSD Class I
Receptors
Chassahowitzka

UTME (km)	UTMW (km)
340.3	3165.7
340.3	3167.7
340.3	3169.8
340.7	3171.9
342.0	3174.0
343.0	3176.2
343.7	3178.3
342.4	3180.6
341.1	3183.4
339.0	3183.4
336.5	3183.4
334.0	3183.4
331.5	3183.4

APPENDIX L

CLASS I MODELING SUMMARY

40 CFR 63 SUBPART X

May 31, 1994

FACT SHEET

FINAL AIR TOXICS RULE FOR THE SECONDARY LEAD SMELTER INDUSTRY

TODAY'S ACTION...

- The Environmental Protection Agency (EPA) is today issuing a final rule to reduce air toxics emissions from secondary lead smelters. Air toxics are those pollutants known or suspected of causing cancer or other serious health effects.

- Secondary lead smelters produce lead from scrap and provide the primary means for recycling lead-acid automotive batteries. Approximately 95% of all lead-acid batteries are recycled at secondary lead smelters.

WHAT ARE THE HEALTH AND ENVIRONMENTAL BENEFITS?

- EPA's final rule will reduce emissions of air toxics, including 1,3 butadiene---a human carcinogen, by about 1,400 tons annually, representing a 67 percent reduction from current levels.

- EPA's rule will also reduce emissions of other pollutants, including particulate matter (e.g. soot, dust), and carbon monoxide. Exposure to carbon monoxide can cause adverse health effects, including fatigue, nausea and respiratory problems; carbon monoxide emissions will be reduced by 88,000 tons annually. Particulate matter emissions will be reduced by 150 tons annually. Exposure to particulate matter can cause serious respiratory problems and can even lead to premature deaths.

WHO WILL BE AFFECTED BY THE FINAL RULE?

- The Clean Air Act Amendments of 1990 requires EPA to regulate emissions of 189 listed toxic air pollutants. EPA's final standard will apply to both major and area sources that comprise the Secondary Lead Smelter Industry. Major sources are defined as those sources that emit 10 tons annually of one or more of a listed pollutant or 25 tons or more of a combination of pollutants. Area sources are defined as those sources that emit hazardous air pollutants in quantities less than that of major sources.

- The Secondary Lead Smelter Industry is comprised of 23 smelters (15 major sources and 8 area sources) located in 13 States. The final rule requires the application of maximum achievable control technology (MACT) for these sources as defined by the Clean Air Act.

WHAT DOES THE FINAL RULE REQUIRE?

- Secondary lead smelters perform three basic unit operations: battery breaking, smelting, and refining and alloying. Battery breaking is accomplished by either crushing or cutting battery cases into pieces. The plastic, spent acid, and leaded materials are then separated. Lead bearing materials are processed in one of three types of smelting furnaces: blast, reverberatory, or rotary. Molten lead from these furnaces is further processed in refining kettles and subsequently cast into molds. The waste stream from the furnaces, called slag, is either returned to the primary smelting furnace or treated in a separate furnace dedicated to slag cleaning to recover additional lead.

- There are three types of emission sources at secondary lead facilities. The regulation addresses each of these emissions points---process sources, process fugitive sources, and fugitive dust sources.

- The monitoring, recordkeeping, and reporting requirements are outlined in the final rule.

HOW MUCH WILL THE RULE COST?

- The nationwide annual cost of the rule will be about $2.0 million. The total capital cost of the rule will be about $4.0 million. The capacity of the industry to recycle lead-acid batteries will not be adversely affected.

FOR MORE INFORMATION...

Anyone with a computer and a modem can download the rule from the Clean Air Act Amendments bulletin board of EPA's electronic Technology Transfer Network by calling (919) 541-5742 (look under "Recently Signed Rules"). For further information about how to access the board, call (919) 541-5384. For further information about the rule, contact Phil Mulrine at (919) 541-5289.

FACILITIES NATIONWIDE AFFECTED BY THE FINAL SECONDARY LEAD

SMELTER AIR TOXICS REGULATION

1. Sanders Lead Co. - Troy, Alabama
2. GNB, Inc. - Vernon, California
3. RSR Corp. - City of Industry, California
4. Gulf Coast Recycling, Inc. - Tampa, Florida
5. GNB, Inc. - Columbus, Georgia
6. Exide Corp. - Muncie, Indiana
7. Refined Metals Corp. - Beech Grove, Indiana
8. RSR Corp. - Indianapolis, Indiana
9. Delatte Metals - Ponchatoula, Louisiana
10. Schuylkill Metals Corp. - Baton Rouge, Louisiana
11. Gopher Smelting & Refining, Inc. - Eagan, Minnesota
12. Doe Run Co. - Boss, Missouri
13. Schuylkill Metals Corp. - Forest City, Missouri
14. RSR Corp. - Middletown, New York
15. Master Metals, Inc. - Cleveland, Ohio
16. East Penn Manufacturing Co. - Lyon Station, Pennsylvania
17. Exide Corp. - Reading, Pennsylvania
18. General Smelting & Refining Co. - College Grove, Tennessee
19. Refined Metals Corp. - Memphis, Tennessee
20. GNB, Inc. - Frisco, Texas
21. Tejas Resources, Inc. - Terrell, Texas
22. PBX, Inc. - Norwalk, Ohio
23. Ross Metals - Rossville, Tennessee

↑ GCR is one of 23 in country

Effective Date of Rule 6/23/95

§ 9.1 OMB approvals under the Paperwork Reduction Act.

* * * * *

40 CFR citation	OMB control no.
* * * * * * * *	
National Emission Standards for Hazardous Air Pollutants for Source Categories	
* * * * * * *	
63.548 - 63.550	2060-0296
* * * * * * *	

PART 63--[AMENDED]

1. The authority citation for part 63 continues to read as follows:

Authority: 42 U.S.C. 7401 et seq.

2. Part 63 is revised by adding subpart X to read as follows:

Subpart X--National Emission Standards for Hazardous Air Pollutants from Secondary Lead Smelting

Secs.

Subpart X--National Emission Standards for Hazardous Air Pollutants from Secondary Lead Smelting

§ 63.541 Applicability.

(a) The provisions of this subpart apply to the following affected sources at all secondary lead smelters: blast, reverberatory, rotary, and electric smelting furnaces; refining kettles; agglomerating furnaces; dryers; process fugitive sources; and fugitive dust sources. The provisions of this subpart do not apply to primary lead smelters, lead refiners, or lead remelters.

(b) Table 1 of this subpart specifies the provisions of subpart A that apply and those that do not apply to owners and operators of secondary lead smelters subject to this subpart.

TABLE 1. GENERAL PROVISIONS APPLICABILITY TO SUBPART X

Reference		Applies to subpart X	Comment
63.1		Yes	
63.2		Yes	
63.3		Yes	
63.4		Yes	
63.5		Yes	
63.6	(a), (b), (c), (e), (f), (g), (i) and (j)	Yes	
63.6	(d) and (h)	No	No opacity limits in rule
63.7		Yes	
63.8		Yes	
63.9	(a), (b), (c), (d), (e), (g), (h)(1-3), (h)(5-6), and (j)	Yes	
63.9	(f) and (h)(4)	No	No opacity or visible emission limits in subpart X
63.10		Yes	
63.11		No	Flares will not be used to comply with the emission limits.
63.12 to 63.15		Yes	

§ 63.542 Definitions

Terms used in this subpart are defined in the Act, in subpart A of this part, or in this section as follows:

Agglomerating furnace means a furnace used to melt into a solid mass flue dust that is collected from a baghouse.

Bag leak detection system means systems that include, but are not limited to, devices using triboelectric, light scattering, and other effects to monitor relative or absolute particulate matter emissions.

Battery breaking area means the plant location at which lead-acid batteries are broken, crushed, or disassembled and separated into components.

Blast furnace means a smelting furnace consisting of a vertical cylinder atop a crucible, into which lead-bearing charge materials are introduced at the top of the furnace and combustion air is introduced through tuyeres at the bottom of the cylinder, and that uses coke as a fuel source and that is operated at such a temperature in the combustion zone (greater than 980 ^{o}C) that lead compounds are chemically reduced to elemental lead metal.

Blast furnace charging location means the physical opening through which raw materials are introduced into a blast furnace.

Dryer means a chamber that is heated and that is used to remove moisture from lead-bearing materials before they are charged to a smelting furnace.

Dryer transition piece means the junction between a dryer and the charge hopper or conveyor, or the junction between the dryer and the smelting furnace feed chute or hopper located at the ends of the dryer.

Electric furnace means a smelting furnace consisting of a vessel into which reverberatory furnace slag is introduced and that uses electrical energy to heat the reverberatory furnace slag to such a temperature (greater than 980 ^{o}C) that lead compounds are reduced to elemental lead metal.

Enclosure hood means a hood that covers a process fugitive emission source on the top and on all sides, with openings only for access to introduce or remove materials to or from the source and through which an induced flow of air is ventilated.

Fugitive dust source means a stationary source of hazardous air pollutant emissions at a secondary lead smelter that is not associated with a specific process or process fugitive vent or stack. Fugitive dust sources include, but are not limited to, roadways, storage piles, materials handling transfer points, materials transport areas, storage areas, process areas, and buildings.

Furnace and refining/casting area means any area of a secondary lead smelter in which: (1) smelting furnaces are located; or (2) refining operations occur; or (3) casting operations occur.

Materials storage and handling area means any area of a secondary lead smelter in which lead-bearing materials (including, but not limited to, broken battery components, slag, flue dust, and dross) are stored or handled between process steps including, but not limited to, areas in which materials are stored in piles, bins, or tubs, and areas in which material is prepared for charging to a smelting furnace.

Partial enclosure means a structure that incorporates walls or partitions on at least three sides or three-quarters of the circumference of an area to screen the material or process equipment located therein to prevent the entrainment of particulate matter into the air.

Pavement cleaning means the use of vacuum equipment, water sprays, or a combination thereof to remove dust or other accumulated material from the paved areas of a secondary lead smelter.

Plant roadway means any area of a secondary lead smelter that is subject to vehicle traffic, including traffic by fork lifts, front-end loaders, or vehicles carrying whole batteries or cast lead ingots. Excluded from this definition are employee and visitor parking areas, provided they are not subject to traffic by vehicles carrying lead-bearing materials.

Process fugitive emission source means a source of hazardous air pollutant emissions at a secondary lead

smelter that is associated with lead smelting or refining but is not the primary exhaust stream from a smelting furnace and is not a fugitive dust source. Process fugitive sources include, but are not limited to, smelting furnace charging points, smelting furnace lead and slag taps, refining kettles, agglomerating furnaces, and drying kiln transition pieces.

Refining kettle means an open-top vessel that is constructed of cast iron or steel and is indirectly heated from below and contains molten lead for the purpose of refining and alloying the lead. Included are pot furnaces, receiving kettles, and holding kettles.

Reverberatory furnace means a refractory-lined furnace that uses one or more flames to heat the walls and roof of the furnace and lead-bearing scrap to such a temperature (greater than 980 ^{o}C) that lead compounds are chemically reduced to elemental lead metal.

Rotary furnace (also known as a rotary reverberatory furnace) means a furnace consisting of a refractory-lined chamber that rotates about a horizontal axis and that uses one or more flames to heat the walls of the furnace and lead-bearing scrap to such a temperature (greater than 980 ^{o}C) that lead compounds are chemically reduced to elemental lead metal.

Secondary lead smelter means any facility at which lead-bearing scrap material, primarily but not limited to

lead-acid batteries, is recycled into elemental lead by smelting.

Smelting means the chemical reduction of lead compounds to lead metal in high-temperature furnaces including, but not limited to, blast furnaces, reverberatory furnaces, rotary furnaces, and electric furnaces.

Total enclosure means a building with a roof and walls or partitions on all sides or the entire circumference to shelter the materials and/or process equipment located therein to prevent the entrainment of particulate matter into the air and with openings only to allow access and egress for people and vehicles.

Vehicle wash means a device for removing dust and other accumulated material from the wheels, body, and underside of a vehicle to prevent the inadvertent transfer of lead-contaminated material to another area of a secondary lead smelter or to public roadways.

Wet suppression means the use of water, water combined with a chemical surfactant, or a chemical binding agent to prevent the entrainment of dust into the air from fugitive dust sources.

§ 63.543 Standards for process sources.

(a) No owner or operator of a secondary lead smelter shall discharge or cause to be discharged into the atmosphere from any existing, new, or reconstructed blast, reverberatory, rotary, or electric smelting furnace any

gases that contain lead compounds in excess of 2.0 milligrams of lead per dry standard cubic meter (0.00087 grains of lead per dry standard cubic foot).

(b) [Reserved]

(c) No owner or operator of a secondary lead smelter with a collocated blast furnace and reverberatory furnace shall discharge or cause to be discharged into the atmosphere from any existing, new, or reconstructed blast furnace or reverberatory furnace any gases that contain total hydrocarbons in excess of 20 parts per million by volume, expressed as propane corrected to 4 percent carbon dioxide, except as allowed under (c)(1) and (c)(2) of this section.

(1) No owner or operator of a secondary lead smelter with a collocated blast furnace and reverberatory furnace shall discharge or cause to be discharged into the atmosphere from any existing blast furnace any gases that contain total hydrocarbons in excess of 360 parts per million by volume, expressed as propane corrected to 4 percent carbon dioxide, during periods when the reverberatory furnace is not operating.

(2) No owner or operator of a secondary lead smelter with a collocated blast furnace and reverberatory furnace shall discharge or cause to be discharged into the atmosphere from any blast furnace that commences construction or reconstruction after June 9, 1994, any gases

that contain total hydrocarbons in excess of 70 parts per million by volume, expressed as propane corrected to 4 percent carbon dioxide, during periods when the reverberatory furnace is not operating.

(d) No owner or operator of a secondary lead smelter with only blast furnaces shall discharge or cause to be discharged into the atmosphere from any existing blast furnace any gases that contain total hydrocarbons in excess of 360 parts per million by volume, expressed as propane corrected to 4 percent carbon dioxide.

(e) No owner or operator of a secondary lead smelter with only blast furnaces shall discharge or cause to be discharged into the atmosphere from any blast furnace that commences construction or reconstruction after June 9, 1994, any gases that contain total hydrocarbons in excess of 70 parts per million by volume, expressed as propane corrected to 4 percent carbon dioxide.

(f) If the owner or operator of a blast furnace or collocated blast and reverberatory furnace combines the blast furnace charging process fugitive emissions with the blast furnace process emissions and discharges them to the atmosphere through a common emission point, then compliance with the applicable total hydrocarbon concentration limit under paragraph (c) of this section shall be determined downstream from the point at which the two emission streams are combined.

(g) If the owner or operator of a blast furnace or a collocated blast and reverberatory furnace does not combine the blast furnace charging process fugitive emissions with the blast furnace process emissions and discharges such emissions to the atmosphere through separate emission points, then the total hydrocarbon emission rate for the blast furnace process fugitive emissions shall not be greater than 0.20 kilograms per hour (0.44 pounds per hour).

(h) The standards for process sources are summarized in table 2.

TABLE 2. SUMMARY OF STANDARDS FOR PROCESS SOURCES

Furnace configuration	Lead compounds (milligrams per dry standard cubic meter)	Total hydrocarbons	Citation
Collocated reverberatory/blast			
(when both furnaces operating)	2.0	20 parts per million by volume[a]	§ 63.543(a),(c)
(when reverberatory furnace not operating)	2.0	360 parts per million by volume[a] (existing)	§ 63.543(a),(c)(1)
		70 parts per million by volume[a] (new)[b]	§ 63.543(a),(c)(2)
Blast	2.0	360 parts per million by volume[a] (existing)	§ 63.543(a),(d)
		70 parts per million by volume[a] (new)[b]	§ 63.543(e)
		0.20 kilograms per hour[c]	§ 63.543(g)
Reverberatory, rotary, and electric	2.0	None	§ 63.543(a)

[a] Total hydrocarbons emission limits are as propane at 4 percent carbon dioxide to correct for dilution, based on a 3-hour average.

[b] New sources include those furnaces that commence construction or reconstruction after June 9, 1994.

[c] Applicable to blast furnace charging process fugitive emissions that are not combined with the blast furnace process emissions prior to the point at which compliance with the total hydrocarbons concentration standard is determined.

§ 63.544 Standards for process fugitive sources.

(a) Each owner or operator of a secondary lead smelter shall control the process fugitive emission sources listed in (a)(1) through (a)(6) of this section by complying with either paragraph (b) or (c) of this section.

(1) Smelting furnace and dryer charging hoppers, chutes, and skip hoists;

(2) Smelting furnace lead taps and molds;

(3) Smelting furnace slag taps and molds;

(4) Refining kettles;

(5) Dryer transition pieces; and

(6) Agglomerating furnace product taps.

(b) All process fugitive emission sources listed in (a)(1) through (a)(6) of this section shall be controlled by an enclosure hood meeting the requirements of (b)(1), (b)(2), or (b)(3) of this section except those meeting the requirements of paragraph (c) of this section. All enclosure hoods shall be ventilated to a control device that shall not discharge to the atmosphere any gases that contain lead compounds in excess of 2.0 milligrams of lead per dry standard cubic meter (0.00087 grains of lead per dry standard cubic foot).

(1) All process fugitive enclosure hoods except those specified for refining kettles and dryer transition pieces shall be ventilated to maintain a face velocity of at least

90 meters per minute (300 feet per minute) at all hood openings.

(2) Process fugitive enclosure hoods required for refining kettles in paragraph (a) of this section shall be ventilated to maintain a face velocity of at least 75 meters per minute (250 feet per minute).

(3) Process fugitive enclosure hoods required over dryer transition pieces in paragraph (a) of this section shall be ventilated to maintain a face velocity of at least 110 meters per minute (350 feet per minute).

(c) All process fugitive emission sources listed in (a)(1) through (a)(6) of this section except those controlled by hoods meeting the requirements of (b)(1) through (b)(3) of this section shall be located in a total enclosure that is ventilated to achieve an air velocity into the enclosure at all doorway openings of not less than 75 meters per minute (250 feet per minute). This enclosure shall be ventilated to a control device that shall not discharge to the atmosphere any gases that contain lead compounds in excess of 2.0 milligrams of lead per dry standard cubic meter (0.00087 grains per dry standard cubic foot).

(d) All dryer emission vents and agglomerating furnace emission vents shall be ventilated to a control device that shall not discharge to the atmosphere any gases that contain lead compounds in excess of 2.0 milligrams of lead per dry

standard cubic meter (0.00087 grains per dry standard cubic foot).

(e) The standards for process fugitive sources are summarized in table 3.

TABLE 3. SUMMARY OF STANDARDS FOR PROCESS FUGITIVE SOURCES

Fugitive emission source	Control device lead compound emission limit (milligrams per dry standard cubic meter)	Enclosed hood or doorway face velocity (meters/minute)	Citation
Control Option I			
Smelting furnace and dryer charging hoppers, chutes, and skip hoists	2.0	90[a]	§ 63.544(b)
Smelting furnace lead taps and molds	2.0	90[a]	§ 63.544(b)
Smelting furnace slag taps and molds	2.0	90[a]	§ 63.544(b)
Refining kettles	2.0	75[a]	§ 63.544(b)
Dryer transition pieces	2.0	110[a]	§ 63.544(b)
Agglomerating furnace process vents and product taps	2.0	90[a]	§ 63.544(b)
Control Option II			
Enclosed building ventilated to a control device	2.0	75[b]	§ 63.544(c)
Applicable to Both Control Options			
Dryer and agglomerating furnace emission vents	2.0	--	§ 63.544(d)

[a] Enclosure hood face velocity applicable to those process fugitive sources not located in an enclosed building ventilated to a control device.

[b] Building doorway air velocity measured at all doorways that are normally open during operations.

§ 63.545 Standards for fugitive dust sources.

(a) Each owner or operator of a secondary lead smelter shall prepare and at all times operate according to a standard operating procedures manual that describes in detail the measures that will be put in place to control fugitive dust emission sources within the areas of the secondary lead smelter listed in (a)(1) through (a)(5) of this section.

(1) Plant roadways;

(2) Battery breaking area;

(3) Furnace area;

(4) Refining and casting area; and

(5) Materials storage and handling area.

(b) The standard operating procedures manual shall be submitted to the Administrator or delegated authority for review and approval.

(c) The controls specified in the standard operating procedures manual shall at a minimum include the requirements of (c)(1) through (c)(5) of this section.

(1) Plant roadways - paving of all areas subject to vehicle traffic and pavement cleaning twice per day of those areas, except on days when natural precipitation makes cleaning unnecessary or when sand or a similar material has been spread on plant roadways to provide traction on ice or snow.

(2) Battery breaking area - partial enclosure of storage piles, wet suppression applied to storage piles with sufficient frequency and quantity to prevent the formation of dust, and pavement cleaning twice per day; or total enclosure of the battery breaking area in a structure meeting the requirements of 40 CFR 265.1101(a) and (c) and ventilation of the enclosure to a control device.

(3) Furnace area - partial enclosure and pavement cleaning twice per day; or total enclosure in a structure meeting the requirements of 40 CFR 265.1101(a) and (c) and ventilation of the enclosure to a control device.

(4) Refining and casting area - partial enclosure and pavement cleaning twice per day; or total enclosure in a structure meeting the requirements of 40 CFR 265.1101(a) and (c) and ventilation of the enclosure to a control device.

(5) Materials storage and handling area - partial enclosure of storage piles, wet suppression applied to storage piles with sufficient frequency and quantity to prevent the formation of dust, vehicle wash at each exit from the area, and paving of the area; or total enclosure of the area in a structure meeting the requirements of 40 CFR 265.1101(a) and (c) and ventilation of the enclosure to a control device and a vehicle wash at each exit.

(d) The standard operating procedures manual shall require that daily records be maintained of all wet

suppression, pavement cleaning, and vehicle washing activities performed to control fugitive dust emissions.

(e) No owner or operator of a secondary lead smelter shall discharge or cause to be discharged into the atmosphere from any building or enclosure ventilation system any gases that contain lead compounds in excess of 2.0 milligrams of lead per dry standard cubic meter (0.00087 grains of lead per dry standard cubic foot).

(f) [Reserved]

(g) [Reserved]

§ 63.546 Compliance dates.

(a) Each owner or operator of an existing secondary lead smelter shall achieve compliance with the requirements of this subpart no later than [Insert date 24 months after publication of the final rule]. → 6/23/95 + 2 years = 6/23/97

(b) Each owner or operator of a secondary lead smelter that commences construction or reconstruction after June 9, 1994, shall achieve compliance with the requirements of this subpart by [Insert date of publication of final rule] or upon startup of operations, whichever is later.

§ 63.547 Test methods.

(a) The following test methods in appendix A of part 60 of this chapter in (a)(1) through (a)(5) of this section shall be used to determine compliance with the emission standards for lead compounds under §§ 63.543(a), 63.544(b), (c), and (d), and 63.545(e):

(1) Method 1 shall be used to select the sampling port location and the number of traverse points.

(2) Method 2 shall be used to measure volumetric flow rate.

(3) Method 3 shall be used for gas analysis to determine the dry molecular weight of the stack gas.

(4) Method 4 shall be used to determine moisture content of the stack gas.

(5) Method 12 shall be used to determine compliance with the lead compound emission standards. The minimum sample volume shall be 0.85 dry standard cubic meters (30 dry standard cubic feet) and the minimum sampling time shall be 60 minutes for each run. Three runs shall be performed and the average of the three runs shall be used to determine compliance.

(b) The following test methods in appendix A of part 60 listed in paragraphs (b)(1) through (b)(5) of this section shall be used, as specified, to determine compliance with the emission standards for total hydrocarbons under § 63.543(c), (d), (e), and (g):

(1) Method 1 shall be used to select the sampling port location to determine compliance under § 63.543(c), (d), (e), and (g).

(2) Method 2 shall be used to measure volumetric flow rate to determine compliance under § 63.543(g).

(3) The Single Point Integrated Sampling and Analytical Procedure of Method 3B shall be used to measure the carbon dioxide content of the stack gases to determine compliance under § 63.543(c), (d), and (e).

(4) Method 4 shall be used to measure moisture content of the stack gases to determine compliance under § 63.543(c), (d), (e), and (g).

(5) Method 25A shall be used to measure total hydrocarbon emissions to determine compliance under § 63.543(c), (d), (e), and (g). The minimum sampling time shall be 1 hour for each run. A minimum of three runs shall be performed. A 1-hour average total hydrocarbon concentration shall be determined for each run and the average of the three 1-hour averages shall be used to determine compliance. The total hydrocarbon emissions concentrations for determining compliance under § 63.543(c), (d), and (e) shall be expressed as propane and shall be corrected to 4 percent carbon dioxide, as described in paragraph (c) of this section.

(c) For the purposes of determining compliance with the emission limits under § 63.543(c), (d), and (e), the measured total hydrocarbon concentrations shall be corrected to 4 percent carbon dioxide as listed in paragraphs (c)(1) through (c)(2) of this section in the following manner:

(1) If the measured percent carbon dioxide is greater than 0.4 percent in each compliance test, the correction factor shall be determined by using equation (1).

$$F = \frac{4.0}{CO_2} \quad (1)$$

where:

F = correction factor (no units)

CO_2 = percent carbon dioxide measured using Method 3B, where the measured carbon dioxide is greater than 0.4 percent.

(2) If the measured percent carbon dioxide is equal to or less than 0.4 percent, then a correction factor (F) of 10 shall be used.

(3) The corrected total hydrocarbon concentration shall be determined by multiplying the measured total hydrocarbon concentration by the correction factor (F) determined for each compliance test.

(d) Compliance with the face velocity requirements under § 63.544(b) and (c) for process fugitive enclosure hoods shall be determined by the following test methods in paragraphs (d)(1) or (d)(2) of this section.

(1) Owners and operators shall calculate face velocity using the procedures in paragraphs (d)(1)(i) through (d)(1)(iv) of this section.

(i) Method 1 shall be used to select the sampling port location in the duct leading from the process fugitive enclosure hood to the control device.

(ii) Method 2 shall be used to measure the volumetric flow rate in the duct from the process fugitive enclosure hood to the control device.

(iii) The face area of the hood shall be determined from measurement of the hood. If the hood has access doors, then face area shall be determined with the access doors in the fully open position.

(iv) Face velocity shall be determined by dividing the volumetric flow rate determined in paragraph (d)(1)(ii) by the total face area for the hood determined in paragraph (d)(1)(iii).

(2) The face velocity shall be measured directly using the procedures in paragraphs (d)(2)(i) through (d)(2)(vi) of this section.

(i) A propeller anemometer or equivalent device shall be used to measure hood face velocity.

(ii) The propeller of the anemometer shall be made of a material of uniform density and shall be properly balanced to optimize performance.

(iii) When the anemometer is mounted with the propeller shaft in a horizontal position, the threshold velocity of the anemometer shall not exceed 15 meters per minute (50 feet per minute) as determined by a procedure equivalent to that in Method 14 of appendix A of part 60.

(iv) The measurement range of the anemometer shall extend to at least 300 meters per minute (1,000 feet per minute).

(v) A known relationship shall exist between the anemometer signal output and air velocity, and the anemometer must be equipped with a suitable readout system.

(vi) Hood face velocity shall be determined for each hood during normal operation with all access doors in the open position and by placing the anemometer in the plane of the hood opening.

(e) Owners and operators shall measure doorway air velocity to determine compliance with the doorway velocity requirement for enclosed buildings in § 63.544(c) using the procedures in paragraphs (e)(1) and (e)(2) of this section.

(1) Owners and operators shall use a propeller anemometer or equivalent device meeting the requirements of paragraphs (d)(2)(ii) through (d)(2)(v) of this section.

(2) Doorway air velocity into the building shall be determined for each doorway in the open position during normal operation by placing the anemometer in the plane of the doorway opening.

§ 63.548 Monitoring requirements.

(a) Owners and operators of secondary lead smelters shall prepare, and at all times operate according to, a standard operating procedures manual that describes in detail procedures for inspection, maintenance, and bag leak

detection and corrective action plans for all baghouses (fabric filters) that are used to control process, process fugitive, or fugitive dust emissions from any source subject to the lead emission standards in §§ 63.543, 63.544, and 63.545, including those used to control emissions from building ventilation. This provision shall not apply to process fugitive sources that are controlled by wet scrubbers.

(b) The standard operating procedures manual for baghouses required by paragraph (a) of this section shall be submitted to the Administrator or delegated authority for review and approval.

(c) The procedures specified in the standard operating procedures manual for inspections and routine maintenance shall, at a minimum, include the requirements of paragraphs (a)(1) through (a)(12) of this section.

(1) Daily monitoring of pressure drop across each baghouse cell.

(2) Daily visual observation of baghouse discharge or stack.

(3) Daily visual inspection to ensure that dust is being removed from hoppers.

(4) Daily check of compressed air supply for pulse-jet baghouses.

(5) Daily visual inspection of isolation dampers for proper operation.

(6) Daily monitoring of cleaning cycle by observing meters or control panel instrumentation.

(7) Weekly visual inspection of bag cleaning mechanisms for proper functioning.

(8) Weekly check of bag tension on reverse air and shaker type baghouses.

(9) Monthly visual inspection of baghouse interior for air leaks.

(10) Monthly inspection of bags and bag connections.

(11) Monthly inspection of fans for wear, material buildup, and corrosion.

(12) Continuous operation of a bag leak detection system.

(d) The procedures specified in the standard operating procedures manual for maintenance shall, at a minimum, include a preventative maintenance schedule that is consistent with the baghouse manufacturer's instructions for routine and long-term maintenance.

(e) The bag leak detection system required by paragraph (a)(12) of this section, shall meet the specifications and requirements of paragraphs (e)(1) through (e)(5) of this section.

(1) The bag leak detection system must be capable of detecting particulate matter emissions at concentrations of 1.0 milligram per actual cubic meter (0.00044 grains per actual cubic foot) or less.

(2) The bag leak detection system sensor must provide output of relative or absolute particulate matter emissions.

(3) The bag leak detection system must be equipped with an alarm system that will alarm when an increase in particulate emissions is detected.

(4) For negative pressure or induced air baghouses, the bag leak detector must be installed downstream of the baghouse and upstream of any wet acid gas scrubber. For positive pressure baghouses, a bag leak detector must be installed in each baghouse compartment or cell. Where multiple detectors are required, the system's instrumentation and alarm may be shared among detectors.

(5) The bag leak detection system shall be installed and operated in a manner consistent with available guidance from the U.S. Environmental Protection Agency or, in the absence of such guidance, the manufacturer's written specifications and recommendations for installation, operation, and calibration of the system. The calibration of the system shall, at a minimum, consist of establishing the relative baseline output level by adjusting the sensitivity and the averaging period of the device, and establishing the alarm set points and the alarm delay time. The system must be fully operational at the time of the initial lead compliance test required to demonstrate compliance with the applicable lead emission standard under §§ 63.543, 63.544, or 63.545. The owner or operator shall

not adjust the sensitivity, averaging period, alarm set points, or alarm delay time after the initial lead compliance test unless a test is performed to demonstrate compliance with the applicable lead emission standard after the adjustments are made.

(f) The standard operating procedures manual required by paragraph (a) of this section shall include a corrective action plan that specifies the procedures to be followed in the case of a bag leak detection system alarm. The corrective action plan shall include, at a minimum, the procedures used to determine and record the time and cause of the alarm as well as the corrective actions taken to correct the control device malfunction or minimize emissions as specified in paragraphs (f)(1) and (f)(2) of this section.

(1) The procedures used to determine the cause of the alarm must be initiated within 30 minutes of the alarm.

(2) The cause of the alarm must be alleviated by taking the necessary corrective action(s) which may include, but not be limited to, paragraphs (f)(1)(i) through (f)(2)(vi) of this section.

(i) Inspecting the baghouse for air leaks, torn or broken filter elements, or any other malfunction that may cause an increase in emissions.

(ii) Sealing off defective bags or filter media.

(iii) Replacing defective bags or filter media, or otherwise repairing the control device.

(iv) Sealing off a defective baghouse compartment.

(v) Cleaning the bag leak detection system probe, or otherwise repairing the bag leak detection system.

(vi) Shutting down the process producing the particulate emissions.

(g) The owner or operator of a secondary lead smelter that uses a wet scrubber to control particulate matter and metal hazardous air pollutant emissions from a process fugitive source shall monitor and record the pressure drop and water flow rate of the wet scrubber during the initial test to demonstrate compliance with the lead emission limit under § 63.544(d). Thereafter, the owner or operator shall monitor and record the pressure drop and water flow rate at least once every hour and shall maintain the pressure drop and water flow rate no lower than 30 percent below the pressure drop and water flow rate measured during the initial compliance test.

(h) The owner or operator of a blast furnace or collocated reverberatory and blast furnace subject to the total hydrocarbon standards in § 63.543(c), (d), or (e), must comply with the requirements of either paragraph (h)(1) or (h)(2) of this section, to demonstrate continuous compliance with the total hydrocarbon emission standards.

(1) Continuous Temperature Monitoring:

(i) The owner or operator of a blast furnace or a collocated reverberatory furnace and blast furnace subject to the total hydrocarbon emission standards in § 63.543(c), (d), or (e) shall install, calibrate, maintain, and continuously operate a device to monitor and record the temperature of the afterburner or the combined blast furnace and reverberatory furnace exhaust streams consistent with the requirements for continuous monitoring systems in subpart A, General Provisions.

(ii) The owner or operator of a blast furnace or a collocated reverberatory furnace and blast furnace subject to the total hydrocarbon emission standards shall monitor and record the temperature of the afterburner or the combined blast furnace and reverberatory furnace exhaust streams every 15 minutes during the total hydrocarbon compliance test and determine an arithmetic average for the recorded temperature measurements.

(iii) To remain in compliance with the standards for total hydrocarbons, the owner or operator must maintain an afterburner or combined exhaust temperature such that the average temperature in any 3-hour period does not fall more than 28 ^{o}C (50 ^{o}F) below the average established in paragraph (h)(1)(ii) of this section. An average temperature in any 3-hour period that falls more than 28 ^{o}C (50 ^{o}F) below the average established in

paragraph (h)(1)(ii) of this section, shall constitute a violation of the applicable emission standard for total hydrocarbons under § 63.543(c), (d), or (e).

(2) Continuous Monitoring of Total Hydrocarbon Emissions:

(i) The owner or operator of a secondary lead smelter shall install, operate, and maintain a total hydrocarbon continuous monitoring system and comply with all of the requirements for continuous monitoring systems found in subpart A, General Provisions.

(ii) Allowing the 3-hour average total hydrocarbon concentration to exceed the applicable total hydrocarbon emission limit under § 63.543 shall constitute a violation of the applicable emission standard for total hydrocarbons under § 63.543(c), (d), or (e).

§ 63.549 Notification requirements.

(a) The owner or operator of a secondary lead smelter shall comply with all of the notification requirements of § 63.9 of subpart A, General Provisions.

(b) The owner or operator of a secondary lead smelter shall submit the fugitive dust control standard operating procedures manual required under § 63.545(a) and the standard operating procedures manual for baghouses required under § 63.548(a) to the Administrator or delegated authority along with a notification that the smelter is seeking review and approval of the these plans and

procedures. Owners or operators of existing secondary lead smelters shall submit this notification no later than [Insert date 18 months after publication of the final rule]. The owner or operator of a secondary lead smelter that commences construction or reconstruction after June 9, 1994, shall submit this notification no later than 180 days before startup of the constructed or reconstructed secondary lead smelter, but no sooner than [Insert date of publication of final rule].

§ 63.550 Recordkeeping and reporting requirements.

(a) Each owner or operator of a secondary lead smelter shall maintain for a period of 5 years, records of the information listed in paragraphs (a)(1) through (a)(8) of this section.

(1) The results of initial and subsequent compliance tests for lead compounds and total hydrocarbons.

(2) An identification of the date and time of all bag leak detection system alarms, their cause, and an explanation of the corrective actions taken.

(3) If an owner or operator chooses to demonstrate continuous compliance with the total hydrocarbon emission standards under § 63.543(c), (d), or (e) by employing the method allowed in § 63.548(h)(1), the records shall include the output from the continuous temperature monitor, an identification of periods when the 3-hour average temperature fell below the minimum established under

§ 63.548(h)(1), and an explanation of the corrective actions taken.

(4) If an owner or operator chooses to demonstrate continuous compliance with the total hydrocarbon emission standard under § 63.543(c), (d), or (e) by employing the method allowed in § 63.548(h)(2), the records shall include the output from the total hydrocarbon continuous monitoring system, an identification of the periods when the 3-hour average total hydrocarbon concentration exceeded the applicable standard and an explanation of the corrective actions taken.

(5) Records of maintenance, calibration, or other procedures required by this rule for any monitoring system used to demonstrate compliance with an applicable requirement.

(6) Any recordkeeping required as part of the practices described in the standard operating procedures manual required under § 63.545(a) for the control of fugitive dust emissions.

(7) Any recordkeeping required as part of the practices described in the standard operating procedures manual for baghouses required under § 63.548(a).

(8) Records of the pressure drop and water flow rate for wet scrubbers used to control metal hazardous air pollutant emissions from process fugitive sources.

(b) The owner or operator of a secondary lead smelter shall comply with all of the reporting requirements under § 63.10 of the General Provisions. The submittal of reports shall be no less frequent than specified under § 63.10(e)(3) of the General Provisions. Once a source reports a violation of the standard or excess emissions, the source shall follow the reporting format required under § 63.10(e)(3) until a request to reduce reporting frequency is approved.

(c) The reports required under paragraph (b) of this section shall include the information specified in paragraphs (c)(1) through (c)(6) of this section.

(1) The report shall include records of all alarms from the bag leak detection system specified in § 63.548(e).

(2) The report shall include a description of the procedures taken following each bag leak detection system alarm pursuant to § 63.548(f)(1) and (2).

(3) The report shall include the information specified in either paragraph (c)(3)(i) or (c)(3)(ii) of this section, consistent with the monitoring option selected under § 63.548(h).

(i) A record of the temperature monitor output, in 3-hour block averages, for those periods when the temperature monitored pursuant to § 63.548(h)(1) fell below the level established in § 63.548(h)(1).

(ii) A record of the total hydrocarbon concentration, in 3-hour block averages, for those periods when the total hydrocarbon concentration being monitored pursuant to § 63.548(h)(2) exceeds the relevant limits established in § 63.543(c), (d), and (e).

(4) The reports required under paragraph (b) of this section shall contain a summary of the records maintained as part of the practices described in the standard operating procedures manual for baghouses required under § 63.548(a) including an explanation of the periods when the procedures were not followed and the corrective actions taken.

(5) The reports required under paragraph (b) of this section shall contain an identification of the periods when the pressure drop and water flow rate of wet scrubbers used to control process fugitive sources dropped below the levels established in § 63.548(g) and an explanation of the corrective actions taken.

(6) The reports required under paragraph (b) of this section shall contain a summary of the fugitive dust control measures performed during the required reporting period, including an explanation of the periods when the procedures outlined in the standard operating procedures manual pursuant to § 63.545(a) were not followed and the corrective actions taken. The reports shall not contain copies of the daily records required to demonstrate compliance with the

requirements of the standard operating procedures manuals required under §§ 63.545(a) and 63.548(a).

[BILLING CODE: 6560-50-P]

3-7-94

Florida Department of
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Twin Towers Office Building
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Lawton Chiles
Governor

Virginia B. Wetherell
Secretary

March 7, 1994

Mr. Larry Carlson
Lake Engineering, Inc.
Suite 500, 35 Glenlake Parkway
Atlanta, Georgia 30328

Re: Department's Review of Preapplication Modeling Results for Gulf Coast Recycling's PSD Permit Application

Dear Mr. Carlson:

The Department has reviewed your December 29, 1993, letter and the accompanying computer diskettes containing preapplication sulfur dioxide (SO_2) Ambient Air Quality Standards (AAQS) modeling results for Gulf Coast Recycling's PSD permit application. This letter responds to preapplication information only and does not constitute a PSD completeness review. That review begins only after Gulf Coast Recycling submits a PSD application to the Department along with the appropriate processing fee. We are providing the following comments as guidance for submitting the AAQS portion of your PSD application.

1. In order for a modeling analysis to show attainment of the AAQS, you must add a representative background concentration to the modeled concentrations. You did not include this concentration in your analysis. This background concentration should be representative of the overall air quality entering the region and of any sources which were not explicitly modeled (i.e., natural and unidentified sources). Normally, this concentration is a nonzero value and is based on air quality monitoring data collected in the vicinity of a proposed project or source. You have not provided sufficient evidence that this background concentration should be zero. In our November 24, 1993, letter to you responding to your proposed modeling protocol, you were advised to use a background concentration based on an annual average concentration taken from the Davis Island monitor near Gulf Coast Recycling. You were to add this value of 24 ug/m^3 to your modeled impacts for all averaging times. Therefore, the argument that your modeling results indicate that Gulf Coast Recycling does not significantly contribute to modeled exceedances of the SO_2 AAQS in Gulf Coast's impact area is only partially correct. Since the modeling considered only the impacts from Gulf Coast Recycling and other modeled sources, your analysis would not be fully correct until the effects of an added background concentration are included.

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2. However, based upon your concern with double counting of source impacts and our review of the modeling information you have provided us, we have reconsidered the background concentration value for this project. In order to minimize double counting of source impacts, we have chosen a background concentration value obtained from another monitor some distance away from Gulf Coast Recycling and most of the sources input into the modeling. This monitor located in the southwestern portion of the county (TECO Big Bend Road SO_2 monitor 1800-021-G02) would less likely be impacted by sources included in the modeling. The background concentration obtained from this monitor is 6 ug/m^3 and is the highest annual average reported during the past three years. You should add this value to the modeled concentrations for all averaging times or else follow the alternative procedure given below.

6 µg/m³ vs. 24

3. If you believe the background concentration given above is still not representative of an appropriate background concentration for use in Gulf Coast's air quality analysis, you may try to further refine this estimate by using the procedure given in Sections 9.2.2 and 9.2.3 of the "Guideline on Air Quality Models (Revised)" (EPA-450/2/-78-027R), (1986), supplement A (1987) and supplement B (1993) to obtain an alternative background concentration to add to the modeled results.

If you have any further modeling questions, please call Cleve Holladay at 904-488-1344.

Sincerely,

C.H. Fancy, P.E.
Chief
Bureau of Air Regulation

CHF/cgh

cc: Jerry Campbell, EPCHC
Bill Thomas, DEP/SWD
Doug Beason, DEP/OGC
John Bunyak, NPS
Joyce Morales-Caramella, GCR

11-24-93

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Virginia B. Wetherell
Secretary

November 24, 1993

Mr. Larry Carlson
Lake Engineering, Inc.
Suite 500, 35 Glenlake Parkway
Atlanta, Georgia 30328

Re: Department's Review of Your October 15 and October 19 letters concerning Modeling Protocol for Gulf Coast Recycling Permit No. AO29-173310

Dear Mr. Carlson:

The Department has reviewed your Ocotober 15 and October 19, 1993 letters . concerning the modeling protocol for Gulf Coast Recycling and we have the following comments:

1. The Prevention of Significant Deterioration (PSD) rule requirements contained in F.A.C. Rule 17-212.400, the Air Quality Models guidance contained in F.A.C. Rule 17-210.500, the Ambient Air Quality Standards guidance contained in F.A.C. Rule 17-272.300, and the Maximum Allowable Increases (PSD increments) guidance contained in F.A.C. Rule 17-272.500 direct that estimates of concentrations of pollutants in the ambient air be made by using air quality modeling. In addition, the "Guideline on Air Quality Models (Revised)" (1986), supplement A(1987) and supplement B (1993) states in Section 11.2.2 that "Modeling is the preferred method for determining emission limitations for both new and existing sources. When a preferred model is available, model results alone (including background) are sufficient. Monitoring will normally not be accepted as the sole basis for emission limitation determination in flat terrain areas." Therefore, in preparing the PSD application for Gulf Coast Recycling, you should do the air quality analysis using concentrations predicted by modeling, except that monitor data may be used to determine the background concentration for use in the ambient air quality standards analysis (AAQS).

2. In order to determine a background concentration for the AAQS analysis, the Department will permit Gulf Coast to use the highest annual average during the past three years taken from the Davis Island SO_2 monitor (4360-0350-G02) for all SO_2 averaging times. This value is 24 ug/m^3 and it should be added to the modeled impacts for the appropriate averaging times.

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If you have any further modeling questions, please call Cleve Holladay at 904-488-1344.

Sincerely,

C.H. Fancy, P.E.
Chief
Bureau of Air Regulation

CHF/cgh

cc: Jerry Kissel, HCEPC
Bill Thomas, DEP/SWD
Doug Beason, DEP/OGC
John Bunyak, NPS
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9-24-93

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September 24, 1993

Mr. Larry Carlson
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Suite 500, 35 Glenlake Parkway
Atlanta, Georgia 30328

Re: Department's Review of Modeling Protocol for Gulf Coast Recycling Permit Number AO29-173310

Dear Mr. Carlson:

The Department has reviewed your modeling protocol and we have the following comments:

1. The "Guideline on Air Quality Models" (EPA, 1986a) including Supplements A (1987) and B (1993), the New Source Workshop Manual (Draft, EPA, 1990), and Chapters 17-212.400 and 17-210.500, F.A.C., provide EPA and FDEP modeling guidance. In addition, for determining impacts on PSD Class I areas, the department follows the recommendations of the Interagency Workgroup on Air Quality Modeling (IWAQM). These recommendations are contained in the "Interagency Workgroup on Air Quality Modeling (IWAQM) Phase I Report: Interim Recommendation for Modeling Long Range Transport and Impacts on Regional Visibility (EPA-454/R-93-015). This document can be downloaded from the EPA's Support Center for Regulatory Air Models Bulletin Board System (SCRAM BBS). The SCRAM BBS phone number is (919)-541-5742. The applicant must also evaluate the impacts of all toxic emissions due to the project for comparison with the Florida Air Toxics Reference Concentrations (formerly called "No Threat Levels" or "NTL's"). We have attached a copy of the "Florida Air Toxics Permitting Strategy" along with the most recent table of Florida Air Reference Concentrations for various toxic chemicals to aid you in this evaluation.

2. Based on guidance contained in the above mentioned documents, the required air quality analyses for the national ambient air quality standards (AAQS) and prevention of significant (PSD) increments are carried out in the proposed project's significant impact area (SIA). The SIA is a circular area with a radius extending from the source to (1) the most distant point where approved dispersion modeling predicts a significant impact from the project will occur, or (2) a modeling receptor distance of 50 km,

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whichever is less. The highest modeled pollutant concentration for each averaging time is used to determine whether the source will have a significant ambient impact for that pollutant. The SIA used for the air quality analysis of a particular pollutant is the largest of these averaging time areas determined for that pollutant.

The model runs to determine ambient impacts and PSD increment consumption will be based on the size of the SIA. Your suggested receptor network is satisfictory out to 10 km for the screening phase. However, if your SIA is greater than 10 km, the network should be expanded beyond 10 km to fill in the SIA. Refined modeling should be performed using a finer mesh receptor grid centered over any critical receptors identified in the screening phase and using a full year's meteorological data for the year containing the meteorological conditions which impacted the critical receptors. Because the dimensions of the Class I areas are fixed, the Department has established the use of specified receptor networks in the Class I areas. The receptor network for the Chassahowitzka Wilderness Area is attached.

3. The Department has identified the SO2 sources that need to be modeled for this application. These sources are included in the attachment. There are three inventories of sources: one for the AAQS analysis, one for the PSD Class II increment analysis, and one for the PSD Class I increment analysis. The PSD increment inventories include both increment consuming PSD sources and increment expanding PSD sources.

4. Since the Department is following the IWAQM guidelines for evaluating air quality impacts on PSD Class I areas, the applicant must evaluate the project's impact on the Chassahowitzka Wilderness Area even though this project is greater than 50 km from the Class I area. This evaluation includes a cumulative PSD Class I increment impact analysis, if necessary, and an air quality related values (AQRV) analysis.

Because of the IWAQM guidelines, the Class I source inventory is more extensive than the Class II inventory. In addressing the Class I increment impacts, the applicant must first model the project's impact on the Class I receptors provided in the attachment. The highest impacts are compared to the National Park Service's (NPS) recommended significance levels of 0.48 ug/m3, 0.07 ug/m3, and 0.025ug/m3 for the 3-hour, 24-hour and annual averaging times, respectively. If the project's impacts are less than the NPS significance levels, then the increment analysis is concluded. If the impacts are greater, then a cumulative PSD Class I increment impact analysis is done using the inventory provided and inputting it into ISCST2. If exceedances of the PSD Class I increments are modeled using this method, then the project impacts alone may be modeled with ISCST2 at the exceedance receptors during the periods which the exceedances occurred. If the project's impact on the exceedance receptors are all less than the NPS significant levels, then the analysis is concluded. If not, then modeling must be performed using the long-range transport model MESOPUFF II. The impacts from this modeling are then compared with the PSD Class I increments. If exceedances of the PSD Class I increments are modeled using MESOPUFF II, the

project's impacts alone may again be modeled for comparison with the NPS significance levels at the exeeceedance receptors during the periods when the exceedances occurred. If the project's impact are greater than the significance levels, then projected emissions from the project must be reduced.

The AQRV analysis evaluates potential effects of the project on vegetation, wildlife, soils, aquatic resources, and visibility. This analysis must be performed regardless of whether the project's impacts are less than the NPS significance levels. Depending upon the project's predicted impacts, the analysis may, however, require at the simplest level only a literature review or at the most complex level a deposition analysis using MESOPUFF II in addition to the literature review.

5. The Davis Island SO2 monitor (4360-0350-G02) is the closest monitor to this project. The data collected from this monitor can be used to establish background SO2 concentrations to be used with the modeling results to determine compliance with the AAQS. Based on 1992 data from this monitor, the Department has recommended that the SO2 background concentrations to be used in the AAQS analysis are the following: 21 ug/m3, annual average; 93 ug/m3, 24-hour average (second highest 24-hour monitored value in 1992); 304 ug/m3, 3-hour average (second highest 3-hour monitored value in 1992). These concentrations should be added to the modeled impacts for the appropriate averaging times.

The remainder of the modeling protocol as outlined in your letter is satisfactory. If you have any further modeling questions, please call Cleve Holladay at 904-488-1344.

Sincerely,

C.H. Fancy, P.E.
Chief
Bureau of Air Regulation

Attachments

CHF/cgh

cc: Jerry Kissel, HCEPC
Bill Thomas, DEP/SWD
Doug Beason, DEP/OGC
John Bunyak, NPS
Jewell Harper, USEPA

ATTACHMENT 2

PSD Class I
Receptors
Chassahowitzka

UTME (km)	UTMW (km)
340.3	3165.7
340.3	3167.7
340.3	3169.8
340.7	3171.9
342.0	3174.0
343.0	3176.2
343.7	3178.3
342.4	3180.6
341.1	3183.4
339.0	3183.4
336.5	3183.4
334.0	3183.4
331.5	3183.4

ATTACHMENT 3

Gulf Coast SO2 AAQS Inventory

Owner	Co	Dist from GCR (km)	UTME (km)	UTMW (km)	SO2 (g/s)	Height (m)	Temp (K)	Velocity (m/s)	Diam (m)
Gulf Coast Recycling	HI	0.0	364.0	3093.5	47.12	45.72	344.1	37.49	0.61
Griffin	HI	2.6	364.1	3096.4	0.06	15.24	505.2	6.71	0.85
Couch Construction	HI	3.4	362.1	3096.7	2.14	12.50	449.7	20.12	1.25
Cargill/Nutrena	HI	3.6	360.8	3095.8	0.05	4.88	483.0	8.84	0.30
Hills Co RRF	HI	4.3	368.2	3092.7	21.40	50.00	491.0	18.30	1.80
Tampa McKay Bay	HI	4.3	360.0	3091.9	21.42	45.70	449.7	21.30	1.34
Weyerhauser	HI	4.6	362.8	3098.3	0.55	7.62	463.6	5.49	0.61
Royster	HI	4.7	362.8	3098.4	0.55	7.62	533.0	8.53	0.76
Nitram	HI	4.9	362.5	3089.0	3.11	27.43	399.7	10.67	1.37
CLM Chloride Metals	HI	5.7	361.8	3088.3	21.02	30.00	375.0	20.00	0.61
TECO Hooker's Pt	HI	6.5	358.0	3091.0	41.33	85.34	419.1	6.10	3.44
TECO Hooker's Pt	HI	6.5	358.0	3091.0	41.33	85.34	438.0	5.49	3.44
TECO Hooker's Pt	HI	6.5	358.0	3091.0	57.04	85.34	434.1	7.92	3.66
TECO Hooker's Pt	HI	6.5	358.0	3091.0	56.95	85.34	421.9	7.32	3.66
TECO Hooker's Pt	HI	6.5	358.0	3091.0	84.55	85.34	448.0	10.97	1.42
TECO Hooker's Pt	HI	6.5	358.0	3091.0	107.86	85.34	434.1	22.25	2.87
TECO Gannon	HI	7.4	360.0	3087.5	760.28	93.27	415.8	28.65	3.05
TECO Gannon	HI	7.4	360.0	3087.5	483.59	93.27	419.6	38.40	3.23
TECO Gannon	HI	7.4	360.0	3087.5	567.25	93.27	426.9	22.86	3.05
TECO Gannon	HI	7.4	360.0	3087.5	690.73	93.27	423.6	23.16	4.45
TECO Gannon	HI	7.4	360.0	3087.5	1148.49	93.27	433.0	24.69	5.36
TECO Gannon	HI	7.4	360.0	3087.5	1.38	10.67	816.3	136.55	1.52
Cargill/Gardinier	HI	11.3	363.4	3082.4	9.60	38.40	328.0	11.56	2.44
Cargill Fertilizer	HI	11.3	362.9	3082.5	98.70	45.72	339.7	9.20	2.44
Cargill Fertilizer	HI	11.3	362.9	3082.5	54.61	21.34	344.1	11.28	2.74
Cargill Fertilizer	HI	11.3	362.9	3082.5	4.01	40.54	315.2	15.24	2.13
TECO Big Bend	HI	18.9	361.9	3075.0	9949.35	149.35	404.7	12.80	7.32
TECO Big Bend	HI	18.9	361.9	3075.0	654.00	149.35	341.9	17.98	7.32
TECO Big Bend	HI	18.9	361.9	3075.0	79.18	22.86	770.8	18.59	4.27
TECO Big Bend	HI	18.9	361.9	3075.0	11.30	10.67	816.3	136.20	1.50
FPL Bartow	PI	24.2	342.4	3082.6	882.44	91.44	424.7	31.09	2.74
FPL Bartow	PI	24.2	342.4	3082.6	729.04	91.44	408.0	34.44	3.35
FPL Bartow	PI	24.2	342.4	3082.6	1.81	9.14	541.3	5.18	0.91
FPL Bartow	PI	24.2	342.4	3082.6	196.55	13.72	771.9	22.25	5.27
FPL Higgins	PI	27.7	336.5	3098.4	322.30	53.00	423.0	7.30	3.80
FPL Higgins	PI	27.7	336.5	3098.4	25.20	16.76	727.4	7.47	3.80
Cons. Minerals	HI	29.9	393.8	3096.3	27.00	46.33	298.0	12.14	1.77
Pinellas RRF	PI	30.3	335.2	3084.1	94.40	49.07	504.7	26.82	2.38
CF Ind-Plant City	HI	32.9	388.0	3116.0	19.98	7.62	560.8	17.74	1.07
CF Ind-Plant City	HI	32.9	388.0	3116.0	88.28	33.53	316.3	19.69	1.52
CF Ind-Plant City	HI	32.9	388.0	3116.0	109.20	60.35	353.0	16.40	2.44
CF Ind-Plant City	HI	32.9	388.0	3116.0	2.97	28.65	326.3	7.93	3.05
CF Ind-Plant City	HI	32.9	388.0	3116.0	39.57	54.86	313.6	8.18	2.80
FPL Bayboro	PI	33.6	338.8	3071.3	197.80	12.20	755.0	6.40	7.00
Mobil Nichols	PO	35.5	398.3	3084.3	27.90	25.90	342.0	14.10	2.29
IMC New Wales	PO	35.6	396.6	3078.9	315.00	60.70	350.0	15.31	2.60
Conserve Nichols	PO	35.6	398.4	3084.2	52.50	45.70	352.0	12.00	2.30
Royster, Piney Point	MA	39.4	348.7	3057.3	49.40	60.98	328.0	8.08	2.36
FPL Manatee	MA	39.7	367.2	3054.1	1587.60	152.10	425.8	23.61	7.92

Royster Mulberry	PO	43.6	406.7	3085.2	36.82	61.00	360.0	12.20	2.13
CF Ind-Bartow	PO	45.8	408.5	3082.5	11.90	36.40	339.0	16.11	2.13
CF Ind-Bartow	PO	45.8	408.5	3082.5	142.80	63.41	361.0	7.28	2.13
Lakeland Larsen	PO	46.2	409.3	3102.8	112.08	50.29	444.1	6.86	3.05
Lakeland Larsen	PO	46.2	409.3	3102.8	29.11	30.48	783.2	28.22	5.79
W.R. Grace-Seminole	PO	46.4	409.8	3087.0	143.77	60.96	347.0	34.00	1.52
Evans Boiler	PA	46.5	383.3	3135.8	28.70	12.20	505.0	11.90	1.00
Evans Dryer	PA	46.5	383.3	3135.8	34.00	25.90	346.0	17.30	1.00
TECO Polk	PO	46.5	402.5	3067.4	49.68	45.72	400.0	16.76	5.79
TECO Polk	PO	46.5	402.5	3067.1	17.64	45.72	389.0	16.15	4.42
TECO Polk	PO	46.5	402.5	3066.8	38.82	22.86	785.0	27.43	5.49
TECO Polk	PO	46.5	402.3	3067.5	8.20	60.70	1033.0	10.70	1.40
Lakeland MacIntosh	PO	46.9	409.2	3106.1	367.24	45.72	402.4	21.29	2.74
Lakeland MacIntosh	PO	46.9	409.3	3102.8	500.10	76.20	350.0	19.70	4.88
Farmland	PO	47.3	409.5	3080.1	67.16	30.48	355.0	9.27	2.29
Farmland	PO	47.3	409.5	3080.1	50.40	45.72	355.0	11.55	2.44
Agrico So.Pierce	PO	48.8	407.5	3071.3	130.09	45.73	350.0	39.06	1.60
FPC Polk	PO	53.7	414.4	3073.9	49.44	34.40	400.0	40.50	4.10
Hardee PS	HA	54.5	404.8	3057.4	277.60	22.90	389.0	23.90	4.88
USSAC	PO	57.5	416.1	3068.6	126.00	53.40	355.0	15.91	2.59

ATTACHMENT 4

Emission Inventory for PSD Class I Analysis for SO2

County	Facility	UTM East	UTM North	SO2 (g/s)	Height (m)	Temperature (K)	Velocity (m/s)	Diameter (m)
Hardee	Hardee Power Station	404.8	3,057.4	92.53	22.90	389.0	23.90	4.88
Hardee	Hardee Power Station	404.8	3,057.3	92.53	22.90	389.0	23.90	4.88
Hardee	Hardee Power Station	404.8	3,057.5	92.53	22.90	389.0	23.90	4.88
Hillsborough	CF Industries	388.0	3,116.0	88.20	33.50	316.0	19.50	1.50
Hillsborough	CF Industries proposed D	388.0	3,116.0	54.60	60.35	353.0	17.77	2.44
Hillsborough	CF Industries proposed C	388.0	3,116.0	54.60	60.35	353.0	17.77	2.44
Hillsborough	CF Industries baseline C	388.0	3,116.0	−50.40	60.35	353.0	16.40	2.44
Hillsborough	CF Industries baseline D	388.0	3,116.0	−50.40	60.35	353.0	16.40	2.44
Hillsborough	CF Industries	388.0	3,116.0	−105.00	18.80	316.0	18.80	1.52
Hillsborough	Cargill Fertilizer (Gardinier) SAP #7	363.4	3,082.4	46.20	45.72	355.0	9.20	2.29
Hillsborough	Cargill Fertilizer (Gardinier) SAP #8	363.4	3,082.4	52.50	45.72	355.0	8.63	2.44
Hillsborough	Cargill Fertilizer (Gardinier) SAP #9	363.4	3,082.4	54.60	45.72	344.0	12.50	2.74
Hillsborough	Cargill Fertilizer (Gardinier) dryer	363.4	3,082.4	−28.89	20.73	310.0	13.12	1.07
Hillsborough	Cargill Fertilizer (Gardinier) SAP #4, 5, 6	363.4	3,082.4	−196.30	22.60	322.0	19.51	1.52
Hillsborough	Cargill Fertilizer (Gardinier) SAP #7	363.4	3,082.4	−50.71	45.72	355.0	9.20	2.29
Hillsborough	TECO Big Bend – Unit 4	361.9	3,075.0	654.70	149.40	342.2	19.81	7.32
Hillsborough	TECO Big Bend – Units 1 & 2	361.9	3,075.0	−2,436.00	149.40	422.0	28.65	7.32
Hillsborough	TECO Big Bend – Unit 3	361.9	3,075.0	−1,218.00	149.40	418.0	14.33	7.32
Hillsborough	Mobil Big–4 boiler (AMAX)	394.8	3,067.7	0.60	8.20	505.0	7.57	0.41
Hillsborough	Mobil Big–4 dryer (AMAX)	394.9	3,069.8	1.90	30.50	334.0	7.26	1.82
Osceola	FPC/Intercession City prop turbines/7 EA	446.3	3,126.0	124.40	15.24	819.8	56.21	4.21
Osceola	FPC/Intercession City prop turbines/7 FA	446.3	3,126.0	110.40	15.24	880.8	32.07	7.04
Pinellas	Pinellas Co Resource Recovery Facility	335.3	3,084.4	62.24	49.10	522.0	27.72	2.74
Polk	Lakeland City Power CT (Larsen)	409.2	3,102.8	29.11	30.48	783.2	28.22	5.79
Polk	Lakeland McIntosh 3	409.5	3,105.8	500.10	76.20	350.0	19.70	4.88

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Emission Inventory for PSD Class I Analysis for SO2

County	Facility	UTM East	UTM North	SO2 (g/s)	Height (m)	Temperature (K)	Velocity (m/s)	Diameter (m)
Polk	WR Grace/Seminole SAP #3	409.8	3,087.0	143.77	60.96	347.0	34.00	1.52
Polk	WR Grace/Seminole SAP #4	409.8	3,087.0	−40.32	60.96	347.0	25.10	1.52
Polk	WR Grace/Seminole SAP #5	409.8	3,087.0	−40.32	60.96	347.0	25.10	1.52
Polk	WR Grace/Seminole SAP #6	409.8	3,087.0	−40.32	60.96	347.0	25.10	1.52
Polk	WR Grace/Seminole dryer	409.8	3,087.0	−39.66	15.24	327.0	17.32	2.04
Polk	WR Grace/Seminole SAP #1	409.8	3,087.0	−108.00	45.72	352.0	16.50	1.37
Polk	WR Grace/Seminole SAP #2	409.8	3,087.0	−108.00	45.72	352.0	16.50	1.37
Polk	WR Grace/Seminole SAP #3	409.8	3,087.0	−52.50	45.72	311.0	16.70	1.52
Polk	Mobil Mining & Minerals SR 676 #4 dryer	398.3	3,084.3	2.44	25.90	339.0	15.20	2.29
Polk	Mobil Mining & Minerals SR 676 boiler	398.3	3,084.3	−13.89	28.40	340.0	19.24	1.09
Polk	Mobil Mining & Minerals SR 676 boiler	398.3	3,084.3	−0.87	4.00	522.0	1.80	0.80
Polk	Royster #1	406.7	3,085.2	−152.70	51.00	356.0	9.90	2.13
Polk	Royster #2	406.7	3,085.2	35.70	61.00	360.0	12.20	2.13
Polk	US Agri−Chem Hwy 60 dryer	413.2	3,086.3	−3.41	15.80	332.0	10.01	1.81
Polk	US Agri−Chem Hwy 60 SAP	413.2	3,086.3	−42.00	28.96	305.0	7.50	2.12
Polk	US Agri−Chem Hwy 630 H2SO4 1	416.1	3,068.6	63.00	53.40	355.0	15.91	2.59
Polk	US Agri−Chem Hwy 630 H2SO4 2	416.1	3,068.6	63.00	53.40	355.0	15.91	2.59
Polk	US Agri−Chem Hwy 630 H2SO4 X	416.2	3,068.7	−78.80	29.00	314.0	6.77	3.02
Polk	US Agri−Chem Hwy 630 GTSP	416.0	3,069.0	−18.27	28.35	330.0	17.60	1.52
Polk	CF Industries DAP 1−3	408.5	3,082.5	3.97	36.40	339.0	16.11	2.13
Polk	CF Industries H2SO4 5	408.5	3,082.5	50.40	63.41	361.0	10.88	2.13
Polk	CF Industries H2SO4 6	408.5	3,082.5	50.40	63.41	370.0	7.28	2.13
Polk	CF Industries H2SO4 7	408.5	3,082.5	42.00	67.10	351.0	9.80	2.40
Polk	CF Industries H2SO4 1	408.5	3,082.5	−60.90	30.49	350.0	12.20	1.37
Polk	CF Industries H2SO4 2	408.5	3,082.5	−110.25	30.49	350.0	10.37	1.68

County	Facility	UTM East	UTM North	SO2 (g/s)	Height (m)	Temperature (K)	Velocity (m/s)	Diameter (m)
Polk	CF Industries H2SO4 3	408.5	3,082.5	−107.10	30.49	364.0	4.27	2.74
Polk	CF Industries H2SO4 4	408.5	3,082.5	−174.83	30.49	358.0	7.93	2.13
Polk	CF Industries H2SO4 5	408.5	3,082.5	−226.80	63.41	358.0	10.67	2.13
Polk	CF Industries H2SO4 6	408.5	3,082.5	−170.10	63.41	359.0	10.37	2.13
Polk	Farmland Industries 3, 4 H2SO4	409.5	3,079.5	67.16	30.48	355.0	9.27	2.29
Polk	Farmland Industries 5 H2SO4	409.5	3,079.5	41.96	45.72	355.0	9.65	2.44
Polk	Farmland Industries 1, 2 H2SO4	409.5	3,079.5	−83.98	30.48	311.0	20.18	1.37
Polk	Agrico Pierce dryers 1, 2	404.1	3,079.0	−24.32	24.38	339.0	12.94	1.52
Polk	Agrico Pierce dryers 3, 4	404.1	3,079.0	−23.00	24.38	339.0	18.82	2.43
Polk	Agrico South Pierce H2SO4	407.5	3,071.3	−75.60	45.73	350.0	26.40	1.60
Polk	Agrico South Pierce H2SO4	407.5	3,071.3	113.50	45.73	350.0	39.06	1.60
Polk	Agrico South Pierce DAP plant	407.5	3,071.3	4.41	38.10	328.0	14.60	3.10
Polk	Conserve Inc. rock dryer	398.4	3,084.2	−3.88	24.40	339.0	12.90	1.52
Polk	Conserve Inc.	398.4	3,084.2	42.00	45.70	352.0	10.30	2.30
Polk	Conserve Inc.	398.4	3,084.2	−54.60	30.50	308.0	18.90	1.80
Polk	IMC New Wales DAP	396.6	3,078.9	5.54	36.60	319.1	20.15	1.83
Polk	IMC New Wales multiphos	396.6	3,078.9	4.80	52.40	314.0	15.80	1.40
Polk	IMC New Wales SAP #1, 2, 3 projected	396.6	3,078.9	189.00	61.00	350.0	15.31	2.60
Polk	IMC New Wales SAP #4, 5 projected	396.6	3,078.9	126.00	60.70	350.0	15.31	2.60
Polk	IMC New Wales rock dryer	396.6	3,078.9	−34.27	21.00	347.0	18.60	2.13
Polk	IMC New Wales SAP #1, 2, 3 baseline	396.6	3,078.9	−146.00	61.00	350.0	14.28	2.60
Polk	IMC New Wales AFI Plant	396.6	3,078.9	0.20	52.40	322.0	13.10	2.40
Polk	Mobil−Electrophos boiler	405.6	3,079.4	−6.53	7.32	464.0	3.23	0.91
Polk	Mobil−Electrophos boiler	405.6	3,079.4	−10.05	6.10	464.0	7.71	0.91
Polk	Mobil−Electrophos rock dryer	405.6	3,079.4	−21.81	18.29	350.0	6.79	1.83

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Emission Inventory for PSD Class I Analysis for SO2

County	Facility	UTM East	UTM North	SO2 (g/s)	Height (m)	Temperature (K)	Velocity (m/s)	Diameter (m)
Polk	Mobil – Electrophos calciner	405.6	3,079.4	–7.11	25.61	306.0	6.97	2.11
Polk	Mobil – Electrophos coke dryer	405.6	3,079.4	–3.17	18.29	322.0	22.87	0.70
Polk	Mobil – Electrophos furnace	405.6	3,079.4	–47.25	29.27	314.0	8.52	2.11
Polk	Auburndale Cogeneration	420.8	3,103.3	6.35	48.80	411.0	14.30	5.49
Hillsborough	Hillsborough Co Resource Recovery Facility	368.2	3,092.7	21.40	50.00	491.0	18.30	1.80
Pasco	Proposed Pasco Co Cogeneration Facility	385.6	3,139.0	5.04	30.48	384.3	17.13	3.35
Polk	Ridge Cogeneration	416.7	3,100.4	13.80	99.10	350.0	14.54	3.05
Hillsborough	Tampa City McKay Bay Refuse – to – Energy	360.0	3,091.9	21.42	45.70	449.7	21.30	1.34
Hernando	Asphalt Pavers No. 3	359.9	3,162.4	2.25	12.20	377.0	10.58	1.37
Hernando	Asphalt Pavers No. 4	361.4	3,168.4	1.76	8.50	357.4	10.95	1.08
Hillsborough	CLM Chl	361.8	3,088.3	21.02	30.00	375.0	20.00	0.61
Pasco	Couch Construction – Odessa (asphalt)	340.7	3,119.5	7.25	9.14	436.0	22.30	1.40
Pasco	Couch Construction – Zephyrhills (asphalt)	390.3	3,129.4	3.54	6.10	422.0	21.00	1.38
Pasco	Dris Paving (Asphalt)	340.6	3,119.2	0.23	12.20	339.0	6.47	3.05
Hernando	ER Jahna (lime dryer)	386.7	3,155.8	0.82	10.67	327.0	8.99	1.83
Pasco	Evans Packing	383.3	3,135.8	0.20	12.30	466.2	9.20	0.40
Hernando	FDOC boiler #3	382.2	3,166.1	2.99	9.14	478.0	4.57	0.61
Hernando	Florida Mining & Materials kiln 2	356.2	3,169.9	1.45	32.01	394.2	9.90	4.27
Hernando	Florida Crushed Stone kiln 1	360.0	3,162.4	98.40	97.60	442.0	23.23	4.88
Citrus	Crystal River 4	334.2	3,204.5	1,008.80	182.90	398.0	21.00	6.90
Citrus	Crystal River 5	334.2	3,204.5	1,008.80	182.90	398.0	21.00	6.90
Citrus	Crystal River 1	334.2	3,204.5	–314.00	152.00	422.0	42.10	4.57
Citrus	Crystal River 2	334.2	3,204.5	–1,859.00	153.00	422.0	42.10	4.88
Volusia	FPC/DeBary prop turbines	465.7	3,197.2	466.40	15.24	819.8	56.21	4.21
Pinellas	Hospital Corp of AM boiler #1	333.4	3,141.0	0.08	10.98	533.0	4.00	0.31
Hillsborough	Couch Construction	362.1	3,096.7	2.14	12.50	449.7	20.12	1.25

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Emission Inventory for PSD Class 1 Analysis for SO2

County	Facility	UTM East	UTM North	SO2 (g/s)	Height (m)	Temperature (K)	Velocity (m/s)	Diameter (m)
Pinellas	Hospital Corp of AM boiler #2	333.4	3,141.0	0.08	10.98	533.0	4.00	0.3
Osceola	Kissimmee Util Exist	460.1	3,129.3	32.10	18.30	422.0	38.00	3.6
Lake	Proposed Lake Co Cogeneration Facility	434.0	3,198.8	5.04	30.48	384.3	17.13	3.3
Pasco	New Port Richey Hospital boiler #1	331.2	3,124.5	0.06	10.98	544.0	3.88	0.3
Pasco	New Port Richey Hospital boiler #2	331.2	3,124.5	0.03	10.98	544.0	3.88	0.3
Hernando	Oman Construction (Asphalt)	359.8	3,164.9	2.09	7.62	347.0	6.29	1.8
Orange	Orlando Util Stanton 1	483.5	3,150.6	601.00	167.60	325.7	21.60	5.8
Orange	Orlando Util Stanton 2	483.5	3,150.6	91.80	167.60	324.2	23.50	5.8
Pasco	Overstreet Paving (Asphalt)	355.9	3,143.7	3.67	9.14	408.0	16.00	1.3
Pasco	Pasco County Resource Recovery Facility	347.1	3,139.2	14.10	83.82	394.3	15.70	3.0
Hillsborough	Borden dryer	394.6	3,069.6	−6.48	30.48	344.0	14.79	1.8
Polk	Borden dryer	414.5	3,109.0	−5.29	17.07	333.0	8.26	2.3
Polk	Brewster Imperial dryer	404.8	3,069.5	−19.26	27.41	339.0	15.25	2.2
Polk	Dolime dryer	404.8	3,069.5	−5.68	27.43	333.0	20.67	1.5
Polk	Dolime boiler	404.8	3,069.5	−4.52	27.43	494.1	7.25	0.6
Polk	Estech/Swift dryer	411.5	3,074.2	−23.94	18.29	339.0	8.47	2.9
Polk	Estech/Swift dryer	411.5	3,074.2	−22.80	18.75	340.0	5.06	2.9
Polk	Estech/Swift SAP	411.5	3,074.2	−92.87	30.79	358.0	3.90	2.1
Hillsborough	Gen. Port Cement kiln 4	358.0	3,090.6	−62.99	35.97	505.2	17.61	2.7
Hillsborough	Gen. Port. Cement kiln 5	358.0	3,090.6	−69.30	45.42	494.1	5.80	3.8
Hillsborough	Stauffer boiler	325.6	3,116.7	−4.86	7.32	464.0	3.23	0.9
Hillsborough	Stauffer dryer	325.6	3,116.7	−1.50	18.29	322.0	22.87	0.7
Hillsborough	Stauffer furnace	325.6	3,116.7	−50.93	49.00	335.0	3.60	1.2
Hillsborough	Stauffer kiln	325.6	3,116.7	−7.36	25.61	306.0	6.97	2.1
Hillsborough	Stauffer roaster	325.6	3,116.7	−0.45	25.61	322.0	6.97	0.9

County	Facility	UTM East	UTM North	SO2 (g/s)	Height (m)	Temperature (K)	Velocity (m/s)	Diameter (m)
Highlands	TECO Sebring Airport	464.3	3,035.4	55.62	45.72	441.3	24.17	1.83
Highlands	TECO Sebring Airport	464.3	3,035.4	55.62	45.72	449.7	24.35	1.83
Osceola	Kissimmee Cane Island	447.7	3,127.9	29.40	12.20	654.0	29.10	3.05
Polk	FPC Polk	414.4	3,073.9	12.36	34.40	400.0	40.50	4.10
Polk	FPC Polk	414.4	3,073.9	12.36	34.40	400.0	40.50	4.10
Polk	FPC Polk	414.4	3,073.9	12.36	34.40	400.0	40.50	4.10
Polk	FPC Polk	414.4	3,073.9	12.36	34.40	400.0	40.50	4.10
Polk	TECO Polk	402.5	3,067.4	49.68	45.72	400.0	16.76	5.79
Polk	TECO Polk	402.5	3,067.4	17.64	45.72	389.0	16.15	4.42
Polk	TECO Polk	402.5	3,067.4	38.82	22.86	785.0	27.43	5.49
Polk	TECO Polk	402.5	3,067.4	8.20	60.70	1033.0	10.70	1.40

County	Facility	UTM East	UTM North	SO2 (g/s)	Height (m)	Temperature (K)	Velocity (m/s)	Diameter (m)
Hardee	Hardee Power Station	404.8	3,057.4	92.53	22.90	389.0	23.90	4.88
Hardee	Hardee Power Station	404.8	3,057.3	92.53	22.90	389.0	23.90	4.88
Hardee	Hardee Power Station	404.8	3,057.5	92.53	22.90	389.0	23.90	4.88
Hillsborough	CF Industries	388.0	3,116.0	88.20	33.50	316.0	19.50	1.50
Hillsborough	CF Industries proposed D	388.0	3,116.0	54.60	60.35	353.0	17.77	2.44
Hillsborough	CF Industries proposed C	388.0	3,116.0	54.60	60.35	353.0	17.77	2.44
Hillsborough	CF Industries baseline C	388.0	3,116.0	−50.40	60.35	353.0	16.40	2.44
Hillsborough	CF Industries baseline D	388.0	3,116.0	−50.40	60.35	353.0	16.40	2.44
Hillsborough	CF Industries	388.0	3,116.0	−105.00	18.80	316.0	18.80	1.52
Hillsborough	Cargill Fertilizer (Gardinier) SAP #7	363.4	3,082.4	46.20	45.72	355.0	9.20	2.29
Hillsborough	Cargill Fertilizer (Gardinier) SAP #8	363.4	3,082.4	52.50	45.72	355.0	8.63	2.44
Hillsborough	Cargill Fertilizer (Gardinier) SAP #9	363.4	3,082.4	54.60	45.72	344.0	12.50	2.74
Hillsborough	Cargill Fertilizer (Gardinier) dryer	363.4	3,082.4	−28.89	20.73	310.0	13.12	1.07
Hillsborough	Cargill Fertilizer (Gardinier) SAP #4, 5, 6	363.4	3,082.4	−196.30	22.60	322.0	19.51	1.52
Hillsborough	Cargill Fertilizer (Gardinier) SAP #7	363.4	3,082.4	−50.71	45.72	355.0	9.20	2.29
Hillsborough	TECO Big Bend – Unit 4	361.9	3,075.0	654.70	149.40	342.2	19.81	7.32
Hillsborough	TECO Big Bend – Units 1 & 2	361.9	3,075.0	−2,436.00	149.40	422.0	28.65	7.32
Hillsborough	TECO Big Bend – Unit 3	361.9	3,075.0	−1,218.00	149.40	418.0	14.33	7.32
Hillsborough	Mobil Big-4 boiler (AMAX)	394.8	3,067.7	0.60	8.20	505.0	7.57	0.41
Hillsborough	Mobil Big-4 dryer (AMAX)	394.9	3,069.8	1.90	30.50	334.0	7.26	1.82
Osceola	FPC/Intercession City prop turbines/7 EA	446.3	3,126.0	124.40	15.24	819.8	56.21	4.21
Osceola	FPC/Intercession City prop turbines/7 FA	446.3	3,126.0	110.40	15.24	880.8	32.07	7.04
Pinellas	Pinellas Co Resource Recovery Facility	335.3	3,084.4	62.24	49.10	522.0	27.72	2.74
Polk	Lakeland City Power CT (Larsen)	409.2	3,102.8	29.11	30.48	783.2	28.22	5.79
Polk	Lakeland McIntosh 3	409.5	3,105.8	500.10	76.20	350.0	19.70	4.88
Polk	WR Grace/Seminole SAP #3	409.8	3,087.0	143.77	60.96	347.0	24.00	1.52
Polk	WR Grace/Seminole SAP #4	409.8	3,087.0	−40.32	60.96	347.0	25.10	1.52
Polk	WR Grace/Seminole SAP #5	409.8	3,087.0	−40.32	60.96	347.0	25.10	1.52

County	Facility	UTM East	UTM North	SO2 (g/s)	Height (m)	Temperature (K)	Velocity (m/s)	Diameter (m)
Polk	WR Grace/Seminole SAP #6	409.8	3,087.0	−40.32	60.96	347.0	25.10	1.52
Polk	WR Grace/Seminole dryer	409.8	3,087.0	−39.66	15.24	327.0	17.32	2.04
Polk	WR Grace/Seminole SAP #1	409.8	3,087.0	−108.00	45.72	352.0	16.50	1.37
Polk	WR Grace/Seminole SAP #2	409.8	3,087.0	−108.00	45.72	352.0	16.50	1.37
Polk	WR Grace/Seminole SAP #3	409.8	3,087.0	−52.50	45.72	311.0	16.70	1.52
Polk	Mobil Mining & Minerals SR 676 #4 dryer	398.3	3,084.3	2.44	25.90	339.0	15.20	2.29
Polk	Mobil Mining & Minerals SR 676 calciner	398.3	3,084.3	−13.89	28.40	340.0	19.24	1.09
Polk	Mobil Mining & Minerals SR 676 calciner	398.3	3,084.3	−0.87	4.00	522.0	1.80	0.80
Polk	Royster #1	406.7	3,085.2	−152.71	51.00	356.0	9.90	2.13
Polk	Royster #2	406.7	3,085.2	35.70	61.00	360.0	12.20	2.13
Polk	US Agri-Chem Hwy 60 dryer	413.2	3,086.3	−3.41	15.80	332.0	10.01	1.83
Polk	US Agri-Chem Hwy 60 SAP	413.2	3,086.3	−42.00	28.96	305.0	7.50	2.12
Polk	US Agri-Chem Hwy 630 H2SO4 1	416.1	3,068.6	63.00	53.40	355.0	15.91	2.59
Polk	US Agri-Chem Hwy 630 H2SO4 2	416.1	3,068.6	63.00	53.40	355.0	15.91	2.59
Polk	US Agri-Chem Hwy 630 H2SO4 X	416.2	3,068.7	−78.80	29.00	314.0	6.77	3.02
Polk	US Agri-Chem Hwy 630 GTSP	416.0	3,069.0	−18.27	28.35	330.0	17.60	1.52
Polk	CF Industries DAP 1-3	408.5	3,082.5	3.97	36.40	339.0	16.11	2.13
Polk	CF Industries H2SO4 5	408.5	3,082.5	50.40	63.41	361.0	10.88	2.13
Polk	CF Industries H2SO4 6	408.5	3,082.5	50.40	63.41	370.0	7.28	2.13
Polk	CF Industries H2SO4 7	408.5	3,082.5	42.00	67.10	351.0	9.80	2.40
Polk	CF Industries H2SO4 1	408.5	3,082.5	−60.90	30.49	350.0	12.20	1.37
Polk	CF Industries H2SO4 2	408.5	3,082.5	−110.25	30.49	350.0	10.37	1.68
Polk	CF Industries H2SO4 3	408.5	3,082.5	−107.10	30.49	364.0	4.27	2.74
Polk	CF Industries H2SO4 4	408.5	3,082.5	−174.83	30.49	358.0	7.93	2.13
Polk	CF Industries H2SO4 5	408.5	3,082.5	−226.80	63.41	358.0	10.67	2.13
Polk	CF Industries H2SO4 6	408.5	3,082.5	−170.10	63.41	359.0	10.37	2.13
Polk	Farmland Industries 3, 4 H2SO4	409.5	3,079.5	67.16	30.48	355.0	9.27	2.29
Polk	Farmland Industries 5 H2SO4	409.5	3,079.5	41.96	45.72	355.0	9.65	2.44

County	Facility	UTM East	UTM North	SO2 (g/s)	Height (m)	Temperature (K)	Velocity (m/s)	Diameter (m)
Polk	Farmland Industries 1, 2 H2SO4	409.5	3,079.5	−83.98	30.48	311.0	20.18	1.37
Polk	Agrico Pierce dryers 1, 2	404.1	3,079.0	−24.32	24.38	339.0	12.94	1.52
Polk	Agrico Pierce dryers 3, 4	404.1	3,079.0	−23.00	24.38	339.0	18.82	2.43
Polk	Agrico South Pierce H2SO4	407.5	3,071.3	−75.60	45.73	350.0	26.40	1.60
Polk	Agrico South Pierce H2SO4	407.5	3,071.3	113.50	45.73	350.0	39.06	1.60
Polk	Agrico South Pierce DAP plant	407.5	3,071.3	4.41	38.10	328.0	14.60	3.10
Polk	Conserve Inc. rock dryer	398.4	3,084.2	−3.88	24.40	339.0	12.90	1.52
Polk	Conserve Inc.	398.4	3,084.2	42.00	45.70	352.0	10.30	2.30
Polk	Conserve Inc.	398.4	3,084.2	−54.60	30.50	308.0	18.90	1.80
Polk	IMC New Wales DAP	396.6	3,078.9	5.54	36.60	319.1	20.15	1.81
Polk	IMC New Wales multiphos	396.6	3,078.9	4.80	52.40	314.0	15.80	1.40
Polk	IMC New Wales SAP #1, 2, 3 projected	396.6	3,078.9	189.00	61.00	350.0	15.31	2.60
Polk	IMC New Wales SAP #4, 5 projected	396.6	3,078.9	126.00	60.70	350.0	15.31	2.60
Polk	IMC New Wales rock dryer	396.6	3,078.9	−34.27	21.00	347.0	18.60	2.13
Polk	IMC New Wales SAP #1, 2, 3 baseline	396.6	3,078.9	−146.00	61.00	350.0	14.28	2.60
Polk	IMC New Wales AFI Plant	396.6	3,078.9	0.20	52.40	322.0	13.10	2.40
Polk	Mobil – Electrophos boiler	405.6	3,079.4	−6.53	7.32	464.0	3.23	0.91
Polk	Mobil – Electrophos boiler	405.6	3,079.4	−10.05	6.10	464.0	7.71	0.91
Polk	Mobil – Electrophos rock dryer	405.6	3,079.4	−21.81	18.29	350.0	6.79	1.83
Polk	Mobil – Electrophos calciner	405.6	3,079.4	−7.11	25.61	306.0	6.97	2.13
Polk	Mobil – Electrophos coke dryer	405.6	3,079.4	−3.17	18.29	322.0	22.87	0.70
Polk	Mobil – Electrophos furnace	405.6	3,079.4	−47.25	29.27	314.0	8.52	2.13
Polk	Auburndale Cogeneration	420.8	3,103.3	6.35	48.80	411.0	14.30	5.49
Hillsborough	Hillsborough Co Resource Recovery Facility	368.2	3,092.7	21.40	50.00	491.0	18.30	1.80
Pasco	Proposed Pasco Co Cogeneration Facility	385.6	3,139.0	5.04	30.48	384.3	17.13	3.35
Polk	Ridge Cogeneration	416.7	3,100.4	13.80	99.10	350.0	14.54	3.05
Hillsborough	Tampa City McKay Bay Refuse – to – Energy	360.0	3,091.9	21.42	45.70	449.7	21.30	1.34
Hillsborough	CLM Chl	361.8	3,088.3	21.02	30.00	375.0	20.00	0.61

Emission Inventory for PSD Class 2 Analysis for SO2

County	Facility	UTM East	UTM North	SO2 (g/s)	Height (m)	Temperature (K)	Velocity (m/s)	Diameter (m)
Pasco	Evans Packing	383.3	3,135.8	0.20	12.30	466.2	9.20	0.40
Hillsborough	Borden dryer	394.6	3,069.6	-6.48	30.48	344.0	14.79	1.82
Polk	Borden dryer	414.5	3,109.0	-5.29	17.07	333.0	8.26	2.34
Polk	Brewster Imperial dryer	404.8	3,069.5	-19.26	27.44	339.0	15.25	2.29
Polk	Dolime dryer	404.8	3,069.5	-5.68	27.43	333.0	20.67	1.52
Polk	Dolime boiler	404.8	3,069.5	-4.52	27.43	494.1	7.25	0.61
Polk	Estech/Swift dryer	411.5	3,074.2	-23.94	18.29	339.0	8.47	2.95
Polk	Estech/Swift dryer	411.5	3,074.2	-22.80	18.75	340.0	5.06	2.95
Polk	Estech/Swift SAP	411.5	3,074.2	-92.87	30.79	358.0	3.90	2.13
Hillsborough	Gen. Port Cement kiln 4	358.0	3,090.6	-62.99	35.97	505.2	17.61	2.74
Hillsborough	Gen. Port. Cement kiln 5	358.0	3,090.6	-69.30	45.42	494.1	5.80	3.81
Highlands	TECO Sebring Airport	464.3	3,035.4	55.62	45.72	441.3	24.10	1.83
Highlands	TECO Sebring Airport	464.3	3,035.4	55.62	45.72	449.7	24.35	1.83
Polk	FPC Polk	414.4	3,073.9	12.36	34.40	400.0	40.50	4.10
Polk	FPC Polk	414.4	3,073.9	12.36	34.40	400.0	40.50	4.10
Polk	FPC Polk	414.4	3,073.9	12.36	34.40	400.0	40.50	4.10
Polk	FPC Polk	414.4	3,073.9	12.36	34.40	400.0	40.50	4.10
Hillsborough	Couch Construction	362.1	3,096.7	2.14	12.50	449.7	20.12	1.25
Polk	TECO Polk	402.5	3,067.4	49.68	45.72	400.0	16.76	5.79
Polk	TECO Polk	402.5	3,067.4	17.64	45.72	389.0	16.15	4.42
Polk	TECO Polk	402.5	3,067.4	38.82	22.86	785.0	27.43	5.49
Polk	TECO Polk	402.5	3,067.4	8.20	60.70	1033.0	10.70	1.40

8-17-93

BEST AVAILABLE COPY

LAKE
ENGINEERING, INC.

RECEIVED
AUG 1 ; 1993
Division of Air
Resources Management

August 17, 1993

Make applicant make argument

Mr. Cleve Holiday
Florida Department of
Environmental Regulation
2600 Blair Stone Road
Twin Towers Office Building
Tallahassee, Florida 32399-2400

VIA TELEFAX

RE: Modeling Protocol for Gulf Coast Recycling
Permit Number AO29-173310

Dear Mr. Holiday:

Gulf Coast Recycling, Inc., located in Tampa (Hillsborough County), is a lead-acid battery recycler that operates a blast furnace which was installed and brought on line in late 1984. It was determined in June 1991 that this furnace installation should have been subject to the Federal Prevention of Significant Deterioration (PSD) regulations. By letter dated April 22, 1993 the Florida Department of Environmental Regulation (FDER) notified Gulf Coast that a PSD application needs to be submitted. In addition to the application, the PSD regulations require computer modeling to be performed to determine the anticipated ambient air quality impacts resulting from the proposed project. On behalf of Gulf Coast Recycling, Inc., Lake Engineering, Inc. is submitting the following proposed air dispersion modeling protocol for this project.

The Gulf Coast facility is located at 1901 North 66th Street, UTM coordinates 364048 East, 3093548 North. The facility is located in a mixed-use area that is considered rural for modeling purposes. The topography within 50 km of the site is predominantly flat with no extreme terrain features. Sulfur dioxide has been established as the only pollutant that is required to be modeled. The SO_2 emissions will be emitted from one source, one stack with dimensions of 150 ft. tall and 3 ft. diameter.

SUITE 500, 35 GLENLAKE PARKWAY
ATLANTA, GEORGIA 30328
(404) 395-0464 FAX: (404) 395-0474

The latest ISCST2 model, currently approved by the EPA, will be used to determine impacts during 3-hr, 24-hr, and annual averaging periods. The five years of met data selected are 1982-1986 from surface and upper air station number 12842 located in Tampa. The regulatory default option will be used with no decay coefficient allowed, resulting in conservative concentrations. Building downwash will not be calculated due to the sufficient height of the stack as determined by Good Engineering Practice (GEP).

Two model runs will be used to determine ambient impacts attributable to Gulf Coast alone. An overall 10 km receptor grid will be used, one run with 100 m spacing out to 1 km and the other run with 1000 m spacing out to 10 km. These concentrations, when added to the ambient background concentration, will be compared to the Florida Ambient Air Quality Standards (FAAQS) of 1300 ug/m^3, 3-hr; 260 ug/m^3, 24-hr; and 60 ug/m^3, annual. The background concentration for the subject area and the last full year of monitoring data, including the location/number of the monitor at which it was measured, is hereby being requested to assist us in our dispersion modeling analysis.

Two additional model runs, utilizing the same receptor grids as above, will be used to determine the increment consumption of Gulf Coast and all major increment consuming SO_2 sources within 30 km. Emissions from Gulf Coast and the appropriate surrounding sources will be modeled together to determine the cumulative ambient concentration for the three averaging periods. These concentrations will then be compared to the Class II increment amounts of 512 ug/m^3, 3-hr; 91 ug/m^3, 24-hr; and 20 ug/m^3, annual.

Attached is a list of 23 surrounding major sources and their respective emission and stack data. This list was taken from a 361-page APIS report obtained from the FDER that listed a total of 325 facilities and 990 sources within a 30 km radius of Gulf Coast. On guidance from you, the "20 by D" rule, developed in North Carolina, was used to determine which sources were required to be used in the modeling:

sources located 0 to 5 km from Gulf Coast: all are to be modeled
sources located 05 to 10 km: ignore those < 100 tons/yr
sources located 10 to 15 km: ignore those < 200 tons/yr
sources located 15 to 20 km: ignore those < 300 tons/yr
sources located 20 to 25 km: ignore those < 400 tons/yr
sources located 25 to 30 km: ignore those < 500 tons/yr

This list is being submitted for verification of accuracy and completeness. Please identify which sources are increment consuming and which are not. Also, please advise if any listed sources may be omitted from modeling and/or if any sources need to be added. Particularly, many of the smaller sources have an emission rate listed in tons/year but not pounds/hr. It is hereby being requested that the smaller sources be omitted from the modeling,

due to their very low emission rate (< 1 ton/yr). Their cumulative emissions are insignificant compared to that of the major sources. If they are required to be modeled, guidance is being sought on how many hours/year are to be assumed to determine an emission rate in pounds/hour.

An additional analysis will be performed to determine impacts on the Chassahowitzka National Wildlife Refuge. The significance levels for this area are 0.48 ug/m^3, 0.07 ug/m^3, and 0.025 ug/m^3 for the 3-hr, 24-hr, and annual averaging periods, respectively. Discrete receptors will be placed on a line from Gulf Coast to the closest boundary of the refuge indicating the concentration trend along the line and the concentration at the boundary of the refuge. The distance from Gulf Coast to the refuge is approximately 75 km, exceeding the accepted limit of the ISC models of 50 km. Please advise if a different modeling method should be utilized.

We would appreciate an expeditious review of this protocol due to the time commitments Gulf Coast has with the FDER permitting section. If you have any questions or require any additional information please contact me at (404) 395-0464.

Sincerely,

LAKE ENGINEERING, INC.

Larry G. Carlson

Larry G. Carlson
Air Pollution Compliance Specialist

LGC:cm
Enclosures

cc: Joyce Morales-Caramella, GCR

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APR 2 ? 1993 (

(SLAG STABILIZATION 5-27-93

Florida Department of Environmental Regulation

Southwest District • 3804 Coconut Palm • Tampa, Florida 33619

Lawton Chiles, Governor 813-744-6100 Virginia B. Wetherell, Secretary

NOTICE OF PERMIT

Mr. Willis M. Kitchen
President
Gulf Coast Recycling, Inc.
1901 N. 66th Street
Tampa, FL 33619

Dear Mr. Kitchen:

Re: Hillsborough County - AP

Enclosed is Permit Number AC29-217704 to construct a slag stabilization operation associated with a secondary lead smelting facility, issued pursuant to Section 403.087, Florida Statutes.

Any party to this order (permit) has the right to seek judicial review of the permit pursuant to Section 120.68, Florida Statutes, by the filing of a Notice of Appeal pursuant to Rule 9.110, Florida Rules of Appellate Procedure, with the Clerk of the Department in the Office of General Counsel, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400; and by filing a copy of the Notice of Appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The Notice of Appeal must be filed within 30 days from the date this Notice is filed with the Clerk of the Department.

Executed in Tampa, Florida.

Sincerely,

J. Harry Kerns

J. Harry Kerns, P.E.
District Air Engineer

JHK/LD/bm

cc: Environmental Protection Commission
of Hillsborough County
Robert E. Wallace, III, P.E., Environmental Engineering
Consultants, Inc.

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CERTIFICATE OF SERVICE

This is to certify that this NOTICE OF PERMIT and all copies were mailed before the close of business on APR 21 1993 to the listed persons.

Clerk Stamp

FILING AND ACKNOWLEDGEMENT
FILED, on this date, pursuant to Section 120.52(11), Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.

Marilyn Quispe
Clerk

APR 21 1993
Date

Florida Department of Environmental Regulation

Southwest District • 3804 Coconut Palm • Tampa, Florida 33619

Lawton Chiles, Governor 813-744-6100 Virginia B. Wetherell, Secretary

PERMITTEE:
Gulf Coast Recycling, Inc.
1901 N. 66th Street
Tampa, FL 33619

PERMIT/CERTIFICATION
Permit No.: AC29-217704
County: Hillsborough
Expiration Date: 02/01/94
Project: Slag Stabilization Operation

This permit is issued under the provisions of Chapter 403, Florida Statutes, and Florida Administrative Code Rules 17-209, 17-210, 17-212, 17-272, 17-275, 17-296, 17-297, and 17-4. The above named permittee is hereby authorized to perform the work or operate the facility shown on the application and approved drawing(s), plans, and other documents, attached hereto or on file with the Department and made a part hereof and specifically described as follows:

For the construction of a slag stabilization operation consisting of a receiving hopper, a kinetic crusher, a vibrating sizing screen, a fixed location mixer with a 7 ton/batch capacity, and associated conveyors. The operation will be totally enclosed. The slag will be crushed and mixed with sodium silicate, Type I cement and water at a maximum process rate of 20 tons per hour.

Particulate and lead emissions from the receiving hopper and kinetic crusher operations will be controlled through the use of a water spray system and a 3,500 ACFM Baghouse modelled after a Wheelabrator-Frye Dustube Collection Model 126. Particulate and lead emissions from the vibrating screen and mixing operations will be controlled through the use of a water spray system in a total enclosure.

Location: 1901 N. 66th Street, Tampa

UTM: 17-364.048 E 2093.548 N **NEDS NO:** 0057 **Point ID:** 07

Replaces Permit No.: N/A

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SPECIFIC CONDITIONS:

1. A part of this permit is the attached 15 General Conditions.

2. Visible emissions from the slag stabilization operation shall not exceed 5% opacity. [Construction Application]

3. Hours of operation for the slag stabilization process shall not exceed 1,248 hours per year. [Construction Application]

4. Lead emissions from the slag stabilization process shall not exceed the following. [Construction Application]

Source	lbs./hr.	TPY
Receiving hopper, and conveyor drop/crusher (collectively)	0.001	0.0005
Conveyor drop/screen, conveyor drop/mixing, and conveyor drop/return of oversize operations (collectively)	N/A	0.0003

5. Particulate matter emissions from the slag stabilization process shall be less than one ton per year in order to exempt this operation from particulate RACT.
[Rule 17-296.700(2)(c)]

6. The average lead content of the slag processed in this operation shall not exceed 7% lead by weight on an annual basis. (The range of lead content is usually 5 to 9% lead by weight.) Only slag generated on-site may be processed. [Construction Application]

7. To show compliance with Specific Condition No. 6, no less than once per month the permittee shall test the slag for lead content prior to undergoing the stabilization process . Lab results shall be maintained for the most recent two year period. The records shall be made available to the Environmental Protection Commission of Hillsborough County, state or federal air pollution agency upon request.
[Rule 17-4.070(3), F.A.C.]

8. Test the keel cast building and the baghouse exhaust during operation of the slag stabilization process for visible emissions within thirty (30) days of startup by reading at the point of highest opacity emanating from the building which encloses the process or from the stack. The duration of the Method 9 test shall be at least thirty (30) minutes and it shall be done concurrent with one of the test runs required by Specific Condition No. 9. Two copies of the test data shall be submitted to the Environmental Protection Commission of Hillsborough County within forty-five (45) days of such testing.
[Rule 17-297, F.A.C.]

SPECIFIC CONDITIONS:

9. Test the baghouse exhaust for lead emissions within 30 days of start-up of the slag stabilization operation. Two copies of the test data shall be submitted to the Air Section of the Environmental Protection Commission of Hillsborough County within 45 days of such testing. Testing procedures shall be consistent with the requirements of 40 CFR 60 and Rule 17-297, F.A.C.

10. Compliance with the emission limitations of Specific Condition Nos. 2 and 4 shall be determined using EPA Methods 1, 2, 4, 9 and 12 contained in 40 CFR 60, Appendix A and adopted by reference in Rule 17-297, F.A.C. The minimum requirements for stack sampling facilities, source sampling and reporting, shall be in accordance with Rule 17-297, F.A.C. and 40 CFR 60, Appendix A.

11. Testing of emissions must be conducted within 10% of the maximum permitted slag stabilization process rate of 20 tons/hr. A compliance test submitted at operating levels less than 90% of permitted capacities will automatically constitute an amended permit at the lesser rate until another test (showing compliance) at 90% of a higher capacity is submitted. Failure to submit the input rates and actual operating conditions may invalidate the test.
[Rule 17-4.070(3), F.A.C.]

12. The permittee shall notify the Environmental Protection Commission of Hillsborough County at least 15 days prior to the date on which each formal compliance test is to begin of the date, time, and place of each such test, and the contact person who will be responsible for coordinating and having such test conducted. [Rules 17-297.340(1)(i) and 17-209.500, F.A.C]

13. In order to document compliance with the tons per year limitations of Specific Condition Nos. 4 and 5, lead and particulate emissions shall be calculated using the methodology outlined in the construction application. A table summarizing the method is included as Appendix A.
[Rule 17-4.070(3), F.A.C.].

14. In order to document compliance with Specific Condition Nos. 3, 4 and 5 the permittee shall maintain a record of slag stabilization operating hours (hours/day) and amount of slag stabilized (tons/day). These records shall be summarized on a monthly basis showing total hours and tons for the month and for the last 12 consecutive month period. These records shall be recorded in a permanent form suitable for inspection by the Department upon request, and shall be retained for at least a two year period.
[Rule 17-4.070(3), F.A.C.].

SPECIFIC CONDITIONS: (continued)

15. All reasonable precautions shall be taken to prevent and control generation of unconfined emissions of particulate matter in accordance with the provision in Rule 17-297.310(3), F.A.C. These provisions are applicable to any source, including, but not limited to, vehicular movement, transportation of materials, construction, alterations, demolition or wrecking, or industrial related activities such as loading, unloading, storing and handling. Reasonable precautions shall include, but not be limited to, the following:

A) Personnel shall ensure that all doors in the keel cast building are closed prior to operating the slag stabilization process and kept closed during operation.
B) Personnel shall ensure that the water spray system for the receiving hopper, conveyors, kinetic crusher, vibrating sizing screen, and mixing operations are on and operating prior to operating the slag stabilization process.
C) Slag stored in the bin located in keel cast building shall be wetted while loading into the receiving hopper.
D) Personnel shall ensure collection hoods above the receiving hopper and kinetic crusher are on and operating prior to operating slag stabilization process.
E) Supervisory inspections shall routinely be conducted during operations to ensure all above stated precautions are taken to reduce fugitive generation.

[Rule 17-297.310(3), F.A.C].

16. Submit to the Environmental Protection Commission of Hillsborough County, each calendar year on or before March 1, an emission report for this facility for the preceding calendar year containing the following information pursuant to Subsection 403.061(13), Florida Statutes:

A) Annual amount of materials and/or fuels utilized.
B) Annual emissions of lead and particulate (include calculation sheet and note basis of calculations).
C) Any changes in the information contained in the permit application.

17. Issuance of this permit does not relieve the permittee from complying with applicable emission limiting standards or other requirements of Chapter 17-296, F.A.C., or any other requirements under federal, state, or local law.
[Rule 17-210.300, F.A.C.]

SPECIFIC CONDITIONS: (continued)

18. Four applications for an operating permit shall be submitted to the Environmental Protection Commission of Hillsborough County within 45 days of testing or at least 60 days prior to the expiration date of this permit, whichever occurs first. To properly apply for an operation permit, the applicant shall submit the following:

A) the appropriate application form (Certificate of Completion of Construction) noting any deviations from the construction permit application;
B) the appropriate operation permit fee;
C) the compliance test reports as required by Specific Condition Nos. 8 and 9 of this permit.
D) a copy of the most recent months operating records as required by Specific Condition No. 14.

[Rules 17-4.070(3) and 17-297.340(1)(a), F.A.C.].

STATE OF FLORIDA DEPARTMENT OF
ENVIRONMENTAL REGULATION

For Richard D. Garrity, Ph.D.
Director of District Management
Southwest District Office

ATTACHMENT - GENERAL CONDITIONS:

1. The terms, conditions, requirements, limitations and restrictions set forth in this permit, are "permit conditions" and are binding and enforceable pursuant to Sections 403.141, 403.161, 403.727, or 403.859 through 403.861, Florida Statutes. The permittee is placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of these conditions.

2. This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.

3. As provided in subsections 403.087(6) and 403.722(5), F.S., the issuance of this permit does not convey any vested rights or any exclusive privileges. Neither does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, State, or local laws or regulations. This permit is not a waiver of or approval of any other Department permit that may be required for other aspects of the total project which are not addressed in this permit.

4. This permit conveys no title to land or water, does not constitute State recognition or acknowledgement of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the State. Only the Trustees of the Internal Improvement Trust Fund may express State opinion as to title.

5. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, or plant life, or property caused by the construction or operation of this permitted source, or from penalties therefore; nor does it allow the permittee to cause pollution in contravention of Florida Statutes and Department rules, unless specifically authorized by an order from the Department.

6. The permittee shall properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed and used by the permittee to achieve compliance with the conditions of this permit, are required by Department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by Department rules.

7. The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, upon presentation of credentials or other documents as may be required by law and at reasonable times, access to the premises where the permitted activity is located or conducted to:

(a) Have access to and copy any records that must be kept under conditions of the permit;

(b) Inspect the facility, equipment, practices, or operations regulated or required under this permit;

(c) Sample or monitor any substances or parameters at any location reasonably necessary to assure compliance with this permit or Department rules.

Reasonable time may depend on the nature of the concern being investigated.

8. If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately provide the Department with the following information:

(a) A description of and cause of noncompliance; and

(b) The period of noncompliance, including dates and times; or, if not corrected, the anticipated time the noncompliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the noncompliance.

The permittee shall be responsible for any and all damages which may result and may be subject to enforcement action by the Department for penalties or for revocation of this permit.

9. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source which are submitted to the Department may be used by the Department as evidence in any enforcement case involving the permitted source arising under the Florida Statutes or Department rules, except where such use is prescribed by Sections 403.111 and 403.73, F.S. Such evidence shall only be used to the extent it is consistent with the Florida Rules of Civil Procedure and appropriate evidentiary rules.

10. The permittee agrees to comply with changes in Department rules and Florida Statutes after a reasonable time for compliance; provided, however, the permittee does not waive any other rights granted by Florida Statutes or Department rules.

11. This permit is transferable only upon Department approval in accordance with Rule 17-4.120 and 17-730.300, Florida Administrative Code, as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the Department.

12. This permit or a copy thereof shall be kept at the work site of the permitted activity.

13. This permit also constitutes:

( ) Determination of Best Available Control Technology (BACT)

( ) Determination of Prevention of Significant Deterioration (PSD)

( ) Certification of compliance with State Water Quality Standards (Section 401, PL 92-500)

( ) Compliance with New Source Performance Standard

14. The permittee shall comply with the following:

(a) Upon request, the permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records will be extended automatically unless otherwise stipulated by the Department.

(b) The permittee shall hold at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation) required by the permit, copies of all reports required by this permit, and records of all data used to complete the application for this permit. These materials shall be retained at least three years from the date of the sample, measurement, report, or application unless otherwise specified by Department rule.

(c) Records of monitoring information shall include:

1. the date, exact place, and time of sampling or measurements;
2. the person responsible for performing the sampling or measurements;
3. the dates analyses were performed;
4. the person responsible for performing the analyses;
5. the analytical techniques or methods used;
6. the results of such analyses.

15. When requested by the Department, the permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the permittee becomes aware the relevant facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be corrected promptly.

APPENDIX A

EMISSIONS CALCULATION METHOD

GULF COAST RECYCLING, INC. - AC29-217704

PM and Lead Potential Emission Calculations - Slag Stabilization

				Controls		
Source	Ef (lb/ton)	Lead* Content	Process Rate** (tph)	Water	Enclosure	Baghouse
Receiving Hopper	0.12			0.9		0.99
Conveyor Drop/Grinder	0.50			0.9		0.99
Conveyor Drop/Screen	0.12			0.9	0.99	
Conveyor Drop/Mixer	0.12			0.9	0.99	
Conveyor Drop/Oversize	0.12			0.9	0.99	

*Substitute value obtained from laboratory analysis.

**Substitute amount of slag processed.

APPENDIX D

OPERATION AND MAINTENANCE PLANS

In accordance with the requirements of FAC Rule 62-296.600(4), an operation and maintenance (O&M) plan is required for lead emission control devices, collection systems and processing systems. Lead oxide handling operations with a potential to emit 200 pounds or less of lead per year are exempt from this requirement.

An O&M plan applicable to all GCR's baghouses serving the blast furnace, slag tapping, furnace charging, lead refining and slag processing operations is presented in Section D.1. An O&M plan applicable to the water spray systems used to control lead emissions from the slag processing and battery breaking operations is presented in Section D.2. An O&M plan applicable to the road sweeper is presented in Section D.3. An O&M plan applicable to all the process systems is presented in Section D.4.

D.1 BAGHOUSES

Operation Plan

1. The baghouse fans will be turned on prior to commencing process operation and shall remain on until the process operation is concluded.

2. Every morning the charging, tapping and refining processes are in operation, a leadman or foreman in the area will manually actuate the shaker motors and shake the bags for a minimum of two minutes (the blast furnace baghouse system is equipped with automatic timers to actuate the shakers).

Maintenance Plan

1. Manometer readings will be checked each day the baghouses are in use. If the pressure drop exceeds the normal operating range, the compartment will be shutdown and the bags shaken for a minimum of two minutes. If this does not decrease the pressure drop, the baghouse may be entered to determine the problem.

2. The shaker motors will be inspected by a maintenance man at least once each week.

3. The stack will be observed each day for visible emissions. If there are any detectable emissions, the system will be checked and baghouses entered, as necessary.

4. A complete visual inspection of the hoods, ductwork, baghouses and fans will be conducted at least once each month to check for outward signs of damage, leaks, etc. Any damage will be repaired.

5. The charging, tapping and refining baghouse hoppers will be emptied at least once each week (the blast furnace baghouse system is equipped with a continuous screw conveying system for hopper clean-out).

6. The source will be tested once each year in accordance with the permit requirements for the source.

D.2 WATER SPRAY SYSTEMS

Operation Plan

1. The water sprays in the battery breaking area, the raw material storage area and those covering roadways will be turned on prior to commencing process operation and shall operate on a cycle that assures each area is adequately wetted. The adequacy of wetting will be determined by visual inspection.

2. Every morning the process is in operation, a leadman or foreman in the area will ensure proper operation of the water spray system.

Maintenance Plan

1. If the water spray does not cover the intended processing area, the water flow will be adjusted accordingly. If this does not provide an adequate spray, the spray system will be examined to determine the problem.

2. The water spraying operation will be observed for proper operation by plant personnel at least once a week. Any piping or spraying unit damage will be repaired immediately.

D.3 ROAD SWEEPER

Operation Plan

1. The road sweeper will be checked for proper operation of the vacuum system and the brushes prior to sweeping the roads.

Maintenance Plan

1. The air filter will be inspected regularly to ensure proper dust collection. The vacuum system and brushes will be inspected at least once each month to check for signs of damage, leaks, malfunction etc. Any damage will be repaired promptly.

D.4 PROCESS SYSTEMS

Operation Plan

1. Personnel shall ensure that all process equipment is operating properly.

2. Personnel shall ensure that applicable lead emission control systems are operating properly prior to commencing the process.

3. Personnel shall ensure that the exhaust systems associated with emission collection hoods are on and operating prior to commencing the process and that the hoods are in place and/or closed to the maximum extent possible during process operations.

4. Supervisory inspections shall routinely be conducted during operations to ensure all above stated precautions are taken to reduce process equipment malfunction.

Maintenance Plan

1. A complete visual inspection of the process equipment will be conducted at least once each month to check for signs of damage, leaks, malfunction etc. Any damage will be repaired immediately.

APPENDIX E

CURRENT AIR PERMITS

GULF COAST RECYCLING, INC.

1901 NORTH 66th STREET • TAMPA, FLORIDA 33619
PHONE: (813) 626-6151 FAX: (813) 622-8388

July 6, 1994

August 1, 94

Mr. Rick Kirby
Air Management Division
Environmental Protection Commission
of Hillsborough County
1401 N. 21st Street
Tampa, FL 33605

Re: Permit No. AC29-217704 - Slag Fixation Operation

Dear Mr. Kirby:

Gulf Coast Recycling, Inc. (GCR) received an extension on the above referenced permit which made the expiration date August 1, 1994. As yet this operation is still not fully functional and it is not likely that completion of the operation and the compliance demonstration can be completed by the current expiration date. Therefore, GCR is requesting another one hundred and eighty (180) extension of the construction permit. Also enclosed is check in the amount of $50.00 to cover the fee requirements.

Should you have any questions or comments concerning this request, please let me know.

Sincerely,

George Townsend

George Townsend

File:GTA4-368

GULF COAST RECYCLING, INC.
1901 NORTH 66th STREET
TAMPA, FLORIDA 33619
(813) 626-6151

Barnett Bank of T[illegible]

029889

[redacted]

DATE	CHECK NO.	CHECK AMOUNT
7/7/94	29889	$50.00

FIFTY DOLLARS AND NO/100

PAY TO THE ORDER OF

EPC OF HILLSBOROUGH COUNTY
1401 N. 21ST STREET
TAMPA, FL 33605
ATTN: AIR MANAGEMENT DIVISION

Willie M. Kitchen

[redacted]

GULF COAST RECYCLING, INC.

VENDOR NO.

VENDOR NAME

TRANSACTION DATE	REFERENCE	GROSS AMOUNT	DEDUCTION	NET AMOUNT
PERMIT NO. AC29-217704-SLAG FIXATION OPERATION				

CHECK DATE	CHECK NO.	TOTAL GROSS	TOTAL DEDUCTION	CHECK AMOUNT

GULF COAST RECYCLING, INC.

1901 NORTH 66th STREET • TAMPA, FLORIDA 33619
PHONE: (813) 626-6151 FAX: (813) 622-8388

December 23, 1993

Permit expires
8/1/94

Mr. Rostam Parsi, Engineer
Air Program
Environmental Protection Commission
of Hillsborough County
1900 9th Avenue
Tampa, Fl 33605

Re: Permit Number AC29-217704

Dear Mr. Parsi:

As per our conversation during your visit to the facility on December 21, 1993. I wish to change the original request for permit extension in my letter dated November 1, 1993 form ninety (90) days to one hundred and eighty (180) days. Since my original letter we still have not received the necessary building permit to modify the building for the slag fixation operation. Therefore, we feel that the additional time will be required to, eventually, obtain the building permit and complete construction of the fixation operation.

Should you have any questions or comments concerning this request, please contact me at (813) 626-6151.

Sincerely,

George Townsend

George Townsend
Director, Regulatory Affairs

pc: Willis Kitchen
Jim Ester

File GTA4-317

File Copy

Florida Department of Environmental Regulation

Twin Towers Office Bldg. • 2600 Blair Stone Road • Tallahassee, Florida 32399-2400

Lawton Chiles, Governor

Virginia B. Wetherell, Secretary

April 22, 1993

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mrs. Joyce Morales-Carmella
Environmental & Health Manager
Gulf Coast Recycling, Inc.
1901 North 66th Street
Tampa, Florida 33619

Dear Mrs. Morales-Carmella:

RE: Response from a Meeting of March 11, 1993, and PSD Issues

Based on a meeting held at the DARM conference room on March 11, 1993, which included Liz Deken (EPCHC) via the conference phone, the following information is to be submitted to the Department and EPCHC no later than May 28, 1993:

1) Submit to the Department and EPCHC a PSD application package, including all assumptions, calculations and reference materials, sealed by a registered Florida P.E., and the appropriate processing fee (as a supplement to the original application package proposal: AC 29-209018). The target date was determined based on your request in a December 30, 1992 letter, which was received by the EPCHC office on the same date. The target date was calculated from the date received.

2) BACT determination proposals are to be in accordance with Rule 17-212.410, Florida Administrative Code.

3) The SO_2 BACT determination proposals, that you will submit along with the application package, are to include material and chemical balances. The reason that this is required is for evaluation purposes and to establish exactly how much scrubbing media will be required to effectively scrub the SO_2 in the gas stream and the amount of solid waste that will be potentially generated; also, it was established that a minimum of 90% reduction of SO_2 should be considered, with higher removal efficiencies evaluated for cut-off purposes.

4) Submit a response to the information requested in EPCHC's incompleteness letter dated November 24, 1992, where it is not answered from the responses required above. Items Nos. 3 and 4 from that letter require submittal of outstanding information from the application. Please note where the response is located within the text that is being submitted.

Recycled Paper

Printed with Soy Based Inks

If there are any questions, please call Mr. Preston Lewis at (904)488-1344 or write to me at the above address.

Sincerely,

C. H. Fancy, P.E.
Chief
Bureau of Air Regulation

CHF/BM/rbm

Attachments

cc: L. Deken, EPCHC
B. Thomas, SWD
B. Beals, EPA
D. Beason, Esq., DER
Reading File
Bruce Mitchell } 4-22-93

Attachments

COMMISSION
PHYLLIS BUSANSKY
JOE CHILLURA
PAM IORIO
SYLVIA KIMBELL
JAN KAMINIS PLATT
JAMES D. SELVEY
ED TURANCHIK

FAX (813) 272-5157

ROGER P. STEWART
EXECUTIVE DIRECTOR
ADMINISTRATIVE OFFICES
AND
WATER MANAGEMENT DIVISION
1900 - 9TH AVENUE
TAMPA, FLORIDA 33605
TELEPHONE (813) 272-5960

AIR MANAGEMENT DIVISION
TELEPHONE (813) 272-5530

WASTE MANAGEMENT DIVISION
TELEPHONE (813) 272-5788

ECOSYSTEMS MANAGEMENT DIVISION
TELEPHONE (813) 272-7104

November 24, 1992

CERTIFIED MAIL # P 648 747 340

Mr. Willis M. Kitchen
President
Gulf Coast Recycling, Inc.
1901 N. 66th Street
Tampa, FL 33619

Re: Hillsborough County - AP
DER File No. AC29-209018

Dear Mr. Kitchen:

Please be advised that the Environmental Protection Commission of Hillsborough County (EPC) and the Florida Department of Environmental Regulation (DER) have completed their latest review of the above application and found it to be incomplete. In order to complete the review process two copies of the following additional information is being requested pursuant to Chapter 17-4.070, F.A.C.:

1. Pursuant to your October 26, 1992 response, the new furnace size was given as 36 inches by 72 inches and described as oval. Equipment is referred to in the project description of any permit by dimension (or capacity), description, and by a unique plant identification scheme. Please be advised that the new blast furnace will appear in the project description as 36" x 72" oval blast furnace No. 1. In addition, since no capacity was submitted for the unit, the capacity will be taken to be the requested permit allowable input process rate of 6 TPH.

2. Gulf Coast Recycling (GCR) has indicated that SO_2 emissions from the blast furnace in part can be directly affected by the amount of iron charged. There may be affects from the materials as well. In addition, GCR has also indicated there is currently not a good method available for measuring how much material is charged on a weight basis for the batch operation. Conducting a test at the rate requested in the permit application would show only for the period of the test and for conditions existing during the test if the requested allowable can or can not be met. A test would only be considered acceptable as reasonable assurance for compliance if a material balance could be done on the process and

show where all the sulfur comes in and leaves the process. Given the variable nature of the sulfur in the scrap and the materials, this does not appear to be possible with any degree of confidence. Testing at the proposed process rate is denied at this time because it would not serve any purpose since a material balance can not be completed.

Based on the information available and due to the variability of the process, GCR can not provide EPC and DER reasonable assurance that the emission limitation for SO_2 can be met at the requested process rate. If you have additional information that you would like the EPC and DER to consider please submit it with your response.

3. In the October 26, 1992 response a request was made by GCR to set the permitted allowable rates just below each pollutants trigger for PSD and other applicable regulations. Table 500-2 in Chapter 17-2.500, F.A.C., lists the pollutant triggers for PSD determinations. This information in Table 500-2 can be used to establish allowable rates. Please be advised that before the emission limitations can be set as requested, GCR must request specific limitations and then provide reasonable assurance that the limitations can be met.

Some of the allowable limitations requested by GCR in previous responses are inconsistent. The latest response requested the PM allowable rate be set at 1.64 lbs./hr. The Pb requested allowable rate was 1.81 lbs./hr. Since Pb is a fraction of the PM, the PM allowable must be equal to or greater than the Pb allowable. In addition, no specific rates have been requested for the charging and tapping operation, which are also part of this application. Also capture efficiency and fugitive losses from the charging and tapping operating have not been addressed.

Please submit an allowable particulate and lead emission rate for <u>each</u> of the following: blast furnace, charging operation, and tapping operation. Include capture efficiency and fugitive losses from the charging and tapping operations. Please be advised that the Department is using 374 lbs./hr. as the requested allowable emission rate for SO_2 from the blast furnace. If this is incorrect, please advise us of the correct rate in your response.

Based on the information submitted, the EPC and the DER have determined that PSD significant levels have been exceeded for SO_2. In addition, without controls the increments have been exceeded for CO (see item No. 5 of this letter). Please complete part VI (Best Available Control Technology) of the application in accordance with Chapter 17-2.500, F.A.C. and submit to DER in Tallahassee.

4. If GCR wishes to use a control efficiency from an afterburner for determining CO and VOC emissions, Section IV of the application must be completed. The EPC and DER understand the MACT standards are not available yet, however, the PSD considerations must be addressed now. GCR may want to consider looking into the Early Reduction Program to see if you qualify for compliance extensions to meet the MACT standards if the afterburner is installed now.

"NOTICE! Pursuant to the provisions of Section 120.600 F.S., if the Department does not receive a response to this request for information within 90 days of the date of this letter, the Department will issue a final order denying your application. You need to respond within 30 days after you receive this letter, responding to as many of the information requests as possible and indicating when a response to any unanswered question will be Mr. submitted. If the response will require longer than 90 days to develop, an application for new construction should be withdrawn and resubmitted when completed information is available. Or for operating permits, you should develop a specific time table for the submission of the requested information for Department review and consideration. Failure to comply with a time table accepted by the Department will be grounds for the Department to issue a Final Order of Denial for lack of timely response. A denial for lack of information or response will be unbiased as to the merits of the application. The applicant can reapply as soon as the requested information is available."

Please be advised your application is being forwarded to the Bureau of Air Regulations Central Air Permitting staff in the Tallahassee DER office for processing as a PSD application. The response to this letter should be sent to Clair Fancy in Tallahassee and copies should be sent to EPC and DER Southwest District office.

If you have any questions, please feel free to contact me at (813) 272-5530.

Sincerely,

Liz Deken

Liz Deken
Engineer

bm

cc: Dave Zell, FDER SW-District
Robert E. Wallace, P.E., Environmental Engineering Consultants, Inc.
Preston Lewis, FDER-Tallahassee

GULF COAST RECYCLING, INC.

1901 NORTH 66th STREET • TAMPA, FLORIDA 33619
PHONE: (813) 626-6151 FAX: (813) 622-8388

December 29, 1992

RECEIVED
DEC 30 1992
E.P.C. OF H.C.
AIR PROGRAM

Liz Deken, Engineer
Environmental Protection Commission
of Hillsborough County
1410 N. 21st Street
Tampa, Florida 33605

RE: Hillsborough County - AP
DER File No. AC29-209018

Dear Ms. Deken:

Gulf Coast Recycling, Inc. is in receipt of your most recent letter concerning the after-the-fact construction permit for the blast furnace.

The Company still maintains that PSD for sulfur dioxide has not been triggered because of the previously agreed upon method for establishing a baseline. Gulf Coast Recycling, however, will agree to perform a PSD determination to establish what controls for SO2 are feasible and commits to installation of feasible controls provide it is granted sufficient time to do so.

Regarding paragraph 3 of your letter, the Company will submit a chart indicating requested allowables for particulate and lead emission rates, shortly after the results of the recent stack tests are received.

In paragraph 2 of your letter you refer to the lack of a material balance for sulfur. Please be advised that we are presently accumulating information from other secondary smelters and battery manufacturers in order to complete a material balance for sulfur.

Gulf Coast Recycling, Inc., respectfully requests that it be given 150 days to complete the referenced application to include PSD determinations for sulfur dioxide and carbon monoxide. The investigation into sulfur dioxide controls has already begun, and as discussed with you and Jerry Campbell during your recent visit, it is going to be a difficult and time consuming investigation.

If you have any questions or require additional information, please do not hesitate to call.

Sincerely,

GULF COAST RECYCLING, INC.

Joyce Morales-Caramella

Joyce Morales-Caramella
Environmental & Health Manager

Is your RETURN ADDRESS completed on the reverse side?

SENDER:
- Complete items 1 and/or 2 for additional services.
- Complete items 3, and 4a & b.
- Print your name and address on the reverse of this form so that we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write "Return Receipt Requested" on the mailpiece below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):
1. ☐ Addressee's Address
2. ☐ Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:
Joyce Morales-Carmella
Gulf Coast Recycling
1901 N. 66th St.
Tampa, Fl 33619

4a. Article Number
P 360 528 707

4b. Service Type
☐ Registered ☐ Insured
☑ Certified ☐ COD
☐ Express Mail ☐ Return Receipt for Merchandise

7. Date of Delivery
4-26-93

5. Signature (Addressee)
Connie Rodriguez

8. Addressee's Address (Only if requested and fee is paid)

6. Signature (Agent)

PS Form 3811, December 1991 ☆U.S. GPO: 1992—323-402 **DOMESTIC RETURN RECEIPT**

Thank you for using Return Receipt Service.

P 360 528 707

Receipt for Certified Mail
No Insurance Coverage Provided
Do not use for International Mail
(See Reverse)

UNITED STATES POSTAL SERVICE

Sent to
Joyce Morales-Carmella
Street and No.
Gulf Coast Recy
P.O. State and ZIP Code
Tampa, Fl

Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, and Addressee's Address	
TOTAL Postage & Fees	$
Postmark or Date	Response 4-23-93

PS Form 3800, June 1991

COMMISSION
PHYLLIS BUSANSKY
JOE CHILLURA
PAM IORIO
SYLVIA KIMBELL
JAN KAMINIS PLATT
JAMES D. SELVEY
ED TURANCHIK

FAX (813) 272-5157

ENVIRONMENTAL PROTECTION COMMISSION
HILLSBOROUGH COUNTY

ROGER P. STEWART
EXECUTIVE DIRECTOR
ADMINISTRATIVE OFFICES
AND
WATER MANAGEMENT DIVISION
1900 - 9TH AVENUE
TAMPA, FLORIDA 33605
TELEPHONE (813) 272-5960

AIR MANAGEMENT DIVISION
TELEPHONE (813) 272-5530

WASTE MANAGEMENT DIVISION
TELEPHONE (813) 272-5788

ECOSYSTEMS MANAGEMENT DIVISION
TELEPHONE (813) 272-7104

~~MIRZA~~ JB ~~CAF~~ Patty - file "Gulf Coast Recycling"

November 24, 1992

Interesting! I wonder what this is all about?? Preston 12/1

CERTIFIED MAIL # P 648 747 340

Mr. Willis M. Kitchen
President
Gulf Coast Recycling, Inc.
1901 N. 66th Street
Tampa, FL 33619

RECEIVED
NOV 30 1992
Division of Air
Resources Management

Re: Hillsborough County - AP
DER File No. AC29-209018

Dear Mr. Kitchen:

Please be advised that the Environmental Protection Commission of Hillsborough County (EPC) and the Florida Department of Environmental Regulation (DER) have completed their latest review of the above application and found it to be incomplete. In order to complete the review process two copies of the following additional information is being requested pursuant to Chapter 17-4.070, F.A.C.:

1. Pursuant to your October 26, 1992 response, the new furnace size was given as 36 inches by 72 inches and described as oval. Equipment is referred to in the project description of any permit by dimension (or capacity), description, and by a unique plant identification scheme. Please be advised that the new blast furnace will appear in the project description as 36" x 72" oval blast furnace No. 1. In addition, since no capacity was submitted for the unit, the capacity will be taken to be the requested permit allowable input process rate of 6 TPH.

2. Gulf Coast Recycling (GCR) has indicated that SO_2 emissions from the blast furnace in part can be directly affected by the amount of iron charged. There may be affects from the materials as well. In addition, GCR has also indicated there is currently not a good method available for measuring how much material is charged on a weight basis for the batch operation. Conducting a test at the rate requested in the permit application would show only for the period of the test and for conditions existing during the test if the requested allowable can or can not be met. A test would only be considered acceptable as reasonable assurance for compliance if a material balance could be done on the process and

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show where all the sulfur comes in and leaves the process. Given the variable nature of the sulfur in the scrap and the materials, this does not appear to be possible with any degree of confidence. Testing at the proposed process rate is denied at this time because it would not serve any purpose since a material balance can not be completed.

Based on the information available and due to the variability of the process, GCR can not provide EPC and DER reasonable assurance that the emission limitation for SO_2 can be met at the requested process rate. If you have additional information that you would like the EPC and DER to consider please submit it with your response.

3. In the October 26, 1992 response a request was made by GCR to set the permitted allowable rates just below each pollutants trigger for PSD and other applicable regulations. Table 500-2 in Chapter 17-2.500, F.A.C., lists the pollutant triggers for PSD determinations. This information in Table 500-2 can be used to establish allowable rates. Please be advised that before the emission limitations can be set as requested, GCR must request specific limitations and then provide reasonable assurance that the limitations can be met.

Some of the allowable limitations requested by GCR in previous responses are inconsistent. The latest response requested the PM allowable rate be set at 1.64 lbs./hr. The Pb requested allowable rate was 1.81 lbs./hr. Since Pb is a fraction of the PM, the PM allowable must be equal to or greater than the Pb allowable. In addition, no specific rates have been requested for the charging and tapping operation, which are also part of this application. Also capture efficiency and fugitive losses from the charging and tapping operating have not been addressed.

Please submit an allowable particulate and lead emission rate for <u>each</u> of the following: blast furnace, charging operation, and tapping operation. Include capture efficiency and fugitive losses from the charging and tapping operations. Please be advised that the Department is using 374 lbs./hr. as the requested allowable emission rate for SO_2 from the blast furnace. If this is incorrect, please advise us of the correct rate in your response.

Based on the information submitted, the EPC and the DER have determined that PSD significant levels have been exceeded for SO_2. In addition, without controls the increments have been exceeded for CO (see item No. 5 of this letter). Please complete part VI (Best Available Control Technology) of the application in accordance with Chapter 17-2.500, F.A.C. and submit to DER in Tallahassee.

4. If GCR wishes to use a control efficiency from an afterburner for determining CO and VOC emissions, Section IV of the application must be completed. The EPC and DER understand the MACT standards are not available yet, however, the PSD considerations must be addressed now. GCR may want to consider looking into the Early Reduction Program to see if you qualify for compliance extensions to meet the MACT standards if the afterburner is installed now.

"NOTICE! Pursuant to the provisions of Section 120.600 F.S., if the Department does not receive a response to this request for information within 90 days of the date of this letter, the Department will issue a final order denying your application. You need to respond within 30 days after you receive this letter, responding to as many of the information requests as possible and indicating when a response to any unanswered question will be Mr. submitted. If the response will require longer than 90 days to develop, an application for new construction should be withdrawn and resubmitted when completed information is available. Or for operating permits, you should develop a specific time table for the submission of the requested information for Department review and consideration. Failure to comply with a time table accepted by the Department will be grounds for the Department to issue a Final Order of Denial for lack of timely response. A denial for lack of information or response will be unbiased as to the merits of the application. The applicant can reapply as soon as the requested information is available."

Please be advised your application is being forwarded to the Bureau of Air Regulations Central Air Permitting staff in the Tallahassee DER office for processing as a PSD application. The response to this letter should be sent to Clair Fancy in Tallahassee and copies should be sent to EPC and DER Southwest District office.

If you have any questions, please feel free to contact me at (813) 272-5530.

Sincerely,

Liz Deken

Liz Deken
Engineer

bm

cc: Dave Zell, FDER SW-District
Robert E. Wallace, P.E., Environmental Engineering Consultants, Inc.
Preston Lewis, FDER-Tallahassee

5-1-92
REFINING

MAY 0 7 1992

Florida Department of Environmental Regulation

Southwest District • 4520 Oak Fair Boulevard • Tampa, Florida 33610-7347
Lawton Chiles, Governor 813-620-6100 Carol M. Browner, Secretary

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION
NOTICE OF PERMIT ISSUANCE

CERTIFIED MAIL

Mr. Willis M. Kitchen
President
Gulf Coast Recycling, Inc.
1901 North 66th Street
Tampa, FL 33619

DER File No.: AO29-173309
County: Hillsborough

Enclosed is Permit Number AO29-173309 to operate the lead refining area, issued pursuant to Section 403.087, Florida Statutes.

A person whose substantial interests are affected by this permit may petition for an administrative proceeding (hearing) in accordance with Section 120.57, Florida Statutes. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 2600 Blair Stone Road, Tallahassee 32399-2400, within fourteen (14) days of receipt of this permit. Petitioner shall mail a copy of the petition to the applicant at the address indicated above at the time of filing. Failure to file a petition within this time period shall constitute a waiver of any right such person may have to request an administrative determination (hearing) under Section 120.57, Florida Statutes.

The Petition shall contain the following information:

(a) The name, address, and telephone number of each petitioner, the applicant's name and address, the Department Permit File Number and the county in which the project is proposed;
(b) A statement of how and when each petitioner received notice of the Department's action or proposed action;
(c) A statement of how each petitioner's substantial interests are affected by the Department's action or proposed action;
(d) A statement of the material facts disputed by petitioner, if any;
(e) A statement of facts which petitioner contends warrant reversal or modification of the Department's action or proposed action;

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(f) A statement of which rules or statutes petitioner contends required reversal or modification of the Department's action or proposed action; and

(g) A statement of the relief sought by petitioner, stating precisely the action petitioner wants the Department to take with respect to the Department's action or proposed action.

If a petition is filed, the administrative hearing process is designed to formulate agency action. Accordingly, the Department's final action may be different from the position taken by it in this permit. Persons whose substantial interests will be affected by any decision of the Department with regard to the application have the right to petition to become a party to the proceeding. The petition must conform to the requirements specified above and be filed (received) within 14 days of receipt of this notice, in the Office of General Counsel at the above address of the Department. Failure to petition within the allotted time frame constitutes a waiver of any right such person has to request a hearing under Section 120.57, F.S., and to participate as a party to this proceeding. Any subsequent intervention will only be at the approval of the presiding officer upon motion filed pursuant to Rule 28-5.207, F.A.C.

This permit is final and effective on the date filed with the Clerk of the Department unless a petition is filed in accordance with the above paragraphs or unless a request for extension of time in which to file a petition is filed within the time specified for filing a petition and conforms to Rule 17-103.070, F.A.C. Upon timely filing of a petition or a request for an extension of time this permit will not be effective until further Order of the Department.

When the Order (Permit) is final, any party to the Order has the right to seek judicial review of the Order pursuant to Section 120.68, Florida Statutes, by the filing of a Notice of Appeal pursuant to Rule 9.110, Florida Rules of Appellate Procedure, with the Clerk of the Department in the Office of General Counsel, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400; and by filing a copy of the Notice of Appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The Notice of Appeal must be filed within 30 days from the date the Final Order is filed with the Clerk of the Department.

Executed in Tampa, Florida

Sincerely,

J. Harry Kerns

J. Harry Kerns, P.E.
District Air Engineer

JHK/DJG/bm

Attachment:

cc: Environmental Protection Commission
of Hillsborough County
Robert E. Wallace, P.E., Environmental Engineering Consultants, Inc.

CERTIFICATE OF SERVICE

This is to certify that this NOTICE OF PERMIT ISSUANCE and all copies were mailed by certified mail before the close of business on APR 3 0 1992 to the listed persons.

FILING AND ACKNOWLEDGEMENT FILED, on this date, pursuant to Section 120.52(11), Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.

Marilyn Quispe
Clerk

APR 3 0 1992
Date

Florida Department of Environmental Regulation

Southwest District • 4520 Oak Fair Boulevard • Tampa, Florida 33610-7347

Lawton Chiles, Governor 813-620-6100 Carol M. Browner, Secretary

PERMITTEE:
Gulf Coast Recycling, Inc.
1901 North 66th Street
Tampa, FL 33619

PERMIT/CERTIFICATION
Permit No: AO29-173309
County: Hillsborough
Expiration Date: 04/28/97
Project: Refining Operation

This permit is issued under the provisions of Chapter 403, Florida Statutes, and Florida Administrative Code Rules 17-2 and 17-4. The above named permittee is hereby authorized to perform the work or operate the facility shown on the application and approved drawing(s), plans and other documents, attached hereto or on file with the department and made a part of hereof and specifically described as follows:

For the operation of the lead refining area. The lead refining area consists of three (3) refining kettles. Each kettle has a charging capacity of 52 tons per batch, is fired solely on natural gas with a maximum heat input rate of 4.0 MMBtu/hr. per kettle. Each kettle produces a different lead product as detailed below:

Kettle No. 1 - Constructed in 1978 under the Department Permit No. AC29-126056. The kettle is used primarily to produce hard lead using a combination of blast lead, antimony, arsenic, sulfur, tin, red phosphorus and selenium, or to produce soft lead.

Kettle No. 2- Constructed in 1980 under the Department Permit No. AC29-21078. The kettle is used primarily to produce calcium lead using a combination of soft lead from kettle No. 3 or No. 1, calcium and aluminum.

Kettle No. 3 - Constructed in 1984 without a Department permit and later covered by the after-the-fact Department Permit No. AC29-184883 issued in 1991. The kettle is used primarily to produce soft lead using a combination of blast lead, sodium nitrate, sodium hydroxide, sulfur, red phosphorus and aluminum or to produce hard lead.

Emissions of particulate matter and lead generated from the lead refining area are controlled by two (2) Wheelabrator-Frye, Model 126 baghouses in parallel and exhausted through a common stack at a design air flow rate of 15,714 dscfm.

Location: 1901 North 66th Street, Tampa

UTM: 17-364.0 E 3093.6 N NEDS NO: 0057 Point ID: 02

Replaces Permit No.: AC29-184883 and AO29-95365

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PERMITTEE:
Gulf Coast Recycling, Inc.

PERMIT/CERTIFICATION NO.: AO29-173309
PROJECT: Refining Operation

SPECIFIC CONDITIONS:

1. A part of this permit is the attached 15 General Conditions.

2. Total maximum allowable emissions of particulate matter from the lead refining area baghouse shall not exceed 0.03 gr/dscf, 4.04 pounds per hour and 12.12 tons per year. [Rule 17-2.650(2)(c)12.b., F.A.C.]

3. Total maximum allowable emissions of lead from the lead refining area baghouse shall not exceed 0.20 pounds per hour and 0.60 tons per year. [Permit No. AC29-184883]

4. Visible emissions from the lead refining area baghouse and building shall not exceed five (5) percent opacity. [40 CFR 52.535(c)(1)ii and vi]

5. The following restrictions and limitations shall apply for any consecutive twelve (12) month period: [Rule 17-4.070(3), F.A.C.]

A) Hours of Operation: 6,000 hrs.
B) Maximum Heat Input Rate: 4.0 MMBtu/hr. per kettle
C) Fuel(s): Natural Gas
D) Operating Mode: Only two (2) kettles may be operating at a time
E) Production: 30,000 tons/yr. of finished lead

6. Any time that a kettle is being heated to refine lead or to bring it to temperature prior to receiving a charge of lead or it contains a charge of lead irregardless of whether heat is being applied, the kettle shall be vented to the baghouse and the baghouse shall be operational. This time shall count towards the 6,000 hours allowed during any twelve (12) consecutive month period.

7. Test the emissions from the lead refining operation baghouse and the lead refining kettles for the following pollutant(s) at intervals of 12 months (± 30 days) from November 13, 1991 and submit 2 copies of test data to the Air Section of the Environmental Protection Commission of Hillsborough County office within forty-five days of such testing. Testing procedures shall be consistent with the requirements of Rule 17-2.700(2), F.A.C.:

(X) Particulates
(X) Opacity
(X) Lead

8. Compliance with the emission limitations of Specific Condition Nos. 2, 3 and 4 shall be determined using EPA Methods 1, 2, 3, 4, 5, 9 and 12 contained in 40 CFR 60, Appendix A and adopted by reference in Rule 17-2.700, F.A.C. In the case of Method 9, Section 2.5 shall be excluded, pursuant to CFR 52.535(b)(5); thus waiving the six minute averaging period and establishing an instantaneous standard. The minimum requirements for stack sampling facilities, source sampling and reporting, shall be in accordance with Rule 17-2.700, F.A.C. and 40 CFR 60, Appendix A.

SPECIFIC CONDITIONS: (continued)

9. The visible emission tests on the lead refining area baghouse and the building shall be at least thirty (30) minutes in duration pursuant to Section 17-2.700, F.A.C., and shall be conducted concurrent with one of the Method 12 runs. [Permit No. AC29-184883]

10. The discharge of air pollutants which cause or contribute to an objectionable odor is prohibited. [Rule 17-2.620(2), F.A.C.]

11. Testing of emissions must be accomplished while two (2) kettles are operating. The actual charging rate and type of materials charged during the test shall be specific in each test result. Failure to include the actual process or production rate in the results may invalidate the test. [Rule 17-4.070(3), F.A.C.]

12. Non-process fugitive emissions (road dust, stockpiles, plant grounds, etc.) shall be minimized. Minimization efforts shall include such fugitive dust suppression activities as chemical stabilization, water spraying with appropriate runoff collection, resurfacing, sweeping, revegetation, and other EPA approved methods. [40 CFR 52.535(b)(2)]

13. The permittee shall maintain continuous records of plant process and emission control operations as necessary to determine continuous compliance. Such records shall include reports of all process operations and control equipment operating parameters. Such records shall also include reports of all types of process upsets and emission control equipment malfunctions detailing the nature and duration of the upset or malfunction, the expected effects on emissions, and the corrective actions taken or planned to avoid recurrences. Such records shall be available at the plant site for inspection for a period of at least two (2) years. [40 CFR 52.535(b)(4)]

14. The Environmental Protection Commission of Hillsborough County shall be notified in writing 15 days in advance of any compliance test to be conducted on this source. [Rules 17-2.800 and 17-2.710, F.A.C.]

15. Submit for this facility, each calendar year, on or before March 1, an emission report for the preceding calendar year containing the following information pursuant to Subsection 403.061(13), Florida Statutes:

A) Annual amount of materials and/or fuels utilized.
B) Annual emissions (note calculation basis).
C) Any changes in the information contained in the permit application.

Duplicate copies of all reports shall be submitted to the Environmental Protection Commission of Hillsborough County.

SPECIFIC CONDITIONS: (continued)

16. Operation and Maintenance Plan for Particulate Control: [Rule 17-2.650(2), F.A.C.]

A) Process Parameters:

1. Source Designators: Lead Refining Area
2. Baghouse Manufacturer: Gulf Coast Recycling, Inc.
3. Model Name and Number: Similar to Wheelabrator-Frye, Model No. 126, Dust Tube Dust Collector
4. Design Flow Rate: 17,000 ACFM
5. Efficiency Rating at Design Capacity: 99+%
6. Pressure Drop: 1-5" H_2O
7. Air to Cloth Ratio: 2 to 1
8. Bag Weave: Sateen Weave
9. Bag Material: 10 oz. Acrylic, Snow Filtration #7-137
10. Bag Cleaning Conditions: Shaker
11. Gas Flow Rate: 14,000 to 16,500 ACFM
12. Gas Temperatures: 95 to 100° outlet
13. Stack Height Above Ground: 25 ft.
14. Exit Diameter: 2 feet
15. Exit Velocity: 70 f.p.s.
16. Water Vapor Content: 2.0 %
17. Process Controlled by Collection System: Lead Refining Area
18. Material Handling Rate: 52 tons per charge
19. Operation Schedule: 24 hrs./day; 5 days/wk.; 50 wks./yr.

B) The following observations, checks and operations apply to this source and shall be conducted on the schedule specified:

Operation Plan

1. The baghouses' fan shall be turned on prior to charging the refining kettles and shall remain on until all of the lead is pumped from the kettle.
2. Every morning the refining area is in operation, a leadman or foreman in the refining area will manually actuate the shaker motors and shake the bags for a minimum of two minutes.

Maintenance Plan

1. Manometer readings will be looked at each day the baghouses are in use. If the pressure drop is greater than four inches, the compartment will be shutdown and the bags shaken for a minimum of two minutes. If this does not decrease the pressure drop, the baghouse may be entered to determine the problem.
2. The shaker motors will be inspected by a maintenance man approximately three times each week.

SPECIFIC CONDITIONS: (continued)

3. The stack will be observed each day for visible opacity. If there are any detectable emissions, the system will be checked and baghouses entered, as necessary.
4. A complete visual inspection of the hoods, ductwork, baghouses and fans will be conducted at least once each month to check for outward signs of damage, leaks, etc. Any damage will be repaired immediately.
5. The baghouse hoppers shall be emptied at least once each week.
6. Capture velocities within the hoods and drossing enclosures, in the refining area, will be measured quarterly. Low measurements will result in a thorough inspection of the ductwork, hoods, baghouses, etc.
7. This source shall be tested once each year in accordance with the permit requirements for the source.

C) Records:

Records of inspections, maintenance, and performance parameters shall be retained for a minimum of two years and shall be made available to the Department or Environmental Protection Commission of Hillsborough County upon request. [Rule 17-2.650(2)(g)5., F.A.C.]

17. An application for renewal of permit to operate this source, completed in quadruplicate, shall be submitted to the Environmental Protection Commission of Hillsborough County at least 60 days prior to its expiration date. [Rule 17-4.090, F.A.C.]

STATE OF FLORIDA DEPARTMENT OF
ENVIRONMENTAL REGULATION

For Richard Garrity, Ph.D.
Director of District Management

ATTACHMENT - GENERAL CONDITIONS:

1. The terms, conditions, requirements, limitations and restrictions set forth in this permit, are "permit conditions" and are binding and enforceable pursuant to Sections 403.141, 403.161, 403.727, or 403.859 through 403.861, Florida Statutes. The permittee is placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of these conditions.

2. This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.

3. As provided in subsections 403.087(6) and 403.722(5), F.S., the issuance of this permit does not convey any vested rights or any exclusive privileges. Neither does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, State, or local laws or regulations. This permit is not a waiver of or approval of any other Department permit that may be required for other aspects of the total project which are not addressed in this permit.

4. This permit conveys no title to land or water, does not constitute State recognition or acknowledgement of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the State. Only the Trustees of the Internal Improvement Trust Fund may express State opinion as to title.

5. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, or plant life, or property caused by the construction or operation of this permitted source, or from penalties therefore; nor does it allow the permittee to cause pollution in contravention of Florida Statutes and Department rules, unless specifically authorized by an order from the Department.

6. The permittee shall properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed and used by the permittee to achieve compliance with the conditions of this permit, are required by Department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by Department rules.

7. The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, upon presentation of credentials or other documents as may be required by law and at reasonable times, access to the premises where the permitted activity is located or conducted to:

(a) Have access to and copy any records that must be kept under conditions of the permit;

(b) Inspect the facility, equipment, practices, or operations regulated or required under this permit; and

14. The permittee shall comply with the following:

(a) Upon request, the permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records will be extended automatically unless otherwise stipulated by the Department.

(b) The permittee shall hold at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation) required by the permit, copies of all reports required by this permit, and records of all data used to complete the application for this permit. These materials shall be retained at least three years from the date of the sample, measurement, report, or application unless otherwise specified by Department rule.

(c) Records of monitoring information shall include:

1. the date, exact place, and time of sampling or measurements;
2. the person responsible for performing the sampling or measurements;
3. the dates analyses were performed;
4. the person responsible for performing the analyses;
5. the analytical techniques or methods used;
6. the results of such analyses.

15. When requested by the Department, the permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the permittee becomes aware the relevant facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be corrected promptly.

Entm 2-4-92
REFINING

Florida Department of Environmental Regulation

Twin Towers Office Bldg. ● 2600 Blair Stone Road ● Tallahassee, Florida 32399-2400

Lawton Chiles, Governor

Carol M. Browner, Secretary

February 4, 1992

CERTIFIED MAIL-RETURN RECEIPT REQUESTED

Mr. Willis M. Kitchen, President
Gulf Coast Recycling, Inc.
1901 North 66th Street
Tampa, Florida 33619

Dear Mr. Kitchen:

Attached is one copy of the revised Technical Evaluation and Preliminary Determination and proposed construction permit to Gulf Coast Recycling, Inc. for the modification of the lead refining area. This facility is located on 1901 North 66th Street, Tampa Hillsborough County, Florida.

Please publish the attached "Notice of Intent to Issue" in the legal ad section of a newspaper of general circulation in the area affected and submit the proof of publication to the Department within seven (7) days of publication, along with any written comments you wish to have considered concerning the Department's proposed action, to Mr. Barry Andrews of the Bureau of Air Regulation.

Sincerely,

For
C. H. Fancy, P.E.
Chief
Bureau of Air Regulation

CHF/MB/kt

Attachments

c: R. E. Wallace, P.E.
B. Thomas, SWD
I. Choronenko, EPCHC
G. Worley, EPA
J. Glunn, FDER

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STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

In the Matter of an
Application for Permit by:

Gulf Coast Recycling, Inc.
1901 N. 66th Street
Tampa, Florida 33619

DER File No. AC 29-184883
Hillsborough County

_____/

INTENT TO ISSUE

The Department of Environmental Regulation gives notice of its intent to issue a modified air construction permit (copy attached) for the proposed project as detailed in the application specified above, for the reasons stated below. The Department is issuing this Intent to Issue for the reasons stated in the attached revised Technical Evaluation and Preliminary Determination.

The applicant, Gulf Coast Recycling, Inc. applied on August 3, 1990, to the Department of Environmental Regulation for an after--the-fact construction permit for kettle No. 3. The applicant modified this construction permit application on December 13, 1991. The modification includes the after-the-fact construction of the No. 3 refining kettle, a decrease in this facility's allowable lead limits, an increase in the hours of operation at the lead refining area and the replacement of permit Nos. AC 29-12606 and AC 29-13078. This facility is located on 1901 N. 66th Street, Tampa, Hillsborough County, Florida.

The Department has permitting jurisdiction under Chapter 403, Florida Statutes, and Florida Administrative Code Chapters 17-2 and 17-4. The project is not exempt from permitting procedures. The Department has determined that a modified air construction permit is required for the proposed work.

Pursuant to Section 403.815, Florida Statutes and DER Rule 17-103.150, F.A.C., you (the applicant) are required to publish at your own expense the enclosed Notice of Intent to Issue Permit. The notice shall be published one time only within 30 days in the legal ad section of a newspaper of general circulation in the area affected. For the purpose of this rule, "publication in a newspaper of general circulation in the area affected" means publication in a newspaper meeting the requirements of Sections 50.011 and 50.031, F.S., in the county where the activity is to take place. Where there is more than one newspaper of general circulation in the county, the newspaper used must be one with significant circulation in the area that may be affected by the permit. If you are uncertain that a

newspaper meets these requirements, please contact the Department at the address or telephone number listed below. The applicant shall provide proof of publication to the Department, at 2600 Blair Stone Road, Twin Towers Office Building, Tallahassee, Florida 32399-2400, within seven days of publication. Failure to publish the notice and provide proof of publication within the allotted time may result in the denial of the permit.

The Department will issue the permit with the attached conditions unless a petition for an administrative proceeding (hearing) is filed pursuant to the provisions of Section 120.57, F.S.

A person whose substantial interests are affected by the Department's proposed permitting decision may petition for an administrative proceeding (hearing) in accordance with Section 120.57, Florida Statutes. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 2600 Blair Stone Road, Tallahassee, Florida 32399-2400. Petitions filed by the permit applicant and the parties listed below must be filed within 14 days of receipt of this intent. Petitions filed by other persons must be filed within 14 days of publication of the public notice or within 14 days of their receipt of this intent, whichever first occurs. Petitioner shall mail a copy of the petition to the applicant at the address indicated above at the time of filing. Failure to file a petition within this time period shall constitute a waiver of any right such person may have to request an administrative determination (hearing) under Section 120.57, Florida Statutes.

The Petition shall contain the following information;

(a) The name, address, and telephone number of each petitioner, the applicant's name and address, the Department Permit File Number and the county in which the project is proposed;
(b) A statement of how and when each petitioner received notice of the Department's action or proposed action;
(c) A statement of how each petitioner's substantial interests are affected by the Department's action or proposed action;
(d) A statement of the material facts disputed by Petitioner, if any;
(e) A statement of facts which petitioner contends warrant reversal or modification of the Department's action or proposed action;
(f) A statement of which rules or statutes petitioner contends require reversal or modification of the Department's action or proposed action; and
(g) A statement of the relief sought by petitioner, stating precisely the action petitioner wants the Department to take with respect to the Department's action or proposed action.

If a petition is filed, the administrative hearing process is designed to formulate agency action. Accordingly, the Department's

final action may be different from the position taken by it in this intent. Persons whose substantial interests will be affected by any decision of the Department with regard to the application have the right to petition to become a party to the proceeding. The petition must conform to the requirements specified above and be filed (received) within 14 days of receipt of this intent in the Office of General Counsel at the above address of the Department. Failure to petition within the allowed time frame constitutes a waiver of any right such person has to request a hearing under Section 120.57, F.S., and to participate as a party to this proceeding. Any subsequent intervention will only be at the approval of the presiding officer upon motion filed pursuant to Rule 28-5.207, F.A.C.

Executed in Tallahassee, Florida.

STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL REGULATION

FOR
C.H. Fancy, P.E., Chief
Bureau of Air Regulation
2600 Blair Stone Road
Tallahassee, Florida 32399-2400
(904)488-1344

CERTIFICATE OF SERVICE

The undersigned duly designated deputy clerk hereby certifies that this INTENT TO ISSUE and all copies were mailed by certified mail before the close of business on 2-5-92 to the listed persons.

Clerk Stamp

FILING AND ACKNOWLEDGMENT

FILED, on this date, pursuant to S.120.52(11), Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.

Clerk 2-5-92 Date

Copies furnished to:

R. E. Wallace, P.E.
B. Thomas, SW District
I. Choronenko, EPCHC
G. Worley, EPA
J. Glunn, FDER

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION
NOTICE OF INTENT TO ISSUE PERMIT

The Department of Environmental Regulation gives notice of its intent to issue a permit to Gulf Coast Recycling, Inc., for the modification of the lead refining area. The modification includes the after-the-fact construction of the No. 3 refining kettle, a decrease in this facility's allowable lead limits, an increase in the hours of operation at the refining area and the replacement of Permit Nos. AC 29-12606 and AC 29-31078. This facility is located on 1901 North 66th Street, Tampa, Hillsborough County, Florida. A determination of Best Available Control Technology (BACT) was not required. The Department is issuing this Intent to Issue for the reasons stated in the Technical Evaluation and Preliminary Determination.

A person whose substantial interests are affected by the Department's proposed permitting decision may petition for an administrative proceeding (hearing) in accordance with Section 120.57, Florida Statutes. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 2600 Blair Stone Road, Tallahassee, Florida 32399-2400, within 14 days of publication of this notice. Petitioner shall mail a copy of the petition to the applicant at the address indicated above at the time of filing. Failure to file a petition within this time period shall constitute a waiver of any right such person may have to request an administrative determination (hearing) under Section 120.57, Florida Statutes.

The Petition shall contain the following information;

(a) The name, address, and telephone number of each petitioner, the applicant's name and address, the Department Permit File Number and the county in which the project is proposed;
(b) A statement of how and when each petitioner received notice of the Department's action or proposed action;
(c) A statement of how each petitioner's substantial interests are affected by the Department's action or proposed action;
(d) A statement of the material facts disputed by Petitioner, if any;
(e) A statement of facts which petitioner contends warrant reversal or modification of the Department's action or proposed action;
(f) A statement of which rules or statutes petitioner contends require reversal or modification of the Department's action or proposed action; and
(g) A statement of the relief sought by petitioner, stating precisely the action petitioner wants the Department to take with respect to the Department's action or proposed action.

If a petition is filed, the administrative hearing process is designed to formulate agency action. Accordingly, the Department's final action may be different from the position taken by it in this Notice. Persons whose substantial interests will be affected by any decision of the Department with regard to the application have the right to petition to become a party to the proceeding. The petition must conform to the requirements specified above and be filed (received) within 14 days of publication of this notice in the Office of General Counsel at the above address of the Department. Failure to petition within the allowed time frame constitutes a waiver of any right such person has to request a hearing under Section 120.57, F.S., and to participate as a party to this proceeding. Any subsequent intervention will only be at the approval of the presiding officer upon motion filed pursuant to Rule 28-5.207, F.A.C.

The application is available for public inspection during normal business hours, 8:00 a.m. to 5:00 p.m., Monday through Friday, except legal holidays, at:

Department of Environmental Regulation
Bureau of Air Regulation
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Department of Environmental Regulation
Southwest District
4520 Oak Fair Boulevard
Tampa, Florida 33610-7347

Environmental Protection Commission
of Hillsborough County
1410 North 21st Street
Tampa, Florida 33605

Any person may send written comments on the proposed action to Mr. Barry Andrews at the Department's Tallahassee address. All comments mailed within 14 days of the publication of this notice will be considered in the Department's final determination.

Revised
Technical Evaluation
and
Preliminary Determination

Gulf Coast Recycling, Inc.
Hillsborough County
Tampa, Florida

Lead Refining Area
Permit Number: AC 29-184883

Florida Department of Environmental Regulation
Division of Air Resources Management
Bureau of Air Regulation

January 27, 1991

I. Application

A. Applicant

Gulf Coast Recycling, Inc.
1901 North 66th Street
Tampa, Florida 33619

B. Project and Location

This project involves issuing a construction permit for the modification of the lead refining area. The modification involves the after-the-fact construction of the No. 3 refining kettle, a decrease in this facility's allowable lead limits, an increase in the hours of operation and the replacement of permit Nos. AC 29- 12606 and AC 29-31028. Emissions from the lead refining area are controlled by two (2) Wheelabrator-Frye Model 126 baghouses in parallel and vented to a common stack.

The applicant, Gulf Coast Recycling, Inc. (GCR), operates a secondary lead smelter at 1901 North 66th Street, Tampa, Hillsborough County, Florida. The UTM coordinates are Zone 17, 364.048 km North and 3093.548 km East.

C. Background Information

GCR, Inc. had constructed kettle No. 3 in 1984 without a Department permit. Although a construction permit was never issued, the operation of kettle No. 3 was addressed in operation permit No. AO 29-95365 that was issued on January 28, 1985. Later, EPA pointed out that an after-the-fact construction permit must be issued for kettle No. 3 for federal enforceability purposes.

On August 3, 1990, GCR, Inc. submitted an application for an after-the-fact construction permit (No. AC 29-184883) for kettle No. 3. A Technical Evaluation and Preliminary Determination and proposed construction permit were issued by the Department on February 8, 1991.

The Department issued a Final Determination along with a construction permit on May 9, 1991, with the exception of a minor change in Specific Condition No. 1.

The construction permit was unacceptable to GCR, Inc. and as a result they appealed the Final Determination to the Second District Court (Appeal No. 91-01768) on June 7, 1991. On August 20, 1991, GCR, Inc. filed a motion for an extension of time requesting until September 14, 1991, to file the initial brief. The Department granted the time extension and agreed to attempt to resolve this matter in a meeting.

On December 10, 1991, a meeting was held in Tallahassee between the representatives of the Department, GCR, Inc. and EPCHC. EPA Region IV was invited to attend the meeting but was unable to attend. After the meeting the Department informed EPA that the following was agreed to by all parties:

1. GCR, Inc. would submit a letter to amend the construction permit application to cover the entire refining area, not just kettle No. 3.

2. A decrease in this facility's allowable lead emissions limits from 0.40 lbs/hr to 0.20 lbs/hr.

3. Limit the production of finished lead to 30,000 tons/year from the lead refining area.

4. A particulate emission limit of 0.03 grs/dscf.

5. An increase in operating time from 4,368 to 6,000 hrs/year.

6. Change the charging capacity for kettle No. 3 from 50 to 52 tons/batch.

7. And a request that the operation and maintenance plan previously submitted by GCR, Inc. not be included with the construction permit application.

Consequently, a revised Technical Evaluation and Preliminary Determination and draft permit are being issued for public comment.

D. Facility Category

The GCR Tampa facility is currently classified as a major lead source by State definition. The facility engages in activities best described in Major Group 33, Industry Group 334 and Industry No. 3341 of the Standard Industrial Classification Manual and the NEDS Source Classification Codes 3-04-004-01, 02, 07, 09, 10, and 14.

II. Project Description

The project involves the modification of the lead refining area and includes the after-the-fact construction of the No. 3 refining kettle, an increase in the hours of operation of the lead refining area and the replacement of permit Nos. AC 29-12606 and AC 29-31078. The lead refining area consists of three (3) refining kettles. Each kettle has a charging capacity of 52 tons per batch, is fired solely on natural gas at a maximum heat input rate 4.0 MMBtu/hr per kettle. Each kettle produces a different lead product as detailed below:

- Kettle No. 1 - Constructed in 1978 under the Department permit No. AC 29-126056 the kettle is used primarily to produce hard lead using a combination of blast lead, antimony, arsenic, sulfur, tin, red phosphorus and selenium or to produce soft lead.

- Kettle No. 2 - Constructed in 1980 under the Department permit No. AC 29-31078 the kettle is used primarily to produce calcium lead using a combination of soft lead from kettle No. 3 or No. 1, calcium and aluminum.

- Kettle No. 3 - Constructed in 1984 without a Department permit the kettle is used primarily to produce soft lead using a combination of blast lead, sodium nitrate, sodium hydroxide, sulfur, red phosphorus and aluminum or to produce hard lead.

Emissions of particulate matter and lead generated from the lead refining area are controlled by two (2) Wheelabrator-Frye Model 126 baghouses in parallel and exhausted through a common stack at a design air flow rate of 15,714 dscfm.

III. Rule Applicability

This facility is in an area designated nonattainment for ozone (Rule 17-2.410, F.A.C.), unclassified for particulate matter and lead (Rule 17-2.430, F.A.C.), and attainment for the other criteria pollutants (Rule 17-2.420, F.A.C.).

This project is not subject to the requirements of Rule 17-2.500, Prevention of Significant Deterioration, F.A.C. or Rule 17-2.510, New Source Review for Nonattainment Areas, F.A.C., since the modification does not result in a significant increase in lead or particulate matter emissions.

This project is subject to the requirements of Rule 17-2.520, Sources Not Subject to Prevention of Significant Deterioration or Nonattainment Requirements, F.A.C., since the project is a modification by State definition.

This project is not subject to the requirements of Rule 17-2.600, Specific Emission Limiting and Performance Standards, F.A.C., since there are no standards for lead refining operations.

This project is subject to the requirements of Rule 17-2.610, General Particulate Emission Limiting Standards, F.A.C., since the refining area is a source of particulate matter emissions.

This project is subject to the requirements of Rule 17-2.620, General Pollutant Emission Limiting Standards, F.A.C., since the refining area is potentially a source of odors.

This project is subject to the requirements of Rule 17-2.650, Reasonably Available Control Technology, F.A.C., since the refining operation is considered a miscellaneous manufacturing process.

This project is subject to the requirements of Rule 17-2.660, Standards of Performance for New Stationary Sources, F.A.C., Subpart L - Standards of Performance for secondary lead smelters.

This project is not subject to the requirements of Rule 17-2.670, National Emission Standards for Hazardous Air Pollutants, F.A.C., since there are no standards for lead refining operations.

This project is subject to the requirements of Chapter 84-446, Laws of Florida, Chapter 1-1 and Chapter 1-3, Rules of the Environmental Protection Commission of Hillsborough County and the Federal Implementation Plan found in 40 CFR 52.520.

IV. Source Impact Analysis

A. Emissions

Pollutant	Current Actuals	Future Allowables	Increase
Particulate Matter	0.882 lbs/hr 1.93 T/yr	4.04 lbs/hr 12.12 T/yr	10.19 T/yr
Lead	0.003 lbs/hr 0.0066 T/yr	0.20 lbs/hr 0.60 T/yr	0.593 T/yr
Visible Emissions	0%	5%	NA

B. Air Quality Impacts

The current ambient air quality standard for lead is set at 1.5 micrograms per cubic meter, on a quarterly average. Since 1990, the Environmental Protection Commission of Hillsborough County has been conducting site specific ambient air quality monitoring for lead at this facility. To date, the monitoring has not exceeded identified an exceedance of the ambient air quality standard. The highest quarterly average to date occurred during the second quarter of 1991 with a reading of 1.53 micrograms per cubic meter.

A dispersion modeling exercise was not required for this modification since allowable lead emissions were being decreased by approximately 50% from those previously modeled. In addition, the refining area has been operating under the restrictions contained in the permit since 1985 and no changes are expected.

V. Conclusion

Based on the information provided by GCR, the Department has reasonable assurance that the lead refining area, as described in this evaluation, and subject to the conditions proposed herein, will not cause or contribute to a violation of any air quality standard, PSD increment, or any other technical provision of Chapter 17-2 of the Florida Administrative Code.

#41755

Florida Department of Environmental Regulation

Twin Towers Office Bldg. ● 2600 Blair Stone Road ● Tallahassee, Florida 32399-2400

Lawton Chiles, Governor

Carol M. Browner, Secretary

PERMITTEE:
Gulf Coast Recycling, Inc.
1901 North 66th Street
Tampa, Florida 33619

Permit Number: AC 29-184883
Expiration Date: June 30, 1992
County: Hillsborough
Latitude/Longitude: 27°57'43"N
82°22'49"W
Project: Lead Refining Area

This permit is issued under the provisions of Chapter 403, Florida Statutes, and Florida Administrative Code Chapters 17-2 and 17-4. The above named permittee is hereby authorized to perform the work or operate the facility shown on the application and approved drawings, plans, and other documents attached hereto or on file with the Department and made a part hereof and specifically described as follows:

For the modification of the lead refining area including the after-the-fact construction of the No. 3 refining kettle, an increase in the hours of operation of the lead refining area and the replacement of permit Nos. AC 29-12606 and AC 29-31078. The lead refining area consists of three (3) refining kettles. Each kettle has a charging capacity of 52 tons per batch, is fired solely on natural gas with a maximum heat input rate of 4.0 MMBtu/hr per kettle. Each kettle produces a different lead product as detailed below:

- Kettle No. 1 - Constructed in 1978 under the Department permit No. AC 29-126056. The kettle is used primarily to produce hard lead using a combination of blast lead, antimony, arsenic, sulfur, tin, red phosphorus and selenium, or to produce soft lead.

- Kettle No. 2 - Constructed in 1980 under the Department permit No. AC 29-31078. The kettle is used primarily to produce calcium lead using a combination of soft lead from kettle No. 3 or No. 1, calcium and aluminum.

- Kettle No. 3 - Constructed in 1984 without a Department permit. The kettle is used primarily to produce soft lead using a combination of blast lead, sodium nitrate, sodium hydroxide, sulfur, red phosphorus and aluminum or to produce hard lead.

Emissions of particulate matter and lead generated from the lead refining area are controlled by two (2) Wheelabrator-Frye Model 126 baghouses in parallel and exhausted through a common stack at a design air flow rate of 15,714 dscfm.

Recycled Paper

PERMITTEE: **Permit Number: AC 29-184883**
Gulf Coast Recycling, Inc. **Expiration Date: June 30, 1992**

This facility is located at 1901 North 66th Street, Tampa, Hillsborough County, Florida. The UTM coordinates are 364.048 km E and 3093.548 km N.

The source shall be constructed in accordance with the permit application, plans, documents, amendments and drawings, except as otherwise noted in the General and Specific Conditions.

Attachments are listed below:

1. Application received August 3, 1990.
2. DER incompleteness letter dated August 29, 1990.
3. Gulf Coast Recycling (GCR), Inc.'s response received November 13, 1990.
4. FDER/EPCHC and GCR, Inc.'s December 10, 1991 meeting record.
5. GCR, Inc.'s letter dated December 13, 1991.
6. GCR, Inc.'s letter dated January 7, 1992.

GENERAL CONDITIONS:

1. The terms, conditions, requirements, limitations, and restrictions set forth in this permit are "Permit Conditions" and are binding and enforceable pursuant to Sections 403.161, 403.727, or 403.859 through 403.861, Florida Statutes. The permittee is placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of these conditions.

2. This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.

3. As provided in Subsections 403.087(6) and 403.722(5), Florida Statutes, the issuance of this permit does not convey any vested rights or any exclusive privileges. Neither does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations. This permit is not a waiver of or approval of any other Department permit that may be required for other aspects of the total project which are not addressed in the permit.

4. This permit conveys no title to land or water, does not constitute State recognition or acknowledgement of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the State. Only the Trustees of the Internal Improvement Trust Fund may express State opinion as to title.

5. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, or plant life, or property caused by the construction or operation of this permitted source, or from penalties therefore; nor does it allow the permittee to cause pollution in contravention of Florida Statutes and Department rules, unless specifically authorized by an order from the Department.

6. The permittee shall properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed or used by the permittee to achieve compliance with the conditions of this permit, as required by Department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by Department rules.

7. The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, upon presentation of credentials or other documents as may be required by law and at a reasonable time, access to the premises, where the permitted activity is located or conducted to:

a. Have access to and copy any records that must be kept under the conditions of the permit;

b. Inspect the facility, equipment, practices, or operations regulated or required under this permit; and

c. Sample or monitor any substances or parameters at any location reasonably necessary to assure compliance with this permit or Department rules.

Reasonable time may depend on the nature of the concern being investigated.

8. If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately provide the Department with the following information:

a. a description of and cause of non-compliance; and

b. the period of noncompliance, including dates and times; or, if not corrected, the anticipated time the non-compliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the non-compliance.

GENERAL CONDITIONS:

The permittee shall be responsible for any and all damages which may result and may be subject to enforcement action by the Department for penalties or for revocation of this permit.

9. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source which are submitted to the Department may be used by the Department as evidence in any enforcement case involving the permitted source arising under the Florida Statutes or Department rules, except where such use is prescribed by Sections 403.73 and 403.111, Florida Statutes. Such evidence shall only be used to the extent it is consistent with the Florida Rules of Civil Procedure and appropriate evidentiary rules.

10. The permittee agrees to comply with changes in Department rules and Florida Statutes after a reasonable time for compliance, provided, however, the permittee does not waive any other rights granted by Florida Statutes or Department rules.

11. This permit is transferable only upon Department approval in accordance with Florida Administrative Code Rules 17-4.120 and 17-30.300, F.A.C., as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the Department.

12. This permit or a copy thereof shall be kept at the work site of the permitted activity.

13. The permittee shall comply with the following:

a. Upon request, the permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records will be extended automatically unless otherwise stipulated by the Department.

b. The permittee shall hold at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation) required by the permit, copies of all reports required by this permit, and

GENERAL CONDITIONS:

records of all data used to complete the application for this permit. These materials shall be retained at least three years from the date of the sample, measurement, report, or application unless otherwise specified by Department rule.

c. Records of monitoring information shall include:

- the date, exact place, and time of sampling or measurements;
- the person responsible for performing the sampling or measurements;
- the dates analyses were performed;
- the person responsible for performing the analyses;
- the analytical techniques or methods used; and
- the results of such analyses.

14. When requested by the Department, the permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the permittee becomes aware that relevant facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be corrected promptly.

SPECIFIC CONDITIONS:

1. The following restrictions and limitations shall apply for any consecutive twelve (12) month period: [Rule 17-4.070(3), F.A.C.]

a. Hours of Operation: 6,000 hrs
b. Maximum Heat Input Rate: 4.0 MMBtu/hr per kettle
c. Fuel(s): Natural Gas
d. Operating Mode: Only two (2) kettles may be operating at a time
e. Production: 30,000 tons/year of finished lead

2. Total maximum allowable emissions of particulate matter from the lead refining area baghouse shall not exceed 0.03 gr/dscf, 4.04 pounds per hour and 12.12 tons per year. [Rule 17-2.650(2)(c)12.b., F.A.C.]

3. Total maximum allowable emissions of lead from the lead refining area baghouse shall not exceed 0.20 pounds per hour and 0.60 tons per year. [Construction Application]

4. Visible emissions from the lead refining area baghouse and building shall not exceed five (5) percent opacity. [40 CFR 52.535(c)(1)ii and VI]

5. Test the emissions from the lead refining operation baghouse and the lead refining kettles for the following pollutant(s) at intervals of 12 months from November 13, 1991, (within ± 30 days) and submit 2 copies of test data to the Air Section of the Environmental Protection Commission of Hillsborough County office within forty-five (45) days of such testing. Testing procedures shall be consistent with the requirements of Rule 17-2.700, F.A.C.:

(x) Particulates
(x) Lead
(x) Opacity

6. Compliance with the emission limitations of Specific Condition Nos. 2, 3 and 4 shall be determined using EPA Methods 1, 2, 3, 4, 5, 9 and 12 contained in 40 CFR 60, Appendix A and adopted by reference in Rule 17-2.700, F.A.C. In the case of the Method 9, Section 2.5 shall be excluded, pursuant to 40 CFR 52.535(b)(5); thus waiving the six minute averaging period and establishing an instantaneous standards. The minimum requirements for stack sampling facilities, source sampling and reporting, shall be in accordance with Rule 17-2.700, F.A.C. and 40 CFR 60, Appendix A.

7. The visible emission tests on the lead refining area baghouse and the building shall be at least thirty (30) minutes in duration pursuant to Section 17-2.700, F.A.C., and shall be conducted concurrent with one of the Method 12 runs.

8. The discharge of air pollutants which cause or contribute to an objectionable odor is prohibited. [Rule 17-2.620(2), F.A.C.]

9. Testing of emissions must be accomplished while two (2) kettles are operating. The actual charging rate and type of materials charged during the test shall be specific in each test result. Failure to include the actual process or production rate in the results may invalidate the test. [Rule 17-4.070(3), F.A.C.]

10. Non-process fugitive emissions (road dust, stockpiles, plant grounds, etc.) shall be minimized. Minimization efforts shall include such fugitive dust suppression activities as chemical stabilization, water spraying with appropriate runoff collection, resurfacing, sweeping, revegetation, and other EPA approved methods. [40 CFR 52.535(b)(2)].

11. The permittee shall maintain continuous records of plant process and emission control operations as necessary to determine continuous compliance. Such records shall include reports of all process operations and control equipment operating parameters. Such records shall also include reports of all types of process upsets and

emission control equipment malfunctions detailing the nature and duration of the upset or malfunction, the expected effects on emissions, and the corrective actions taken or planned to avoid recurrences. Such records shall be available at the plant site for inspection for a period of at least two (2) years. [40 CFR 52.535(b)(4)]

12. The Environmental Protection Commission of Hillsborough County shall be notified in writing 15 days in advance of any compliance test to be conducted on this source. [Rules 17-2.800 and 17-2.710, F.A.C.]

13. Submit for this facility, each calendar year, on or before March 1, an emission report for the preceding calendar year containing the following information pursuant to Subsection 403.061(13), Florida Statutes:

(a) Annual amount of materials and/or fuels utilized
(b) Annual emissions (note calculation basis)
(c) Any changes in the information contained in the permit application

14. The permittee shall comply with all applicable provisions of F.A.C. Chapters 17-2 and 17-4, and the EPCHC rules.

15. The permittee, for good cause, may request that this construction permit be extended. Such a request shall be submitted to the Bureau of Air Regulation prior to 60 days before the expiration date of the permit (F.A.C. Rule 17-4.090).

16. An application for an operation permit must be submitted to the EPCHC office at least 90 days prior to the expiration date of this construction permit. To properly apply for an operation permit, the applicant shall submit the appropriate application form, operation and maintenance plan for the control equipment, fee, certification that construction was completed noting any deviations from the conditions in the construction permit, and compliance test reports as required by this permit (F.A.C. Rules 17-4.055 and 17-4.220).

Issued this _____ day

of _____, 1992

STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL REGULATION

_____

STEVE SMALLWOOD, P.E., Director
Division of Air Resources Mgmt.

10-17-91

COMMISSION
PHYLLIS BUSANSKY
JOE CHILLURA
PAM IORIO
SYLVIA KIMBELL
JAN KAMINIS PLATT
JAMES D. SELVEY
ED TURANCHIK

FAX (813) 272-5157

ROGER P. STEWART
EXECUTIVE DIRECTOR
ADMINISTRATIVE OFFICES
AND
WATER MANAGEMENT DIVISION
1900 - 9TH AVENUE
TAMPA, FLORIDA 33605
TELEPHONE (813) 272-5960

AIR MANAGEMENT DIVISION
TELEPHONE (813) 272-5530

WASTE MANAGEMENT DIVISION
TELEPHONE (813) 272-5788

ECOSYSTEMS MANAGEMENT DIVISION
TELEPHONE (813) 272-7104

October 17, 1991

CERTIFIED MAIL NO. P 648 748 373

Ms. Joyce Morales
Environmental and Health Manager
Gulf Coast Recycling, Inc.
1901 N. 66th St.
Tampa, FL 33619

RE: Case No. 00809KLS057
Consent Order

Dear Ms. Morales:

Enclosed please find your signed copy of the Consent Order pertaining to referenced enforcement case. Please note that the date of the Executive Director's signature is the effective date of the Order. All interim and final requirements under the Order are tracked from this date.

Paragraphs nine (9) and (10) ten of the Consent Order require submittal of two checks on or before October 30, 1991. One check in the amount of $5,800.00 should be made payable to the Pollution Recovery Fund of Hillsborough County. The second check in the amount of $142.50 should be made payable to the Environmental Protection Commission of Hillsborough County. The checks may be mailed to my attention at the Air Management Division, EPC, 1410 N. 21st Street, Tampa, FL 33605.

As required in paragraph seven (7), a compliance plan addressing air emissions from the blast furnace is due in this office no later than November 15, 1991. Additionally, paragraph eight (8) requires submittal of a construction permit application by February 13, 1992.

An Affirmative Action - Equal Opportunity Employer

printed on recycled paper

If you have any questions regarding your responsibilities as respondent in this matter, please contact me at (813) 272-5530 for additional assistance.

Thank you for your cooperation.

Sincerely,

Kay Strother

Kay Strother
Enforcement Coordinator
Air Management Division

Enclosure

cc: C. S. Lee, FDER
Sara Fotopulos; Chief Counsel, EPC

BEFORE THE
ENVIRONMENTAL PROTECTION COMMISSION
OF HILLSBOROUGH COUNTY

ENVIRONMENTAL PROTECTION COMMISSION
OF HILLSBOROUGH COUNTY
Complainant,

vs. Case No. 00809KLS057

GULF COAST RECYCLING, INC.
Respondent.

CONSENT ORDER

This Consent Order is made and entered into between the Environmental Protection Commission of Hillsborough County ("Commission") and Gulf Coast Recycling, Inc. ("GCR"), pursuant to Chapter 84-446, Laws of Florida and interagency agreement with the Florida Department of Environmental Regulation ("DER").

The Commission alleges the following and nothing herein shall be construed to be an admission of wrong doing by GCR. This document may not be used as evidence in any proceeding, except to enforce the terms thereof.

1. GCR is a corporation duly authorized to conduct business in the State of Florida. GCR owns and operates a facility located at 1901 North 66th Street, Tampa, in Hillsborough County, Florida.

2. GCR's business activities include the recovery of lead from damaged or spent lead-acid batteries. The operation of the secondary lead blast furnace is subject to the requirements of DER Permit No. AO29-173310; the New Source Performance Standards of 40 CFR 60, Subpart L; Federal and State Regulations regarding Prevention of Significant Deterioration ("PSD"); the Federal Implementation Plan ("FIP") contained in 40 CFR 52.535; the Florida Administrative Code and the Rules of the Commission. The three refining kettles are subject to the requirements of DER Permit No. AO29-95365, the New Source Performance Standards, the FIP contained in 40 CFR 52.535, the Florida Administrative Code, and the Rules of the Commission.

3. On August 9, 1990, representatives of PEI Associates, Inc., the United States Environmental Protection Agency ("EPA"), and the DER inspected the GCR's facility at the aforementioned location. For a period of thirty seconds, there was an opacity of 80 percent at the blast furnace slag tap, in violation of the 5 percent opacity standard in 40 CFR 52.535(c)(1)(ii).

4. GCR's number 3 refining kettle was constructed without a DER construction permit. This was in violation of Section 17-2.210, F.A.C., and Section 1-3.21, Rules of the Commission. However, GCR operated the number 3 refining kettle under permit # A029-95365, issued January 28, 1985, with the approval of the Commission and the DER.

5. GCR constructed a blast furnace without a DER construction permit. Prior to the construction of the blast furnace, representatives of GCR, the Commission and DER met to determine whether or not a construction permit was going to be needed. At those meetings, joint decisions were made that the blast furnace could be constructed without a construction permit and that further testing would be needed to decide whether PSD for SO_2 would be triggered. Since previous SO_2 test results on the old furnace were extremely varied and a single SO_2 run did not cover a complete charging cycle, a testing protocol for the old furnace was agreed upon to establish a baseline for SO_2. It was agreed that ten - one hour SO_2 runs would be performed on the furnace and the results from the ten tests would be averaged. This testing protocol was carried out in December 1983. After a comparison of this test data and test results taken subsequently from the newer furnace, it was decided by Agency representatives that PSD was not applicable for SO_2. However, subsequent to this determination, EPA has determined that a construction permit was required at the time in question and has directed the Commission staff to require GCR to submit an after-the-fact construction permit and address PSD for a number of pollutants including SO_2.

6. GCR submitted an after-the-fact permit application, August 2, 1990, for construction of its number 3 refining kettle. Issuance of the final permit is pending.

WHEREFORE, GCR and the Commission mutually agree and it is ORDERED:

7. Within thirty (30) days of the effective date of this Consent Order, GCR shall submit a plan to address air emissions from the blast furnace. The plan shall describe all measures GCR has taken and intends to take to ensure compliance with all applicable opacity regulations.

8. Within one hundred and twenty (120) days of the effective date of this Consent Order, GCR shall submit an after-the-fact construction permit application for the blast furnace. The following items are necessary for the fulfillment of this requirement:

A. The application shall be submitted on DER form 17-1.202(1).

B. Pursuant to Section 17-4.05(3), F.A.C., the application shall be submitted in quadruplicate with original P.E. seals and signatures.

C. The review fee of $400.00, payable to the Hillsborough County Board of County Commissioners, shall be submitted with the application.

D. GCR shall contact the DER to determine the permit review fee and shall submit same, payable to the Florida Department of Environmental Regulation, with the application.

9. Within fifteen (15) days of the effective date of this Consent Order, GCR shall deliver to the Director a check payable to the Pollution Recovery Fund of Hillsborough County in the amount of five thousand eight hundred dollars ($5,800.00). This amount constitutes a reasonable settlement amount ascribed to the above violations.

10. Within fifteen (15) days of the effective date of this Consent Order, GCR shall deliver to the Director a check payable to the Environmental Protection Commission of Hillsborough County in the amount of one hundred forty-two dollars and fifty cents ($142.50). This amount constitutes the reasonable expenses of the Commission for 4.75 hours at $30 each in investigating and resolving this matter.

11. The Commission, for and in consideration of the complete and timely performance by GCR of the obligations agreed to in this Consent Order, hereby waives its right to seek judicial imposition of damages or civil penalties for violations outlined in this Order. GCR waives its right to a hearing or judicial review of this Order.

12. Entry into this Consent Order does not relieve GCR of the need to comply with other applicable federal, state, or local laws, regulations or ordinances. The entry of this Consent Order does not abrogate the rights of substantially affected persons who are not parties to this Consent Order.

13. The Commission hereby expressly reserves the right to initiate appropriate legal action to prevent or prohibit the future violation of applicable statutes, or the rules promulgated thereunder.

14. The terms and conditions set forth in this Consent Order may be enforced in a court of competent jurisdiction. Failure to comply with the terms of this Consent Order is a violation of Chapter 403, Florida Statutes and of Chapter 84-446, Laws of Florida.

15. GCR is fully aware that a violation of the terms of this Consent Order may subject GCR to judicial imposition of damages, civil penalties of up to $10,000 per violation, criminal penalties and costs and expenses incurred in litigating this matter.

16. This Consent Order shall take effect upon the date of execution by the Director of the Commission and shall constitute final agency action by the Commission.

FOR THE RESPONDENT

Witness

Willis M. Kitchen
President

AFFIDAVIT

State of Florida
County of Hillsborough

Before me this day personally appeared Willis M. Kitchen, who being duly sworn, deposes and says that he, Willis M. Kitchen, as president of Gulf Coast Recycling, Inc., ("GCR") at 1901 N. 66th Street, Tampa, Florida, is the authorized representative of GCR, that he is duly authorized under the articles of incorporation and by-laws of GCR to bind GCR by his signature to this Consent Order and that it is his signature which first appears above on behalf of GCR.

Sworn to and subscribed before me this 15th day of October, 1991.

Notary Public
My commission expires:

NOTARY PUBLIC STATE OF FLORIDA
MY COMMISSION EXP. OCT. 4, 1995
BONDED THRU GENERAL INS. UND.

DONE AND ORDERED this 15 of Oct, 1991 in Tampa, Florida.

Roger P. Stewart, Executive Director
Environmental Protection Commission
of Hillsborough County
1900 Ninth Avenue
Tampa, Florida 33605
(813) 272-5960

tb/gcr.nco
09/24/91

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IV
345 COURTLAND STREET, N.E.
ATLANTA, GEORGIA 30365

MEMORANDUM

DATE: JUN 19 1991

SUBJECT: PSD Determination of Gulf Coast Recycling, Inc.

FROM: Brian L. Beals, Chief
Source Evaluation Unit

TO: Mark A. Armentrout, Chief
Northern Compliance Unit

This determination concerns the operations at Gulf Coast Recycling, Inc. and is in response to your memorandum dated April 26, 1991. Our determinations with respect to PSD are as follows:

(1) Gulf Coast Recycling is classified as a major stationary source, as defined in CFR 51.166, therefore, when notification was made of impending construction of a new 60 ton blast furnace, the PSD application process should have been initiated. This furnace qualified as a major modification as defined in CFR 51.166, due to the fact that construction would result in a significant net emissions increase and potential to emit increase in pollutants. Based on the emissions sampling data from 1979-90, there was a 43.7% increase in actual SO2 emissions from the pre-construction to post-construction periods. From 1979-84, actual SO2 emissions averaged 208.7 pounds per hour. After completion of the 60 ton blast furnace, actual SO2 emissions from 1985-90 averaged 300.0 pounds per hour. Based on Gulf Coast's annual operating level of 7800 hours per year, the actual emissions increase for SO2 rose from 814 tons per year in 1979-84 to 1170 tons per year in 1985-90. The significant rate of emissions for SO2 is defined as being 40 tons per year or more of that pollutant.

EPA used 5 yr actuals (before/after)

(2) The preconstruction requirements as outlined in Section 165 of the Clean Air Act should have been met. This would have included obtaining a construction permit for the 60 ton blast furnace prior to its fabrication, instead of obtaining one 6 years after the fact.

(3) The source is classified as a secondary lead smelter and due to the expected increases in pollutants, PSD review would subject all pollutants in the category to review. This would broaden the scope to include PM, Pb, CO, SO2, NOx, sulfuric acid mist, and hydrogen sulfide.

(4) Best Available Control Technology (BACT) analysis would be applicable for any pollutants subject to PSD review (from determination (3) above) which exceed their respective significant emissions rate.

(5) Further investigation is warranted into whether VOC emissions from the 60 ton blast furnace exceeds the 40 tons per year limit for NSR. If NSR is applicable, then LAER and emissions offsets would have to be taken into consideration.

(6) A final concern with respect to the operations at Gulf Coast pertains to the 50-ton refining kettle built and operated with no construction permit, designated as kettle #3. A valid construction permit should have addressed the operating limitations of kettle #3, specifically with reference to the simultaneous operation of more than two 50-ton kettles. Federally enforceable permit limits should have been incorporated into the construction permit, as they were in the eventual operating permit. According to Gulf Coast, kettle #1 operates independently; kettle #2 (calcium lead formation) is dependent upon the operations of kettle #3 (lead softening). The only impediment to simultaneous operation of all three kettles is manpower constraints, not design features; therefore, it is physically possible for all three 50-ton refining kettles to be operating simultaneously. The potential lead emissions for kettle #3 were 0.874 tons per year - an amount above the significance level of 0.6 tons per year; consequently, a PSD application was required for refining kettle #3.

Should you have any questions, please contact either Dennis Beauregard or Scott Davis at x5014.

JUL 1 8 1990

7-17-9

Florida Department of Environmental Regulation

Southwest District • 4520 Oak Fair Boulevard • Tampa, Florida 33610-7347 • 813-623-5561

Bob Martinez, Governor Dale Twachtmann, Secretary John Shearer, Assistant Secretary
Dr. Richard Garrity, Deputy Assistant Secretary

July 17, 1990

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION
NOTICE OF PERMIT ISSUANCE

Mr. Willis M. Kitchen
Vice President
Gulf Coast Lead Company, Inc.
1901 North 66th Street
Tampa, FL 33619

DER File No.: AO29-173310
County: Hillsborough

Enclosed is Permit Number AO29-173310 to operate a blast furnace and a flue dust agglomeration furnace, issued pursuant to Section 403.087, Florida Statutes.

A person whose substantial interests are affected by this permit may petition for an administrative proceeding (hearing) in accordance with Section 120.57, Florida Statutes. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 2600 Blair Stone Road, Tallahassee 32399-2400, within fourteen (14) days of receipt of this permit. Petitioner shall mail a copy of the petition to the applicant at the address indicated above at the time of filing. Failure to file a petition within this time period shall constitute a waiver of any right such person may have to request an administrative determination (hearing) under Section 120.57, Florida Statutes.

The Petition shall contain the following information:

(a) The name, address, and telephone number of each petitioner, the applicant's name and address, the Department Permit File Number and the county in which the project is proposed;
(b) A statement of how and when each petitioner received notice of the Department's action or proposed action;
(c) A statement of how each petitioner's subsequent interests are affected by the Department's action or proposed action;
(d) A statement of the material facts disputed by petitioner, if any;

(e) A statement of facts which petitioner contends warrant reversal or modification of the Department's action or proposed action;

(f) A statement of which rules or statutes petitioner contends required reversal or modification of the Department's action or proposed action; and

(g) A statement of the relief sought by petitioner, stating precisely the action petitioner wants the Department to take with respect to the Department's action or proposed action.

If a petition is filed, the administrative hearing process is designed to formulate agency action. Accordingly, the Department's final action may be different from the position taken by it in this permit. Persons whose substantial interests will be affected by any decision of the Department with regard to the application have the right to petition to become a party to the proceeding. The petition must conform to the requirements specified above and be filed (received) within 14 days of receipt of this notice, in the Office of General Counsel at the above address of the Department. Failure to petition within the allotted time frame constitutes a waiver of any right such person has to request a hearing under Section 120.57, F.S., and to participate as a party to this proceeding. Any subsequent intervention will only be at the approval of the presiding officer upon motion filed pursuant to Rule 28-5.207, F.A.C.

This permit is final and effective on the date filed with the Clerk of the Department unless a petition is filed in accordance with the above paragraphs or unless a request for extension of time in which to file a petition is filed within the time specified for filing a petition and conforms to Rule 17-103.070, F.A.C. Upon timely filing of a petition or a request for an extension of time this permit will not be effective until further Order of the Department.

When the Order (Permit) is final, any party to the Order has the right to seek judicial review of the Order pursuant to Section 120.68, Florida Statutes, by the filing of a Notice of Appeal pursuant to Rule 9.110, Florida Rules of Appellate Procedure, with the Clerk of the Department in the Office of General Counsel, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400; and by filing a copy of the Notice of Appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The Notice of Appeal must be filed within 30 days from the date the Final Order is filed with the Clerk of the Department.

Executed in Tampa, Florida

Sincerely,

W. C. Thomas, P.E.
District Air Program Administrator

JHK/DJG/bb

Attachment:

cc: Environmental Protection Commission
of Hillsborough County
Robert E. Wallace III, P.E.

CERTIFICATE OF SERVICE

This is to certify that this NOTICE OF PERMIT and all copies were mailed before the close of business on JUL 17 1990 to the listed persons.

FILING AND ACKNOWLEDGEMENT
FILED, on this date, pursuant to Section 120.52(10), Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.

Clerk JUL 17 1990
Date

7-17-90

Florida Department of Environmental Regulation

Southwest District • 4520 Oak Fair Boulevard • Tampa, Florida 33610-7347 • 813-623-5561

Bob Martinez, Governor Dale Twachtmann, Secretary John Shearer, Assistant Secretary
Dr. Richard Garrity, Deputy Assistant Secretary

PERMITTEE:
Gulf Coast Lead Company, Inc.
1901 North 66th Street
Tampa, FL 33619

PERMIT/CERTIFICATION
Permit No: AO29-173310
County: Hillsborough
Expiration Date: 06/22/95
Project: Blast Furnace and Agglomeration Furnace

This permit is issued under the provisions of Chapter 403, Florida Statutes, and Florida Administrative Code Rules 17-2 & 17-4. The above named permittee is hereby authorized to perform the work or operate the facility shown on the application and approved drawing(s), plans and other documents, attached hereto or on file with the department and made a part hereof and specifically described as follows:

For the operation of a secondary lead blast furnace and a flue dust agglomeration furnace. At the facility leadbearing scrap materials (LSM's), coke, lime rock, cast iron and slag are loaded into a skid-hoist and charged into the blast furnace (60 ton capacity). Lead in the liquid form collects at the base of the blast furnace. In this process lime rock is added to displace the lead in any lead silicate which might have been formed, while cast iron (iron oxide) binds with any sulfur to produce iron sulfide thus reducing sulfur dioxide emissions. The lead is tapped from the blast furnace and cast into buttons. Emissions generated by the charging (Point 06), the blast furnace exhaust (Point 01) and the tapping (Point 04) are controlled by three (3) sets of baghouses which vent separately. Flue dust collected by the baghouses is conveyed to an agglomeration furnace fired on natural gas. The blast furnace is subject to the New Source Performance Standards of 40 CFR 60, Subpart L, Standards of Performance for Secondary Lead Smelters and the Federal Implementation Plan contained in 40 CFR 62.535.

Location: 1401 North 66th Street, Tampa

UTM: 17-364.0 E 3093.6 N NEDS NO: 0057 Point ID: 01 - Furnace Exhaust
04 - Tapping
06 - Charging

Replaces Permit No.: AO29-95366

PERMITTEE:
Gulf Coast Lead Company, Inc.

PERMIT/CERTIFICATION NO.: AO29-173310
PROJECT: Blast Furnace and Agglomeration Furnace

SPECIFIC CONDITIONS:

PM? doesn't say

1. A part of this permit is the attached 15 General Conditions.

2. Pursuant to Rule 17-2.650(2)~~(b)~~1., F.A.C., this facility qualifies for an exemption of the Reasonably Available Control Technology (RACT) requirements since, at the request of the permittee, the total allowable emissions of the facility shall not exceed 4.4 pounds per hour and 14.9 tons per year.

3. In order to insure compliance with Specific Condition No. 2, the maximum allowable particulate matter emissions and hours of operation of the sources authorized to operate under this permit shall be:

Source	Emission Limitations	Hours of Operation
Blast Furnace Charging	0.65 lbs./hr. (2.54 TPY)	7800
Blast Furnace	2.15 lbs./hr. (8.38 TPY)	7800
Blast Furnace Tapping	0.40 lbs./hr. (1.56 TPY)	7800

4. Pursuant to 40 CFR 52.535(c)(1)(i), the maximum allowable lead emissions from the sources authorized to operate under this permit shall be:

Source	Emissions Limitations
Blast Furnace Charging	0.22 lbs./hr. (0.86 TPY)
Blast Furnace	1.81 lbs./hr. (7.06 TPY)
Blast Furnace Tapping	0.06 lbs./hr. (0.23 TPY)

5. Pursuant to 40 CFR 52.535(c)(1)(ii), visible emissions from the closed charge doors on the blast furnace shall not exceed five (5) percent opacity during furnace operation.

6. Pursuant to 40 CFR 52.535(c)(1)(iii), visible emissions from the charge doors on the blast furnace shall not exceed ten (10) percent opacity during charging operations.

7. Pursuant to 40 CFR 52.535(c)(1)(iv), visible emissions from all other sources authorized to operate under this permit shall not exceed five (5) percent opacity.

PERMITTEE:
Gulf Coast Lead Company, Inc.

PERMIT/CERTIFICATION NO.: AO29-173310
PROJECT: Blast Furnace and Agglomeration Furnace

SPECIFIC CONDITIONS: (continued)

8. Sulfur dioxide (SO_2) emissions shall not exceed 384.2 pounds per hour. If testing indicates that SO_2 emissions exceed 384.2 (374 lbs./hr. base line + 40 tons/yr., 12/83) then the permittee shall immediately reapply for a new permit under the provisions of Section 17-2.500, F.A.C.

9. Test emissions from the blast furnace charging, blast furnace, and blast furnace tapping operations for the following pollutants at intervals of twelve (12) months from February 14, 1990 and submit 2 copies of test data to the Environmental Protection Commission of Hillsborough County within forty-five (45) days of such testing pursuant to Section 17-2.700, F.A.C.:

(X) Particulates
(X) Opacity
(X) Sulfur Oxides*
(X) Lead

* Applies only to the blast furnace emissions.

10. Compliance with the emission limitations of Specific Conditions Nos. 3, 4, 5, 6, 7 and 8 shall be determined using EPA Methods 1, 2, 3, 4, 6, 9 and 12 contained in 40 CFR 60, Appendix A and adopted by reference in Section 17-2.700, F.A.C. In the case of the Method 9, Section 2.5 shall be excluded, pursuant to 40 CFR 52.535(b)(5).; thus waiving the six minute averaging period and establishing an instantaneous standard. The annual sulfur oxide test will be conducted by the same method used in the December, 1983 test. The minimum requirements for stack sampling facilities, source sampling and reporting, shall be in accordance with Section 17-2.700, F.A.C. and 40 CFR 60, Appendix A.

11. The visible emission test on the blast furnace shall be thirty (30) minutes in duration pursuant to Section 17-2.700, F.A.C., and shall be conducted concurrent with one of the Method 12 runs.

12. The visible emission tests on the blast furnace charging operation shall each be thirty (30) minutes in duration, pursuant to Rule 17-2.700(1)(d)1.b.i., F.A.C. Readings shall be taken on the:

A) Charge doors on the blast furnace only during charging.
B) Closed charge doors on the blast furnace only during furnace operation.
C) Baghouse exhaust only during blast furnace charging.

SPECIFIC CONDITIONS: (continued)

13. The visible emission test on the blast furnace tapping shall be thirty (30) minutes in duration pursuant to Rule 1702.700(1)(d)1.b.i., F.A.C. Readings shall be taken only during product tapping.

14. The maximum process input rate shall be 4.58 tons per hour of raw materials. Raw material charging rates on a daily basis shall be consistent with the following percentages based on the February, 1990 test.

Raw Material	Percentage
Lead Scrap and Re-Run Slag	88%
Coke	7%
Lime Rock	2.5%
Cast Iron	2.5%

15. Testing of emissions must be accomplished at approximately the maximum process weight rate of 4.58 tons per hour of raw materials. The actual charging rate and type of materials charged during the test shall be specified in each test result. Failure to include the actual process or production rate in the results may invalidate the test [Rule 17-4.070(3), F.A.C.].

16. Pursuant to 40 CFR 52.535(b)(2), non-process fugitive emissions (road dust, stockpiles, plant grounds, etc.) shall be minimized. Minimization efforts shall include such fugitive dust suppression activities as chemical stabilization, water spraying with appropriate runoff collection, resurfacing, sweeping, revegetation, and other EPA approved methods.

17. Pursuant to 40 CFR 52.535(b)(4), the permittee shall maintain continuous records of plant process and emission control operations as necessary to determine continuous compliance. Such records shall include reports of all process operations and control equipment operating parameters. Such records shall also include reports of all types of process upsets and emission control equipment malfunction, detailing the nature and duration of the upset or malfunction, the expected effects on emissions, and the corrective actions taken or planned to avoid recurrences. Such records shall be available at the plant site for inspection for a period of at least two (2) years.

18. Pursuant to Rule 1-1.04.1 of the Rules of the Environmental Protection Commission of Hillsborough County and consistent with Specific Condition No. 14, the permittee shall maintain daily records on the charging rates and type of materials charged (pounds per hour) into the blast furnace.

PERMITTEE:
Gulf Coast Lead Company, Inc.

PERMIT/CERTIFICATION NO.: AO29-173310
PROJECT: Blast Furnace and Agglomeration Furnace

SPECIFIC CONDITIONS: (continued)

19. Pursuant to Chapter 1-3.22(3) of the Rules of the Environmental Protection Commission of Hillsborough County, the permittee shall not allow the discharge of air pollutants which contribute to an objectionable odor.

20. The Environmental Protection Commission of Hillsborough County shall be notified in writing 15 days in advance of any compliance test to be conducted on this source.

21. Submit for this facility, each calendar year, on or before March 1, an emission report for the preceding calendar year containing the following information pursuant to Section 403.061(13), Florida Statutes:

(A) Annual amount of materials and/or fuels utilized.
(B) Annual emissions (note calculation basis).
(C) Any changes in the information contained in the permit application.

Duplicate copies of all reports shall be submitted to the Environmental Protection Commission of Hillsborough County.

22. Pursuant to Section 17-4.090, F.A.C., an application for renewal of permit to operate this source, completed in quadruplicate, shall be submitted to the Environmental Protection Commission of Hillsborough County at least 60 days prior to its expiration date.

Issued this 17 day of July
19 90

STATE OF FLORIDA DEPARTMENT OF
ENVIRONMENTAL REGULATION

For Richard Garrity, Ph.D.
Deputy Assistant Secretary

ATTACHMENT - GENERAL CONDITIONS:

1. The terms, conditions, requirements, limitations and restrictions set forth in this permit, are "permit conditions" and are binding and enforceable pursuant to Sections 403.141, 403.161, 403.727, or 403.859 through 403.861, Florida Statutes. The permittee is placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of these conditions.

2. This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.

3. As provided in subsections 403.087(6) and 403.722(5), F.S., the issuance of this permit does not convey any vested rights or any exclusive privileges. Neither does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, State, or local laws or regulations. This permit is not a waiver of or approval of any other Department permit that may be required for other aspects of the total project which are not addressed in this permit.

4. This permit conveys no title to land or water, does not constitute State recognition or acknowledgement of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the State. Only the Trustees of the Internal Improvement Trust Fund may express State opinion as to title.

5. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, or plant life, or property caused by the construction or operation of this permitted source, or from penalties therefore; nor does it allow the permittee to cause pollution in contravention of Florida Statutes and Department rules, unless specifically authorized by an order from the Department.

6. The permittee shall properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed and used by the permittee to achieve compliance with the conditions of this permit, are required by Department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by Department rules.

7. The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, upon presentation of credentials or other documents as may be required by law and at reasonable times, access to the premises where the permitted activity is located or conducted to:

(a) Have access to and copy any records that must be kept under conditions of the permit;

(b) Inspect the facility, equipment, practices, or operations regulated or required under this permit; and

4. The permittee shall comply with the following:

(a) Upon request, the permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records will be extended automatically unless otherwise stipulated by the Department.

(b) The permittee shall hold at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation) required by the permit, copies of all reports required by this permit, and records of all data used to complete the application for this permit. These materials shall be retained at least three years from the date of the sample, measurement, report, or application unless otherwise specified by Department rule.

(c) Records of monitoring information shall include:

1. the date, exact place, and time of sampling or measurements;
2. the person responsible for performing the sampling or measurements;
3. the dates analyses were performed;
4. the person responsible for performing the analyses;
5. the analytical techniques or methods used;
6. the results of such analyses.

5. When requested by the Department, the permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the permittee becomes aware the relevant facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be corrected promptly.

12-7-83

COUNTY OF HILLSBOROUGH

MEMORANDUM

Date Dec. 7, 1983

To Jim Estler through Bill Thomas JC

From Jerry Campbell, E.P.C.

Subject: RENEWAL OF AO29-12482 FOR GULF COAST LEAD'S BLAST FURNACE

Having reviewed their application, I recommend approval for this source to be issued an operating permit. I further recommend that the following specific conditions apply to the new permit:

1) The maximum allowable particulate emission shall be 2.0 pounds per hour and 8.16 tpy as requested by the applicant to exempt the facility from F.A.C. 17-2-650.

2) The opacity from the baghouse shall not exceed 20 percent (HCEPC Chapter 1-3.031.).

3) Within 60 days of receipt of this operating permit, the applicant will have conducted SO_2 emission testing by methods approved by the Hillsborough County EPC and the Florida DER to establish the actual emissions from this source. The results of these test shall be reported to the regulatory agencies listed above in this same period. At that time the EPC and the DER will set an SO_2 emission limiting standard which shall become a part of this permit.

4) The compliance test shall consist of an annual test for particulates, lead particulate, SO_2 and opacity. The lead particulate emissions shall be determined by analysis of the probe wash, the filter wash and the filter. This analysis does not require a method #12 test as per 40CFR60 Appendix A, but the method shall be subject to the approval of the Hillsborough County EPC. The opacity test shall be conducted during the stack testing and it shall be at least 30 minutes in duration (H.C.E.P.A. Chapter 67-1504 Section 12).

5) The Hillsborough County EPC shall be notified 30 days in advance of any compliance test to be conducted on this source.

6) The compliance test shall be conducted at -/+ 10 percent of the maximum permitted process rate of 4.67 tons of raw materials input per hour.

7) Only one of the two blast furnaces covered under this permit may be operated at one time.

8) A fuel analysis from the supplier shall be submitted with the annual compliance test.

9) The annual operating report for this source shall be submitted to the Hillsborough County EPC on or before March 1 of each year of this permit.

10) The combined total hours of operation for the 2 blast furnaces shall not exceed 8160 hours per year as requested by the applicant to exempt the facility from F.A.C. 17-2.650.

JC/b

BEST AVAILABLE COPY

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL RE

SOUTHWEST DISTRICT
7601 HIGHWAY 301 NORTH
TAMPA, FLORIDA 33610-9544

PERMITTEE:
Mr. Lonnie A. Payne, President
Gulf Coast Lead Company
1901 North 66th Street
Tampa, FL 33619

PERMIT/CERTIF
Permit No.:
County: Hills
Expiration Da
Project: Two
Fur

This permit is issued under the provisions of Cha
Statutes, and Florida Administrative Code Rules 1
above named permittee is hereby authorized to per
operate the facility shown on the application and
drawing(s), plans, and other documents, attached
with the department and made a part hereof and sp
described as follows:

For the operation of the two lead blast furnaces
furnace using a Wheelabrator-Frye dust collector
Model 126, Series 55).

Location: 1901 North 66th Street, Tampa

UTM: 17-363.9E 3093.8N NEDS NO: 0057

Replaces Permit No.: A029-12482

DEPARTM

SOUTHWEST DISTRICT
7601 HIGHWAY 301 NORTH
TAMPA, FLORIDA 33610-9544

Mr. Lonnie A. Payn
Gulf Coast Lead Co
1901 North 66th St
Tampa, FL 33619

Dear Mr. Payne:

Re: Hil
Two

Enclosed is Permi
operate the subje
403.061(14), Flor

Should you object
conditions contai
for administrativ
fourteen (14) day
petition must con
tive Code Rule 28
filed with the Of
Environmental Reg
Stone Road, Talla

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enforcement actio
requirements the

WKH/scm
Enclosures
cc: HCEPC

DER Form 17-1.20

GENERAL CONDITIONS:

1. The terms, conditions, requirements, limitations, and restrictions set forth herein are "Permit Conditions" and as such are binding upon the permittee and enforceable pursuant to the authority of Sections 403.161, 403.727, or 403.859 through 403.861, Florida Statutes. The permittee is hereby placed on notice that the department will review this permit periodically and may initiate the enforcement action for any violation of the "Permit Conditions" by the permittee, its agents, employees, servants or representatives.

2. This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the department.

3. As provided in Subsections 403.087(6) and 403.712(5), Florida Statutes, the issuance of this permit does not convey any vested rights or any exclusive privileges. Nor does it authorize any injury to public or private property or any invasion of personal rights, nor infringement of federal, state or local laws or regulations. This permit does not constitute a waiver of or approval of any other department permit that may be required for other aspects of the total project which are not addressed in the permit.

4. This permit conveys no title to land or water, does not constitute state recognition or acknowledgement of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the state. Only the Trustees of the Internal Improvement Trust Fund may express state opinion as to title.

5. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, plant or aquatic life or property and penalties therefore caused by the construction or operation of this permitted source, nor does it allow the permittee to cause pollution in contravention of Florida Statutes and department rules, unless specifically authorized by any order from the department.

6. The permittee shall at all times properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed or used by the permittee to achieve compliance with the conditions of this permit, as required by department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by department rules.

7. The permittee, by accepting this permit, specifically agrees to allow authorized department personnel, upon presentation of credentials or other documents as maybe required by law, access to the premises, at reasonable times, where the permitted activity is located or conducted for the purposes of;

a. Having access to and copying any records that must be kept under the conditions of the permit:

b. Inspecting the facility, equipment, practices, or operations regulated or required under this permit; and

c. Sampling or monitoring any substances or parameters at any location reasonably necessary to assure compliance with this permit or department rules.

Reasonable time may depend on the nature of the concern being investigated.

8. If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately notify and provide the department with the following information:

(a) a description of and cause of non-compliance; and

(b) the period of non-compliance, including exact dates and times; or, if not corrected, the anticipated time the non-compliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the non-compliance.

The permittee shall be responsible for any and all damages which may result and may be subject to enforcement action by the department for penalties or revocation of this permit.

9. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source, which are submitted to the department, may be used by the department as evidence in any enforcement case arising under the Florida Statutes or department rules, except where such use is proscribed by Section 403.73 and 403.111, Florida Statutes.

10. The permittee agrees to comply with changes in department rules and Florida Statutes after a reasonable time for compliance, provided, however, the permittee does not waive any other rights granted by Florida Statutes or department rules.

11. This permit is transferable only upon department approval in accordance with Florida Administrative Code Rules 17-4.12 and 17-30.30, as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the department.

12. This permit is required to be kept at the work site of the permitted activity during the entire period of construction or operation.

13. This permit also constitutes:

( ) Determination of Best Available Control Technology (BACT)

( ) Determination of Prevention of Significant Deterioration (PSD)

( ) Certification of Compliance with State Water Quality Standards (Section 401. PL 92-500)

( ) Compliance with New Source Performance Standards

14. The permittee shall comply with the following monitoring and record keeping requirements:

a. Upon request, the permittee shall furnish all records and plans required under department rules. The retention period for all records will be extended automatically, unless otherwise stipulated by the department, during the course of any unresolved enforcement action.

14. (con't)

b. The permittee shall retain at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation), copies of all reports required by this permit, and records of all data used to complete the application for this permit. The time period of retention shall be at least three years from the date of the sample, measurement, report or application unless otherwise specified by department rule.

c. Records of monitoring information shall include:

- the date, exact place, and time of sampling or measurements;
- the person responsible for performing the sampling or measurements;
- the date(s) analyses were performed;
- the person responsible for performing the analyses;
- the analytical techniques or methods used; and
- the results of such analyses.

15. When requested by the department, the permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the permittee becomes aware that relevant facts were not submitted or were incorrect in the permit application or in any report to the department, such facts or information shall be submitted or corrected promptly.

SPECIFIC CONDITIONS:

1. Test the emissions for the following pollutant(s) at intervals of 12 months from the date January 13, 1983 and submit a copy of test data to the Air Section of the Southwest District Office and Hillsborough County Environmental Protection Commission within forty five days of such testing (Section 17-2.700 (2), Florida Administrative Code (F.A.C.)).

(X) Particulates	(X) Sulfur Oxides
( ) Fluorides	( ) Nitrogen Oxides
(X) Opacity	( ) Hydrocarbons
	( ) Total Reduced Sulfur

*The opacity test shall be conducted during the particulate stack test and shall be at least 30 minutes in duration.

SPECIFIC CONDITIONS (con't):

2. The compliance test shall be conducted at ±10% of the maximum permitted process rate of 4.67 tons of raw materials input per hour. A test submitted at a lower process rate showing compliance will be acceptable and will automatically modify the permit to list the process rate during testing as the maximum process rate.

3. Submit for this facility, each calendar year, on or before March 1, an emission report for the preceding calendar year containing the following information as per Section17-4.14, F.A.C.

(A) Annual amount of materials and/or fuels utilized.
(B) Annual emissions (note calculation basis).
(C) Any changes in the information contained in the permit application.

Submit copies of this report to the Department and Hillsborough County Environmental Protection Commission.

4. In order to qualify for the particulate RACT exemption in Section 17-2.650(2)(b)1., F.A.C., the maximum allowable particulate emission rate as requested by the Permittee is 2.5 lbs/hr. and 9.75 tons per year.

5. Within 60 days of receipt of this operating permit, the applicant will have conducted SO_2 emission testing by methods approved by the Hillsborough County Environmental Protection Commission (HCEPC) the Florida Department of Environmental Regulation (FDER) to establish the actual emissions from this source. The results of these tests shall be reported to the regulatory agencies listed above in this same period. At that time the HCEPC and FDER will set an SO_2 emission standard which shall become a part of this permit.

6. Visible emissions shall not be equal to or greater than 20% opacity in accordance with Subsection 17-2.610(2)(b), F.A.C.

7. Compliance with the emission limitations of Specific Conditions Nos. 4, 5 & 6 shall be determined using EPA Methods 1,2,3,4,5,6 and 9 contained in 40 CFR 60, Appendix A and adopted by reference in Section 17-2.700, F.A.C. The minimum requirements for stack sampling facilities, source sampling and reporting, shall be in accordance with Section 17-2.700, F.A.C. and 40 CFR 60, Appendix A.

8. The HCEPC shall be notified 30 days in advance of any compliance test to be conducted on this source.

9. All reasonable precautions shall be taken to prevent and control generation of unconfined emissions of particulate matter in accordance with the provision in Section 17-2.610 (3), F.A.C.. These provisions are applicable to any source, including, but not limited to, vehicular movement, transportation of materials, construction, alteration, demolition or wrecking, or industrial related activities such as loading, unloading, storing and handling.

PERMITTEE:
Guld Coast Lead Company

Permit/Certification No.: A029-78246
Project: Two Lead & One Slag Furnace

SPECIFIC CONDITIONS (con't):

10. Only one of the two blast furnaces covered under this permit may be operated at one time.

11. A fuel analysis from the supplier shall be submitted with the annual compliance test.

12. A compliance test shall be conducted for lead particulate on a yearly basis from the date of January 13, 1983. The emissions shall be determined by analysis of the probe wash, the filter wash and the filter. This analysis does not require a Method #12 test as per 40 CFR 60 Appendix A, but the method shall be subject to prior approval of the HCEPC (H.C.E.P.A. Chapter 67-1504 Section 12).

What are Pb limits?

13. The combined total hours of operation for the two blast furnaces shall not exceed 7800 hours/yr. as requested by the applicant to exempt the facility from Section 17-2.650, F.A.C.

Issued this 26th day of January, 1984.

STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL REGULATION

Dan A. Williams
Acting District Manager

12-6-83

GULF COAST LEAD CO.

LEAD PRODUCTS -- WHOLESALE ONLY

OFFICE AND PLANT
1901 NORTH 66TH STREET • TAMPA, FLORIDA 33619
PHONE: 626-0303—626-6151

December 6, 1983

RECEIVED
DEC 6 1983
H.C.E.P.C.

Mr. Jerry Campbell
Hillsborough County Environmental
Protection Commission
1900 - 9th Avenue
Tampa, Florida 33605

Dear Mr. Campbell:

On June 2, 1983 I wrote a letter to Mr. Iwan Choronenko requesting an exemption from the RACT regulations for our facility since our total particulate emissions are less than 5 pounds/hour, 15 tons/year.

You called my office December 1, 1983 and informed me that Gulf Coast Lead Company does qualify for the RACT exemption, however, we must assign maximum emission limits to all of our sources. The total of these emission limits must not exceed 5 pounds/hour, 15 tons/year. The emission limits must be set prior to December 7, 1983 or the permit renewal we applied for November 7, 1983 will be returned for lack of information. Below are the maximum emission limits and hours of operation we want reflected on the permit.

	#/hour	T/year	Hours of operation/yr.
Furnaces	2.0	8.16	8160
Lead and slag tap points	0.15	0.61	8160
Skip-hoist	0.55	2.24	8160
* Refining	1.0	3.60	7200
* Keel Casting	0.20	0.24	2400
Total	3.9	14.85	

During your visit to Gulf Coast Lead Company, December 5, 1983 you also asked that we determine the maximum charge and production rates for the blast furnace. The maximum will be reflected on the permit and all stack tests must be conducted while operating within 10% of the rate. Follow- is the maximum charge and production rates for the blast furnace.

	Pounds/hour
Raw Materials Charged:	
Lead-bearing materials	7700
Coke	1030
Limestone	190
Cast iron	190
Rerun slag	230
Product Weight:	5375

Input 4,67 TPH

If you have any questions or require further information, please don't hesitate to call.

Sincerely,

GULF COAST LEAD COMPANY

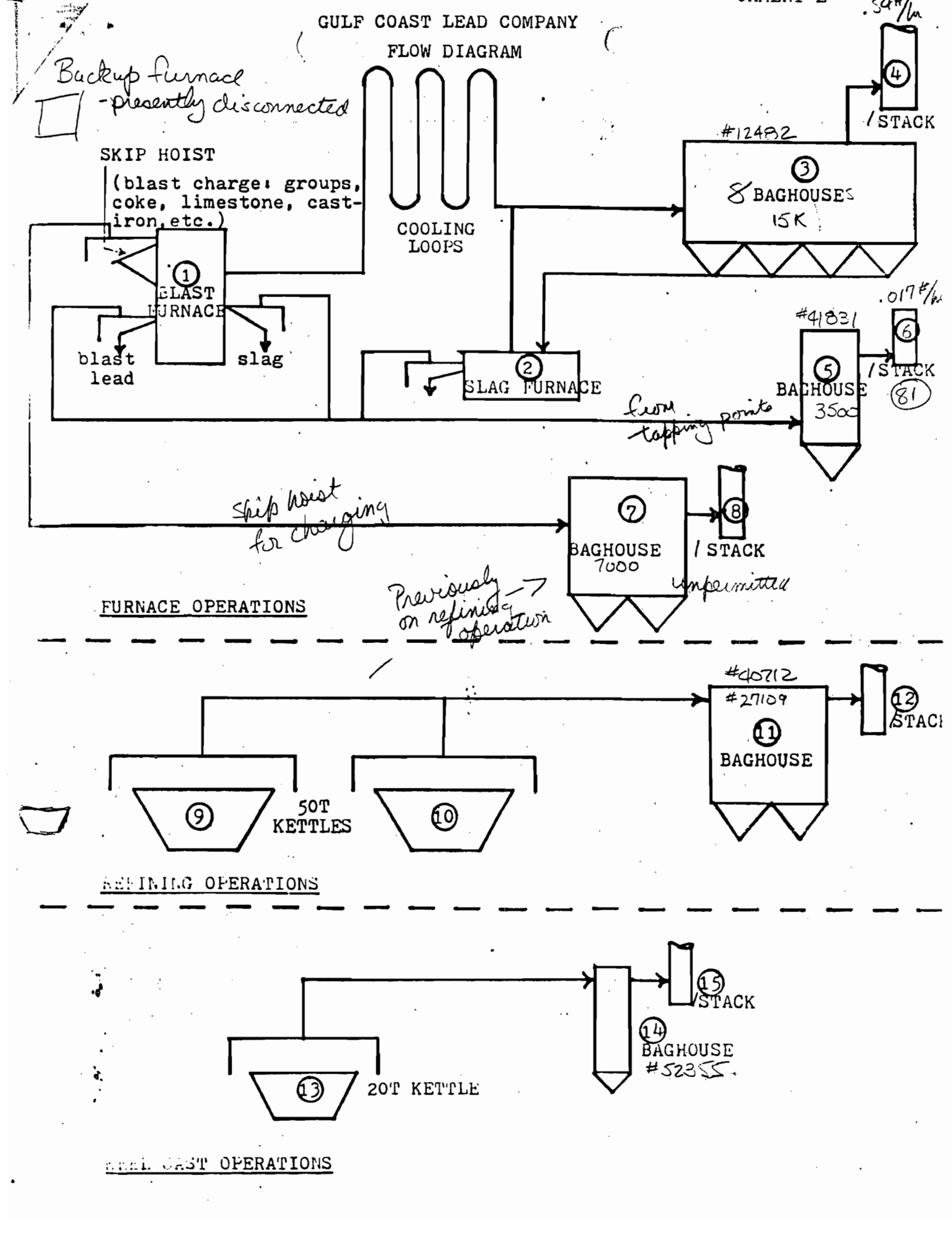
Joyce D. Morales-Caramella

Joyce D. Morales-Caramella
Safety & Environmental Director

cc: Jim Essler, FDER
Lonnie A. Payne, GCL
Richard Bowman, Jr.,GCL

GULF COAST LEAD COMPANY

FLOW DIAGRAM



12-4-84

COUNTY OF HILLSBOROUGH

MEMORANDUM

Date December 4, 1984

To Jim Estler

From Jerry Campbell JC

Subject: Gulf Coast Lead's New Operating Permits

Having reviewed the applications and related correspondence, I recommend that two new and one amended operating permits be issued. I further recommend that the following specific conditions apply:

Blast Furnace Operations (Points 01, 04, 06)
Point 01

1. Test the emissions from the main baghouse at intervals of 12 months from January, 1984, and submit a copy of test data to the Air Section of the Southwest District Office within forty five days of such testing (Section 17-2.700(2), Florida Administrative Code (F.A.C.).

(X)	Particulates	(X)	Sulfur Oxides
( )	Fluorides	( )	Nitrogen Oxides
(X)	Opacity	( )	Hydrocarbons
(X)	Lead	( )	Total Reduced Sulfur

*Fuel analysis may be submitted for required sulfur dioxide emission test.

2. Maximum allowable emissions from the (emissions unit) shall be:

Pollutant	Emissions Limitation	Regulation
Particulates	2.50 #/hr	As requested by the permittee to exempt the facility from particulate RACT
Opacity	5%	As requested by the permittee to exempt the facility from particulate RACT
Lead	1.81 #/hr	Lead SIP

3. Compliance with the emission limitations of Specific Conditions Nos. 2 shall be determined using EPA Methods 1, 2, 3, 4, 6, 9, & 12 contained in 40 CFR 60, Appendix A and adopted by reference in Section 17-2.700, F.A.C. with the exception of the January, 1985, sulfur oxides test. The minimum requirements for stack sampling facilities, source sampling and reporting, shall be in accordance with Section 17-2.700, F.A.C. and 40 CFR 60, Appendix A.

4. The January, 1985, sulfur oxide test will be conducted by the same method used in the December, 1983, test.

5. If the sulfur oxides compliance test for January, 1985, indicates that SO2 emissions have increased significantly over the 374 pounds per hour baseline established in 12/83, then the permittee shall reapply under the provisions of FAC 17-2.500. A significant increase here shall be defined as 10.2 pounds per hour over the baseline of 374. That works out to 40 tons per year over 7800 hours.

6. The visible emission test shall be 30 minutes in duration and it shall be conducted concurrent with one of the method #12 runs.

7. Testing of emissions must be accomplished within 10 percent of the rates as stated in this permit. Failure to submit the input rates or operation at conditions which do not reflect actual operating conditions may invalidate the data (Section 403.161(1)(c), Florida Statutes).

8. The maximum process weight rate shall be 4.58 tons per hour of raw material input. formerly 4.67

9. The total hours of operation of both blast furnaces shall not exceed 7800 hours per year.

10. Any changes to the physical stack characteristics or flow parameters listed in this application which could affect the maximum modelled impact of 0.293 ug of Pb/m3, shall be considered a modification of the permit. As a modification, the permittee would be required to submit an application for prior approval.

11. The Hillsborough County Environmental Protection Commision shall be notified in writing 15 days in advance of any compliance test to be conducted on this source.

12. Submit to the Hillsborough County Environemntal Protection Commission for this facility, each calendar year, on or before March 1, an emission report for the preceding calendar year containing the following information as per Section 17-4.14, F.A.C.

    (A) Annual amount of materials and/or fuels utilized.
    (B) Annual emissions (note calculation basis).
    (C) Any changes in the information contained in the permit application.

Point 04

1. Test the emissions from the baghouse controlling the tapping operation for the following pollutant(s) at intervals of 12 months from the date of January 1984 and submit a copy of test data to the Air Section of the Southwest District Office within forty five days of such testing (Section 17-2.700(2), Florida Administrative Code (F.A.C.).

( )	Particulates	( )	Sulfur Oxides
( )	Fluorides	( )	Nitrogen Oxides
(X)	Opacity	( )	Hydrocarbons
		( )	Total Reduced Sulfur

*Fuel analysis may be submitted for required sulfur dioxide emission test.

2. In January, 1985, the permittee will test the baghouse by EPA method #12 for particulate and lead. If the test results are favorable, then the permittee will not be required to retest for these parameters until the permit is renewed.

3. Maximum allowable emissions from the (emissions unit) shall be:

Pollutant	Emissions Limitation	Regulation
Particulates	0.15 #/hour	As requested by the permittee to exempt the facility from particulate RACT.
Opacity	5%	As requested by the permittee to exempt the facility from particulate RACT.
Lead	0.06 #/hour	Lead SIP

4. The visible emission test shall be 30 minutes in duration and it shall be read only while tapping is occurring.

5. The total hours of operation of both blast furnaces shall not exceed 7800 hours per year.

6. Any changes to the physical stack characteristics or flow parameters listed in this application which could affect the maximum modelled impact of 0.088 ug of Pb per cubic meter, shall be considered a modification of this permit. As a modification, the permittee would be required to submit an application for prior approval.

7. The Hillsborough County Environmental Protection Commision shall be notified in writing 15 days in advance of any compliance test to be conducted on this source.

8. Submit to the Hillsborough County Environmental Protection Commission for this facility, each calendar year, on or before March 1, an emission report for the preceding calendar year containing the following information as per Section 17-4.14, F.A.C.

   (A) Annual amount of materials and/or fuels utilized.
   (B) Annual emissions (note calculation basis).
   (C) Any changes in the information contained in the permit application.

Point 06

1. Test the emissions from the baghouse controlling the charging operation for the following pollutant(s) at intervals of 12 months from the date of January 1984 and submit a copy of test data to the Air Section of the Southwest District Office within forty five days of such testing (Section 17-2.700(2), Florida Administrative Code (F.A.C.).

( ) Particulates	( ) Sulfur Oxides
( ) Fluorides	( ) Nitrogen Oxides
(X) Opacity	( ) Hydrocarbons
	( ) Total Reduced Sulfur

*Fuel analysis may be submitted for required sulfur dioxide emission test.

2. In January, 1985, the permittee will test the baghouse by EPA method #12 for particulate and lead. If the test results are favorable, then the permittee will not be required to retest for these parameters until the permit is renewed.

3. Maximum allowable emissions from the (emissions unit) shall be:

Pollutant	Emissions Limitation	Regulation
Particulates	0.55 #/hour	As requested by the permittee to exempt the facility from particulate RACT
Opacity	5%	As requested by the permittee to exempt the facility from particulate RACT
Lead	0.22 #/hour	Lead SIP

4. The visible emission test shall be 30 minutes in duration and it shall be read only while charging is occurring.

5. The total hours of operation of both blast furnaces shall not exceed 7800 hours per year.

6. Any changes to the physical stack characteristics or flow parameters listed in this application which could affect the maximum modelled impact of 0.118 ug of Pb per cubic meter, shall be considered a modification of this permit. As a modification, the permittee would be required to submit an application for prior approval.

7. The Hillsborough County Environmental Protection Commision shall be notified in writing 15 days in advance of any compliance test to be conducted on this source.

8. Submit to the Hillsborough County Environmental Protection Commission for this facility, each calendar year, on or before March 1, an emission report for the preceding calendar year containing the following information as per Section 17-4.14, F.A.C.

Lead Refining Operation (Point 02)

1. Test the emissions for the following pollutant(s) at intervals of 12 months from January 1984 and submit a copy of test data to the Air Section of the Southwest District Office within forty five days of such testing (Section 17-2.700(2), Florida Administrative Code (F.A.C.).

(X)	Particulates	( )	Sulfur Oxides
( )	Fluorides	( )	Nitrogen Oxides
(X)	Opacity	( )	Hydrocarbons
(X)	Lead	( )	Total Reduced Sulfur

*Fuel analysis may be submitted for required sulfur dioxide emission test.

2. Maximum allowable emissions from the (emissions unit) shall be:

Pollutant	Emissions Limitation	Regulation
Particulates	1.0 #/hour	As requested by the permittee to exempt the facility from particulate RACT
Opacity	5%	As requested by the permittee to exempt the facility from particulate RACT
Lead	0.4 #/hour	Lead SIP

3. Compliance with the emission limitations of Specific Conditions Nos. 2 shall be determined using EPA Methods 1, 2, 3, 4, 9 and 12 contained in 40 CFR 60, Appendix A and adopted by reference in Section 17-2.700, F.A.C. The minimum requirements for stack sampling facilities, source sampling and reporting, shall be in accordance with Section 17-2.700, F.A.C. and 40 CFR 60, Appendix A.

4. The visible emission test shall be 30 minutes in duration and it shall be concurrent with one of the method #12 runs.

5. Testing shall be conducted while 2 of the kettles are in operation and they are to be identified in the test report. The kettles operating during the test shall be alternated from year to year so that over a 2 year period all 3 will have been tested.

6. The hours of operation for the refining area covered under this permit shall not exceed 4368 per year.

7. The periodic replacement of a kettle liner due to the abuse of the soft lead refining process will be considered maintenance and will not require a construction application.

8. Any changes to the physical stack characteristics or flow parameters listed in this application which could affect the maximum modelled impact of 0.294 ug of Pb per cubic meter, shall be considered a modification of this permit. As a modification, the permittee would be required to submit an application for prior approval.

9. The Hillsborough County Environmental Protection Commission shall be notified in writing 15 days in advance of any compliance test to be conducted on this source.

10. Submit to the Hillsborough County Environmental Protection Commission for this facility, each calendar year, on or before March 1, an emission report for the preceding calendar year containing the following information as per Section 17-4.14, F.A.C.

    (A) Annual amount of materials and/or fuels utilized.
    (B) Annual emissions (note calculation basis).
    (C) Any changes in the information contained in the permit application.

Keel Casting Operation (Point 05)

1. Test the emissions for the following pollutant(s) at intervals of 12 months from January 1984 and submit a copy of test data to the Air Section of the Southwest District Office within forty five days of such testing (Section 17-2.700(2), Florida Administrative Code (F.A.C.).

( ) Particulates	( ) Sulfur Oxides
( ) Fluorides	( ) Nitrogen Oxides
(X) Opacity	( ) Hydrocarbons
	( ) Total Reduced Sulfur

*Fuel analysis may be submitted for required sulfur dioxide emission test.

2. Maximum allowable emissions from the (emissions unit) shall be:

Pollutant	Emissions Limitation	Regulation
Particulates	0.20	As requested by the permittee to exempt the facility from particulate RACT
Opacity	5%	As requested by the permittee to exempt the facility from particulate RACT
Lead	0.08	Lead SIP

3. In January, 1985, the permittee will test this source by EPA Method #12 for particulate and lead. If the test results are favorable, then the permittee will not be required to retest for these parameters until the permit is renewed.

4. The visible emission test shall be 30 minutes in duration.

5. Testing of emissions must be accomplished within 10 per cent of the rates as stated in this permit. Failure to submit the input rates or operation at conditions which do not reflect actual operating conditions may invalidate the data (Section 403.161(1)(c), Florida Statutes).

6. The maximum process weight rate shall be 2.33 tons per hour.

7. The hours of operation of this source shall not exceed 2400 per year.

8. Any changes to the physical stack characteristics or flow parameters listed in this application which could affect the maximum modelled impact of 0.118 ug of Pb per cubic meter, shall be considered a modification of this permit. As a modification, the permittee would be required to submit an application for piror approval.

9. The Hillsborough County Environmental Protection Commission shall be notified in writing 15 days in advance of any compliance test to be conducted on this source.

10. Submit to the Hillsborough County Environmental Protection Commission for this facility, each calendar year, on or before March 1, an emission report for the preceding calendar year containing the following information as per Section 17-4.14, F.A.C.

    (A) Annual amount of materials and/or fuels utilized.
    (B) Annual emissions (note calculation basis).
    (C) Any changes in the information contained in the permit application.

If you have any questions or comments concerning the above items, please contact me.

11-21-84

TO: Files
FROM: Jean Campbell
DATE: November 21, 1984
SUBJECT: Attached Information on Permits for the Tapping Baghouse

In November, 1984, DER and EPC decided to issue a single permit for the two blast furnaces and the one slag furnace. There are 3 baghouses controlling these sources. The main baghouse is point 01; the tapping baghouse is point 04 and the charging baghouse is point 06. The Attached material is for point 04.

11-7-83

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

SOUTHWEST DISTRICT
7601 HIGHWAY 301 NORTH
TAMPA, FLORIDA 33610

BOB GRAHAM
GOVERNOR

VICTORIA J. TSCHINKEL
SECRETARY

WILLIAM K. HENNESSEY
DISTRICT MANAGER

RECEIVED
NOV 7 1983
H.C.E.P.C.

$140.00 11/7/83
PAID
H.C.E.P.C.

APPLICATION FOR RENEWAL OF PERMIT TO OPERATE AIR POLLUTION SOURCE(S)

If major alterations have occurred, the applicant should complete the Standard Air Permit Application Form.

Source Type: Secondary Lead Smelter Renewal of DER Permit No. A029-12482

Company Name: Gulf Coast Lead Company County: Hillsborough

Identify the specific emission point source(s) addressed in this application (i.e., Lime Kiln No. 4 with Venturi Scrubber; Peaking Unit No. 2, Gas Fired):

2 Blast furnaces and a slag furnace with baghouses (8)

Source Location: Street: 1901 N. 66th Street City: Tampa,

UTM: East 364.048 North 3093.548

Latitude: 27° 57' 44"N. Longitude: 82° 22' 55"W.

---

1. Attach a check made payable to the Department of Environmental Regulation in accordance with operation permit fee schedule set forth in Florida Administrative Code Rule 17-4.05.

2. Have there been any alterations to the plant since last permitted? [ ] Yes [X] No
   If minor alterations have occurred, describe on a separate sheet and attach.

3. Attach the last compliance test report required per permit conditions if not submitted previously. Emissions tests were conducted in January 1983. Reports were submitted to HCEPC and FDER in February 1983.

4. Have previous permit conditions been adhered to? [X] Yes [ ] No If no, explain on a separate sheet and attach.

5. Has there been any malfunction of the pollution control equipment during tenure of current permit? [X] Yes [ ] No If yes, and not previously reported, give brief details and what action was ~~taken~~ on a ~~separate~~ sheet and attach. Copy of Notice issued by HCEPC and subsequent correspondence is attached.

6. Has the pollution control equipment been maintained to preserve the collection efficiency last permitted by the Department? [X] Yes [ ] No

7. Has the annual operating report for the last calendar year been submitted? [X] Yes [ ] No If no, please attach. The annual emissions report was submitted to HCEPC in April 1983.

8. Please provide the following information if applicable:

A. Raw Materials and Chemical Used in Your Process:

Description	Contaminant Type	Contaminant %Wt	Utilization Rate lbs/hr
(1) Lead-bearing materials	oxides, plastic, misc.	30%	6000
(2) Coke			800
(3) Limestone			150
(4) Cast iron			150
(5) Rerun slag			180

B. Product Weight (lbs/hr): 4300 lbs/hr

C. Fuels

Type (Be Specific)	Consumption* Avg/hr*	Consumption* Max/hr**	Maximum Heat Input (MMBTU/hr)
Coke	800 lbs/hr	960	Alabama By-Products Birmingham, Alabama

D. Normal Equipment Operating Time: hrs/day 24; days/wk 7; wks/yr 45; hrs/yr (power plants only) ____; if seasonal, describe N/A

The undersigned owner or authorized representative*** of Gulf Coast Lead Company is fully aware that the statements made in this application for a renewal of a permit to operate an air pollution source are true, correct and complete to the best of his knowledge and belief. Further, the undersigned agrees to maintain and operate the pollution source and pollution control facilities in such a manner as to comply with the provisions of Chapter 403, Florida Statutes, and all the rules and regulations of the Department. He also understands that a permit, if granted by the Department, will be non-transferable and he will promptly notify the Department upon sale or legal transfer of the permitted facility.

*During actual time of operation.
**Units: Natural Gas-MMCF/hr; Fuel Oils-barrels/hr; Coal-lbs/hr.
***Attach letter of authorization if not previously submitted

Lonnie A Payne
Signature, Owner or Authorized Representative (Notarization is mandatory)

Lonnie A. Payne, President
Typed Name and Title

1901 N. 66th Street
Address

Tampa Fl. 33619
City State Zip

November 7, 1983 (813) 626-6151
Date Telephone No.

DER Form 17-1.202(4)
Effective November 30, 1982

WITNESS my hand and official seal, this 7th day of November A.D., 1983.

Joyce D. Morales Caramella
Notary Public, State of Florida at Large
My Commission Expires Oct. 4, 1987

9-29-83 JC.

GULF COAST LEAD CO.

LEAD PRODUCTS -- WHOLESALE ONLY

OFFICE AND PLANT
1901 NORTH 66TH STREET • TAMPA, FLORIDA 33619
PHONE: 626-0303—626-6151

September 29, 1983

RECEIVED
SEP 30 1983
EPCHC

Mr. Jerry Campbell
Air Engineering Department
Hillsborough County Environmental
Protection Commission
1900 - 9th Avenue
Tampa, Florida 33605

Dear Mr. Campbell:

Florida Department of Environmental Regulation (FDER) permit # A029-12482 for operation of two blast furnaces and one slagging furnace at Gulf Coast Lead Company expired on September 15, 1983.

As discussed in our meeting September 21, 1983 with you and representatives of the FDER, we were prepared to submit an application to you by September 23, 1983. However, you have indicated that we must conduct an emission test on the stack which vents the baghouses serving the blast furnace skip-hoist enclosure prior to submitting the application.

The emission test on the skip-hoist baghouses is scheduled to be conducted by Environmental Engineering Consultants, Inc. on Thursday, October 6, 1983, starting at 8:00am. The permit application for the blast furnace operations will be submitted the week following the emission test.

If you have any questions, please don't hesitate to call.

Sincerely,
GULF COAST LEAD COMPANY

Joyce D. Morales-Caramella

Joyce D. Morales-Caramella,
Safety & Environmental Director

cc: Bill Thomas, FDER
Jim Essler, FDER
Jack Fross, EECI

RCVD 11/1/84

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

SOUTHWEST DISTRICT
7601 HIGHWAY 301 NORTH
TAMPA, FLORIDA 33610

$140 00 11/14/84 JC
PAID
H. C. E. P. C.

BOB GRAHAM
GOVERNOR
VICTORIA J. TSCHINKEL
SECRETARY
WILLIAM K. HENNESSEY
DISTRICT MANAGER

APPLICATION TO OPERATE/CONSTRUCT AIR POLLUTION SOURCES

SOURCE TYPE: Secondary Lead Smelter [ ] New[1] [XX] Existing[1]

APPLICATION TYPE: [ ] Construction [XX] Operation [ ] Modification

COMPANY NAME: Gulf Coast Lead Company, Inc. COUNTY: Hillsborough

Identify the specific emission point source(s) addressed in this application (i.e. Lime Kiln No. 4 with Venturi Scrubber; Peaking Unit No. 2, Gas Fired) 2 blast furnaces and 1 flue dust agglomeration furnace w/baghouses

SOURCE LOCATION: Street 1901 N. 66th Street City Tampa

UTM: East 364.048 North 3093.548

Latitude 27 ° 57 ' 43 "N Longitude 82 ° 22 ' 49 "W

APPLICANT NAME AND TITLE: Willis M. Kitchen, Vice President

APPLICANT ADDRESS: 1901 N. 66th Street Tampa, Fl. 33619

SECTION I: STATEMENTS BY APPLICANT AND ENGINEER

A. APPLICANT

I am the undersigned owner or authorized representative* of Gulf Coast Lead Co.,Inc.

I certify that the statements made in this application for a Air pollution source permit are true, correct and complete to the best of my knowledge and belief. Further, I agree to maintain and operate the pollution control source and pollution control facilities in such a manner as to comply with the provision of Chapter 403, Florida Statutes, and all the rules and regulations of the department and revisions thereof. I also understand that a permit, if granted by the department, will be non-transferable and I will promptly notify the department upon sale or legal transfer of the permitted establishment.

*Attach letter of authorization

Signed: Willis M. Kitchen

Willis M. Kitchen, Vice President
Name and Title (Please Type)

Date: Nov 1, 1984 Telephone No. 813/626-6151

B. PROFESSIONAL ENGINEER REGISTERED IN FLORIDA (where required by Chapter 471, F.S.)

This is to certify that the engineering features of this pollution control project have been [redacted]/examined by me and found to be in conformity with modern engineering principles applicable to the treatment and disposal of pollutants characterized in the permit application. There is reasonable assurance, in my professional judgment, that

[1] See Florida Administrative Code Rule 17-2.100(57) and (104)

the pollution control facilities, when properly maintained and operated, will discharge an effluent that complies with all applicable statutes of the State of Florida and the rules and regulations of the department. It is also agreed that the undersigned will furnish, if authorized by the owner, the applicant a set of instructions for the proper maintenance and operation of the pollution control facilities and, if applicable, pollution sources.

Signed Robert E. Wallace

Robert E. Wallace, III, P.E.
Name (Please Type)

Environmental Engineering Consultants, Inc.
Company Name (Pleaae Type)

Post Office Box 7854 Tampa, Fl. 33673
Mailing Address (Please Type)

Florida Regiatration No. 21608 Date: Nov. 1, 1984 Telephone No. 813/237-3781

SECTION II: GENERAL PROJECT INFORMATION

A. Describe the nature and extent of the project. Refer to pollution control equipment, and expected improvements in source performance as a result of installation. State whether the project will result in full compliance. Attach additional sheet if necessary.

Controlling particulate emissions from one blast furnace, one flue dust agglomeration furnace, furnaces' tap points and blast furnace skip hoist with eleven baghouses. Eight baghouses are designated to the main ventilation on the furnaces, one to the tap points ventilation system, and two to the skip hoist ventilation system. This project will be in full compliance. Note: Only one blast furnace operates at a time. The second is a back-up only.

B. Schedule of project covered in this application (Construction Permit Application Only)

Start of Construction _____ Completion of Construction _____

C. Costs of pollution control system(s): (Note: Show breakdown of estimated costs only for individual components/units of the project serving pollution control purposes. Information on actual costs shall be furnished with the application for operation permit.)

Eleven baghouses, three blower motors, three stacks, ductwork, hoods, engineering and installation : $400,000.

D. Indicate any previous DER permits, orders and notices associated with the emission point, including permit issuance and expiration dates.

AO29-78246 Issued: 01-26-84 Expires: 01-06-89

AO29-41831 Issued: 08-28-81 Expires: 04-20-86

E. Requested permitted equipment operating time: hrs/day 24 ; daya/wk 7 ; wks/yr 46.4 ; if power plant, hrs/yr ____ ; if seasonal, describe: These sources operate 325 days per year for a total of 7800 hours per year.

F. If this is a new source or major modification, answer the following questions. (Yes or No) N/A

1. Is this source in a non-attainment area for a particular pollutant? ____

   a. If yes, has "offset" been applied? ____

   b. If yes, has "Lowest Achievable Emission Rate" been applied? ____

   c. If yes, list non-attainment pollutants. ____

2. Does best available control technology (BACT) apply to this source? If yes, see Section VI. ____

3. Does the State "Prevention of Significant Deterioriation" (PSD) requirement apply to this source? If yes, see Sections VI and VII. ____

4. Do "Standards of Performance for New Stationary Sources" (NSPS) apply to this source? ____

5. Do "National Emission Standards for Hazardous Air Pollutants" (NESHAP) apply to this source? ____

H. Do "Reasonably Available Control Technology" (RACT) requirements apply to this source? No

   a. If yes, for what pollutants? ____

   b. If yes, in addition to the information required in this form, any information requested in Rule 17-2.650 must be submitted.

Attach all supportive information related to any answer of "Yes". Attach any justification for any answer of "No" that might be considered questionable.

H. See Attachment B (Table 1)

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ould be

of Con-
ruction

Part 60

rces (If

data for each stack): See Attachment

: _____ ft.

rature: _____ °F.

_____ FPS

N N/A

Type V (Liq.& Gas By-prod.)	Type VI (Solid By-prod.)

city (lbs/hr) _____

k _____ wks/yr. _____

BTU/hr	Temperature (°F)

_ Stack Temp. _____

elocity: _____ FPS

ons rate in grains per stan-

er [ ] Afterburner

VICES (Other than Incinerators)

if applicable:

zation lbs/hr	Relate to Flow Diagram
0	Attachment C
30	1-8
90	1-8
90	
30	

1)

s table must be submitted for each
)

le[3] on r	Potential[4] Emission lbs/hr	T/yr	Relate to Flow Diagram
s/yr	320	1248	1-8
/hr	209	815.1	1-8
lity			

g. Rule 17-2.600(5)(b)2. Table II,

d.

tion V, Item 3).

D. Control Devices: (See Section V, Item 4).

Name and Type (Model & Serial No.)	Contaminant	Efficiency	Range of Particles Size Collected (in microns) (If applicable)	Basis for Efficiency (Section V Item 5)
Baghouse - Wheel-abrator - Frye Model 126 or equivalent (Two of the eleven baghouses were patterned after the Model 126 but were fabricated by GCL.	Particulate	99+%	>1 micron	Manufacturer

E. Fuels

Type (Be Specific)	Consumption*		Maximum Heat Input (MMBTU/hr)
	avg/hr	max./hr	
Coke	1030	1500	9.75

*Units: Natural Gas--MMCF/hr; Fuel Oils--gallons/hr; Coal, wood, refuse, other--lbs/hr.

Fuel Analysis:

Percent Sulfur: 0.58 Percent Ash: 5.4

Density: N/A lbs/gal Typical Percent Nitrogen: N/A

Heat Capacity: 13,000 BTU/lb N/A BTU/gal

Other Fuel Contaminants (which may cause air pollution):

F. If applicable, indicate the percent of fuel used for space heating. N/A

Annual Average Maximum

G. Indicate liquid or solid wastes generated and method of disposal.

Slag is disposed of in an approved and permitted landfill.

Brief description of operating characteristics of control devices: _____

_____

_____

_____

_____

Ultimate disposal of any effluent other than that emitted from the stack (scrubber water, ash, etc.):

_____

_____

_____

_____

NOTE: Items 2, 3, 4, 6, 7, 8, and 10 in Section V must be included where applicable.

SECTION V: SUPPLEMENTAL REQUIREMENTS

Please provide the following supplements where required for this application.

1. Total process input rate and product weight -- show derivation [Rule 17-2.100(127)]

2. To a construction application, attach basis of emission estimate (e.g., design calculations, design drawings, pertinent manufacturer's test data, etc.) and attach proposed methods (e.g., FR Part 60 Methods 1, 2, 3, 4, 5) to show proof of compliance with applicable standards. To an operation application, attach test results or methods used to show proof of compliance. Information provided when applying for an operation permit from a construction permit shall be indicative of the time at which the test was made.

3. Attach basis of potential discharge (e.g., emission factor, that is, AP42 test).

4. With construction permit application, include design details for all air pollution control systems (e.g., for baghouse include cloth to air ratio; for scrubber include cross-section sketch, design pressure drop, etc.)

5. With construction permit application, attach derivation of control device(s) efficiency. Include test or design data. Items 2, 3 and 5 should be consistent: actual emissions = potential (1-efficiency).

6. An 8 1/2" x 11" flow diagram which will, without revealing trade secrets, identify the individual operations and/or processes. Indicate where raw materials enter, where solid and liquid waste exit, where gaseous emissions and/or airborne particles are evolved and where finished products are obtained.

7. An 8 1/2" x 11" plot plan showing the location of the establishment, and points of airborne emissions, in relation to the surrounding area, residences and other permanent structures and roadways (Example: Copy of relevant portion of USGS topographic map).

8. An 8 1/2" x 11" plot plan of facility showing the location of manufacturing processes and outlets for airborne emissions. Relate all flows to the flow diagram.

5. Useful Life:

6. Operating Costs:

7. Energy:

8. Maintenance Cost:

9. Emissions:

Contaminant	Rate or Concentration

10. Stack Parameters

a. Height: ft.

b. Diameter: ft.

c. Flow Rate: ACFM

d. Temperature: °F.

e. Velocity: FPS

E. Describe the control and treatment technology available (As many types as applicable, use additional pages if necessary).

1.

a. Control Device:

b. Operating Principles:

c. Efficiency:[1]

d. Capital Cost:

e. Useful Life:

f. Operating Cost:

g. Energy:[2]

h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

j. Applicability to manufacturing processes:

k. Ability to construct with control device, install in available space, and operate within proposed levels:

2.

a. Control Device:

b. Operating Principles:

c. Efficiency:[1]

d. Capital Cost:

e. Useful Life:

f. Operating Cost:

g. Energy:[2]

h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

[1]Explain method of determining efficiency.
[2]Energy to be reported in units of electrical power - KWH design rate.

(5) Environmental Manager:

(6) Telephone No.:

(7) Emissions:[1]

Contaminant	Rate or Concentration

(8) Process Rate:[1]

b. (1) Company:

(2) Mailing Address:

(3) City: (4) State:

(5) Environmental Manager:

(6) Telephone No.:

(7) Emissions:[1]

Contaminant	Rate or Concentration

(8) Process Rate:[1]

10. Reason for selection and description of systems:

[1]Applicant must provide this information when available. Should this information not be available, applicant must state the reason(s) why.

SECTION VII - PREVENTION OF SIGNIFICANT DETERIORATION N/A

A. Company Monitored Data

1. _____no. sites _____ TSP _____( ) SO^2* _____ Wind spd/dir

Period of Monitoring _____/____/____ to _____/____/____
month day year month day year

Other data recorded _____

Attach all data or statistical summaries to this application.

*Specify bubbler (B) or continuous (C).

2. Instrumentation, Field and Laboratory

a. Was instrumentation EPA referenced or its equivalent? [ ] Yes [ ] No

b. Was instrumentation calibrated in accordance with Department procedures?

[ ] Yes [ ] No [ ] Unknown

B. Meteorological Data Used for Air Quality Modeling

1. _____ Year(s) of data from _____/_____/_____ to _____/_____/_____
month day year month day year

2. Surface data obtained from (location)_____

3. Upper air (mixing height) data obtained from (location)_____

4. Stability wind rose (STAR) data obtained from (location)_____

C. Computer Models Used

1. _____ Modified? If yes, attach description.

2. _____ Modified? If yes, attach description.

3. _____ Modified? If yes, attach description.

4. _____ Modified? If yes, attach description.

Attach copies of all final model runs showing input data, receptor locations, and principle output tables.

D. Applicants Maximum Allowable Emission Data

Pollutant	Emission Rate	
TSP	_____	grams/sec
SO^2	_____	grams/sec

E. Emission Data Used in Modeling

Attach list of emission sources. Emission data required is source name, description of point source (on NEDS point number), UTM coordinates, stack data, allowable emissions, and normal operating time.

F. Attach all other information supportive to the PSD review.

G. Discuss the social and economic impact of the selected technology versus other applicable technologies (i.e., jobs, payroll, production, taxes, energy, etc.). Include assessment of the environmental impact of the sources.

H. Attach scientific, engineering, and technical material, reports, publications, journals, and other competent relevant information describing the theory and application of the requested best available control technology.

8-17-81

7601 HIGHWAY 301 NORTH
TAMPA, FLORIDA 33610

BOB GRAHAM
GOVERNOR

~~XXXXXXXXXX~~
SECRETARY

WILLIAM K. HENNESSEY
DISTRICT MANAGER

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

SOUTHWEST DISTRICT

Hillsborough County AP

Mr. Lonnie A. Payne
Gulf Coast Lead Company
1901 N. 66th Street
Tampa, Fla. 33619

RECEIVED
AUG 18 1981
H.C.E.P.C.

Dear Mr. Payne:

Enclosed is Permit Number AO29-41831 dated August 17, 1981, to operate the subject air pollution source issued pursuant to Section 403, Florida Statutes.

Should you object to this permit, including any and all of the conditions contained therein, you may file an appropriate petition for administrative hearing. This petition must be filed within fourteen (14) days of the receipt of this letter. Further, the petition must conform to the requirements of Section 28-5.201, Florida Administrative Code, (see reverse side of this letter). The petition must be filed with the Office of General Counsel, Department of Environmental Regulation, Twin Towers Office Building, 2600 Blair Stone Road, Tallahassee, Florida 32301.

If no petition is filed within the prescribed time, you will be deemed to have accepted this permit and waived your right to request an administrative hearing on this matter.

Acceptance of the permit constitutes notice and agreement that the Department will periodically review this permit for compliance, including site inspections where applicable, and may initiate enforcement action for violation of the conditions and requirements thereof.

Sincerely,

W.K. Hennessey
District Manager

cc: Record Center
Robert E. Wallace, P.E.
HCEPC
Enclosure

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

SOUTHWEST DISTRICT
7601 HIGHWAY 301 NORTH
TAMPA, FLORIDA 33610

BOB GRAHAM
GOVERNOR
~~XXXXXXXXXX~~
~~JACOBO KARNIX~~
SECRETARY
Vicki Tschinkel
WILLIAM K. HENNESSEY
DISTRICT MANAGER

APPLICANT:

Gulf Coast Lead Company
1901 N. 66th Street
Tampa, Fla. 33619

PERMIT/CERTIFICATION NO. AO29-41831

COUNTY: Hillsborough

PROJECT: Dust Collector for Blast & Slag Furnaces Secondary Emissions

This permit is issued under the provisions of Chapter 403, Florida Statutes, and Chapter 17-2, Florida Administrative Code. The above named applicant, hereinafter called Permittee, is hereby authorized to perform the work or operate the facility shown on the approved drawing(s), plans, documents, and specifications attached hereto and made a part hereof and specifically described as follows:

For the operation of enclosure hoods for slag and lead tap points for the blast furnace and a slagging furnace slag tap enclosure hood all exhausting thru a baghouse to a stack.

Located at 1901 N. 66th Street, Tampa.

UTM: 17-364.0E 3093.5N

Replaces Permit NO: AC29-35694 NEDS NO: 0057 Point ID: ~~02~~ 04

JC
11/21/84

Expires: April 20, 1986

DER FORM 17-1.122(63) 1/4 (1/80)

PERMIT NO.: AO29-41831
APPLICANT: Gulf Coast Lead Company

GENERAL CONDITIONS:

1. The terms, conditions, requirements, limitations, and restrictions set forth herein are "Permit Conditions:, and as such are binding upon the permittee and enforceable pursuant to the authority of Section 403.161(1), Florida Statutes. Permittee is hereby placed on notice that the department will review this permit periodically and may initiate court action for any violation of the "Permit Conditions" by the permittee, its agents, employees, servants or representatives.

2. This permit is valid only for the specific processes and operations indicated in the attached drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit shall constitute grounds for revocation and enforcement action by the department.

3. If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately notify and provide the department with the following information: (a) a description of and cause of non-compliance; and (b) the period of non-compliance, including exact dates and times; or, if not corrected, the anticipated time the non-compliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the non-compliance. The permittee shall be responsible for any and all damages which may result and may be subject to enforcement action by the department for penalties or revocation of this permit.

4. As provided in subsection 403.087(6), Florida Statutes, the issuance of this permit does not convey any vested rights or any exclusive privileges. Nor does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations.

5. This permit is required to be posted in a conspicuous location at the work site or source during the entire period of construction or operation.

6. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source, which are submitted to the department, may be used by the department as evidence in any enforcement case arising under the Florida Statutes or department rules, except where such use is proscribed by Section 403.111, F.S.

7. In the case of an operation permit, permittee agrees to comply with changes in department rules and Florida Statutes after a reasonable time for compliance, provided, however, the permittee does not waive any other rights granted by Florida Statutes or department rules.

8. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, plant, or aquatic life or property and penalities therefore caused by the construction or operation of this permitted source, nor does it allow the permittee to cause pollution in contravention of Florida Statutes and department rules, except where specifically authorized by an order from the department granting a variance or exception from department rules or state statutes.

9. This permit is not transferable. Upon sale or legal transfer of the property or facility covered by this permit, the permittee shall notify the department within thirty (30) days. The new owner must apply for a permit transfer within thirty (30) days. The permittee shall be liable for any non-compliance of the permitted source until the transferee applies for and receives a transfer of permit.

10. The permittee, by acceptance of this permit, specifically agrees to allow access to permitted source at reasonable times by department personnel presenting credentials for the purposes of inspection and testing to determine compliance with this permit and department rules.

11. This permit does not indicate a waiver of or approval of any other department permit that may be required for other aspects of the total project.

12. This permit conveys no title to land or water, nor constitutes state recognition or acknowledgement of title, and does not constitute authority for the reclamation of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the state. Only the Trustees of the Internal Improvement Trust Fund may express state opinion as to title.

13. This permit also constitutes:

[ ] Determination of Best Available Control Technology (BACT)
[ ] Determination of Prevention of Significant Deterioration (PSD)
[ ] Certification of Compliance with State Water Quality Standards (Section 401, PL 92-500)

PERMIT NO.: AO29-41831
APPLICANT: Gulf Coast Lead Company

SPECIFIC CONDITIONS:

1. Test the emissions for the following pollutant(s) at intervals of 12 months from the date of 2/10/81 and submit a copy of test data to the District Engineer of this agency within fifteen days of such testing. (Chapter 17-2.07(1), F.A.C.).

(X) Particulates	(X) Sulfur Oxides*
( ) Fluorides	( ) Nitrogen Oxides
(X) Plume Density	( ) Hydrocarbons
	( ) Total Reduced Sulfur

* Fuel analysis is acceptable

2. Testing of emissions must be accomplished at approximately the rates as stated in the application. Failure to submit the input rates or operation at conditions which do not reflect actual operating conditions may invalidate the data (Chapter 403.161(1)(c), Florida Statutes).

3. Submit for this facility, each calendar year, on or before March 1, an emission report for the preceding calendar year containing the following information as per Chapter 17-4.14, F.A.C.

   (A) Annual amount of materials and/or fuels utilized.
   (B) Annual emissions (note calculation basis).
   (C) Any changes in the information contained in the permit application.

4. Submit for this source quarterly reports showing the type and monthly quantities of fuels used in the operation of this source. Also state the sulfur content of each fuel. (Chapter 17-4.14, F.A.C.)

5. All emissions generated by this process are discharged through a baghouse to a stack.

6. One time only within 12 months of 2/10/81 the stack test for total suspended particulates shall be analysed quantitatively & qualitatively for lead.

7. The entire plant is to have a cap limit of emissions not to exceed 6.7 lb/hr of total suspended particulate and 5% opacity.

PERMIT NO.: AO29-41831
APPLICANT: Gulf Coast Lead Company

Expiration Date: April 20, 1986

_____ Pages Attached.

Issued this 17th day of August, 19 81.

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

W.K. Hennessey
Signature
W.K. Hennessey
District Manager

DER FORM 17-1.122(63) 4/4 (1/80)

ATTACHMENT A

Section V

1. Both process input wight and products weight are measured.

2. See Table 1.

3. Measured data from stack tests: 1981 through 1984.

6. See Attachment C. Raw materials enter the blast furnace by way of the skiphoist. Raw materials for the flue dust agglomeration furnace originate from the baghouse hoppers. Products exit from the furnace tap point marked: blast lead. Wastes exit from the furnace tap point marked: slag.

ATTACHMENT B

EMISSIONS LIMITS FOR GULF COAST LEAD COMPANY

PARTICULATE AND LEAD

Source	Particulate Emissions lbs/hr	Emission Ratio Pb/PM	Pb Emissions lbs/hr	Hrs. of Operation Per Year	Tons/Yr PM	Tons/Yr Pb
Blast & Slag Furnaces	2.5	.723	1.81	7800	9.750	7.059
Blast & Slag Furnaces Tap Points	0.15	.40	0.06	7800	0.585	0.234
Skip Hoist	0.55	.40	0.22	7800	2.145	0.858
Refining Kettles	1.0	.40	0.40	4368[a]	2.184	0.874
Keel Cast Kettle	0.20	.40	0.08	2400	0.240	0.096
Total	4.4		2.57		14.904	9.121

[a] Total hours of operation for the refining kettle area. Two kettles will always operate simultaneously.

TABLE 1

ATTACHMENT D

EMISSION STACK GEOMETRY & FLOW CHARACTERISTICS

SECTION III, H

BLAST & SLAG FURNACES

Stack Height: 97 ft.

Stack Diameter: 2 ft.

Gas Flow Rate: 18,000 ACFM
15,000 DSCFM

Gas Exit Temperature: 155 F

Water Vapor Content: 4.3%

Velocity: 92 FPS

LEAD & SLAG TAP ENCLOSURES

Stack Height: 29 ft.

Stack Diameter: 1 ft. (square)

Gas Flow Rate: 3560 ACFM
3100 DSCFM

Gas Exit Temperture: 95 F

Water Vapor Content: 1.6%

Velocity: 48 FPS

SKIP-HOIST ENCLOSURE

Stack Height: 60 ft.

Stack Diameter: 2 ft.

Gas Flow Rate: 6300 ACFM
5775 DSCFM

Gas Exit Temperature: 105 F

Water Vapor Content: 2.7%

Velocity: 40 FPS

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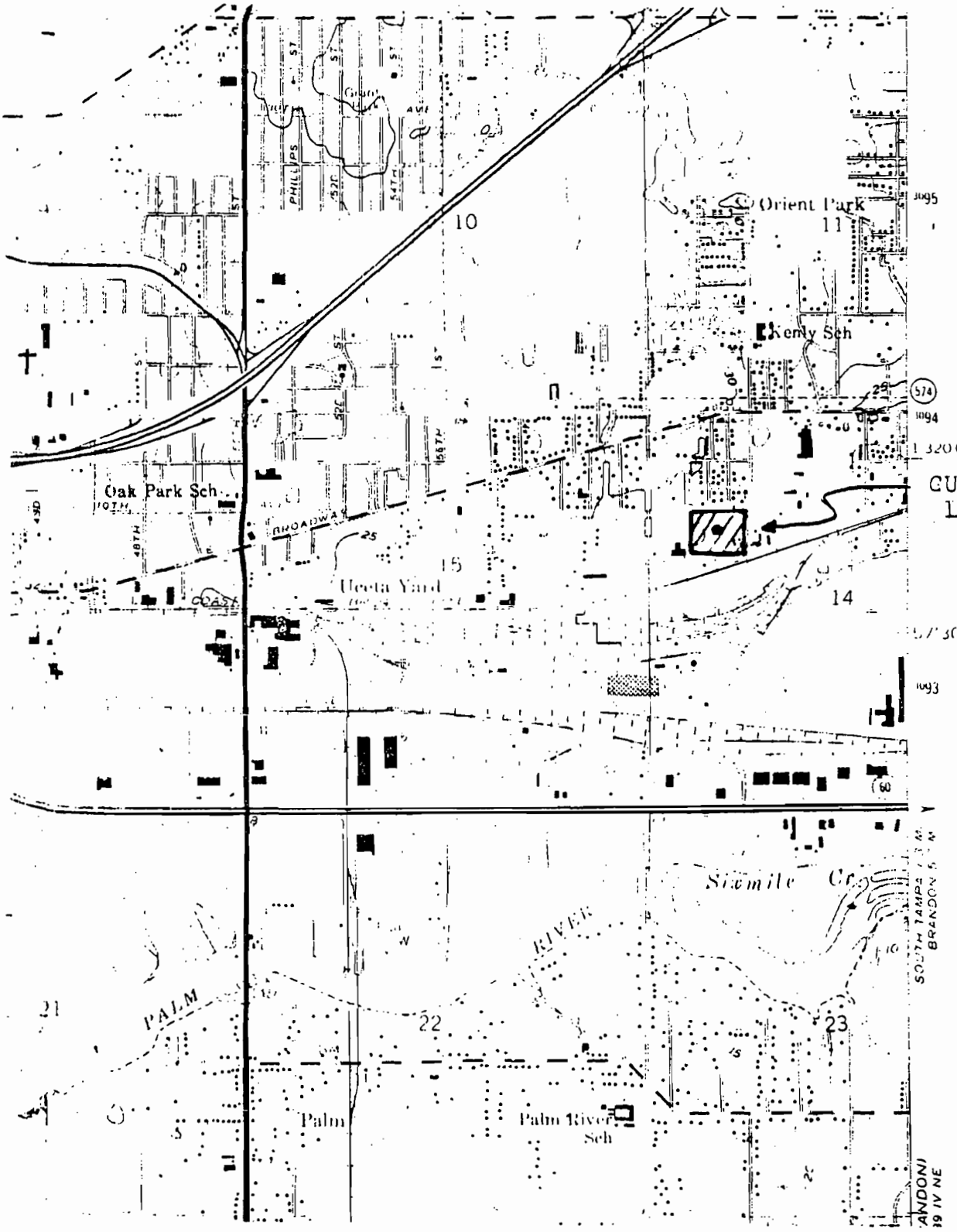
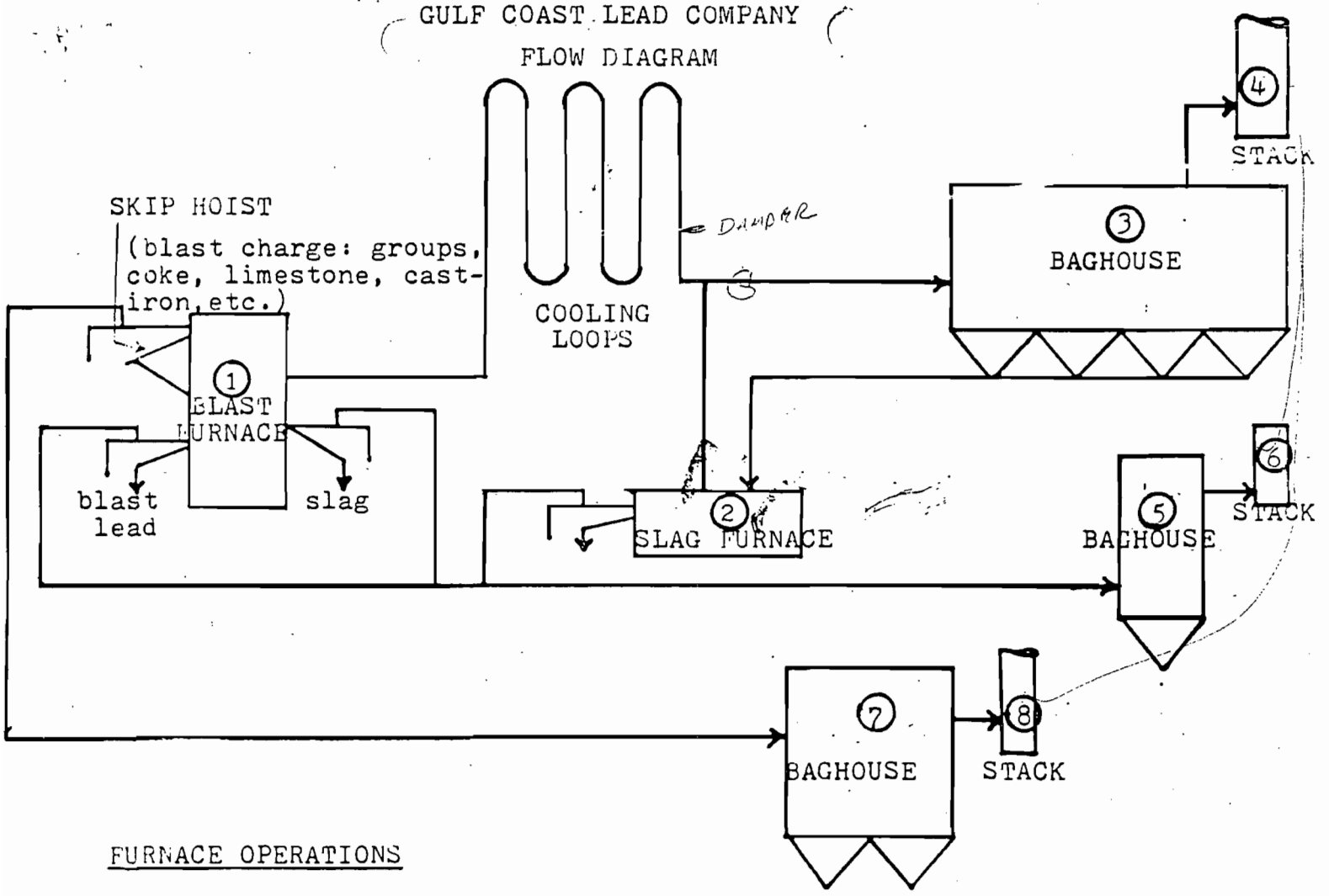
ATTACHMENT E

GULF COAST LEAD COMPANY LOCATION

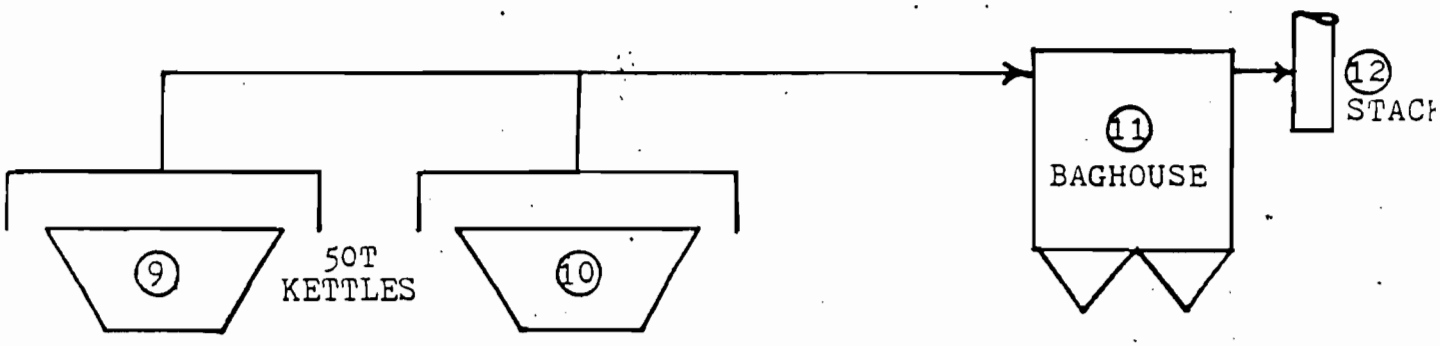


GULF COAST LEAD COMPANY

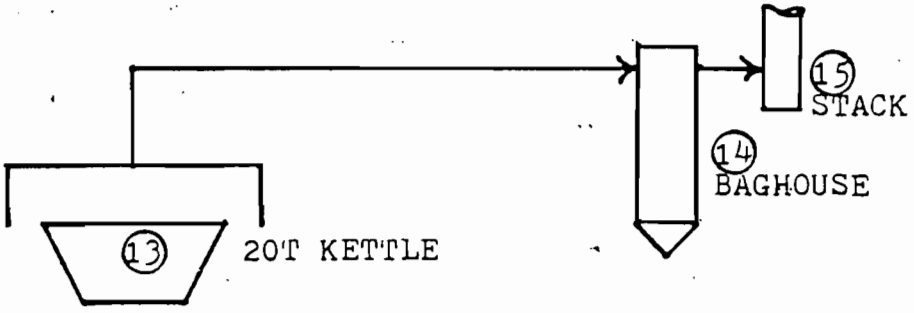
FLOW DIAGRAM



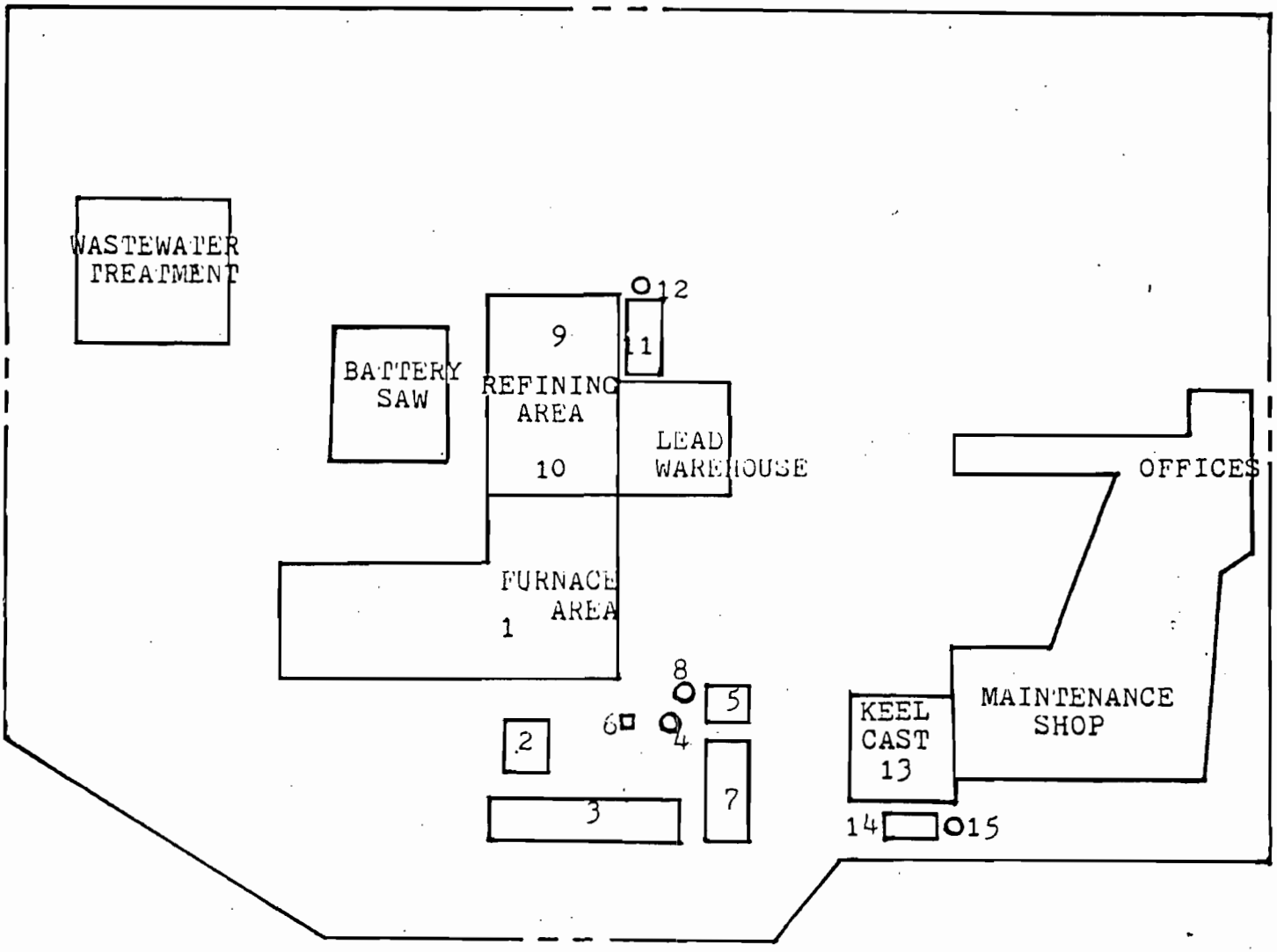
FURNACE OPERATIONS



[illegible]ING OPERATIONS



[illegible] CAST OPERATIONS



GULF COAST LEAD COMPANY

LOCATION OF MANUFACTURING PROCESSES & EMISSION POINTS

STATE OF FLORIDA

DEPART.. NT OF ENVIRONMENTAL ... GULATION

5-20-81

SOUTHWEST DISTRICT
7601 HIGHWAY 301 NORTH
TAMPA, FLORIDA 33610

BOB GRAHAM
GOVERNOR
XXXXXXXXXX
SECRETARY
Vicki Tschinkel
WILLIAM K. HENNESSEY
DISTRICT MANAGER

APPLICANT:

Gulf Coast Lead Company
1901 N. 66th Street
Tampa, Fla. 33619

PERMIT/CERTIFICATION
NO. AO29-41831

COUNTY: Hillsborough

PROJECT: Dust Collector
for Blast & Slag Furnaces
Secondary Emissions

This permit is issued under the provisions of Chapter 403, Florida Statutes, and Chapter 17-2, Florida Administrative Code. The above named applicant, hereinafter called Permittee, is hereby authorized to perform the work or operate the facility shown on the approved drawing(s), plans, documents, and specifications attached hereto and made a part hereof and specifically described as follows:

For the operation of enclosure hoods for slag and lead tap points for the blast furnace and a slagging furnace slag tap enclosure hood all exhausting thru a baghouse to a stack.

Located at 1901 N. 66th Street, Tampa.

UTM: 17-364.0E 3093.5N

Replaces Permit NO: AC29-35694 NEDS NO: 0057 Point ID: 04

Expires: April 20, 1986

PERMIT NO.: AO29-41831
APPLICANT: Gulf Coast Lead Company

SPECIFIC CONDITIONS:

1. Test the emissions for the following pollutant(s) at intervals of 12 months from the date of 2/10/81 and submit a copy of test data to the District Engineer of this agency within fifteen days of such testing. (Chapter 17-2.07(1), F.A.C.).

(X)Particulates	(X) Sulfur Oxides*
( )Fluorides	( ) Nitrogen Oxides
(X) Plume Density	( ) Hydrocarbons
	( ) Total Reduced Sulfur

* Fuel analysis is acceptable

2. Testing of emissions must be accomplished at approximately the rates as stated in the application. Failure to submit the input rates or operation at conditions which do not reflect actual operating conditions may invalidate the data (Chapter 403.161(1)(c), Florida Statutes).

3. Submit for this facility, each calendar year, on or before March 1, an emission report for the preceding calendar year containing the following information as per Chapter 17-4.14, F.A.C.

   (A) Annual amount of materials and/or fuels utilized.
   (B) Annual emissions (note calculation basis).
   (C) Any changes in the information contained in the permit application.

4. Submit for this source quarterly reports showing the type and monthly quantities of fuels used in the operation of this source. Also state the sulfur content of each fuel. (Chapter 17-4.14, F.A.C.)

5. All emissions generated by this process are discharged through a baghouse to a stack.

6. One time only within 12 months of 2/10/81 the stack test for total suspended particulates shall be analysed quantitatively & qualitatively for lead.

7. The entire plant is to have a cap limit of emissions not to exceed 6.7 lb/hr of total suspended particulate and 5% opacity.

ENVIRONMENTAL ENGINEERING CONSULTANTS, INC.

Consulting

Engineers • Chemists • Industrial Hygienists • Environmental Scientists

February 27, 1981

Anthony Jones
Hillsborough County Environmental
Protection Commission
1900 9th Avenue N
Tampa, Florida 33605

Dear Anthony:

Enclosed is the report of the Visible Emissions Test conducted at Gulf Coast Lead Company on February 20, 1981. The stack tested was the vent for the slagging furnace and the lead and slag top hoods at the blast furnace. The opacity density was 0 percent for the entire test.

If you have any questions, please call me.

Sincerely,

ENVIRONMENTAL ENGINEERING CONSULTANTS, INC.

Carl F. Fink

Carl F. Fink

CFF/vb

Encl.

cc: Joyce Morales
Gulf Coast Lead Company

5500 N. Florida Avenue • P.O. Box 8386 • Tampa, Florida 33604 (813) 237-3781

ENVIRONMENTAL ENGINEERING CONSULTANTS, INC.

Consulting

Engineers • Chemists • Industrial Hygienists • Environmental Scientists

VISIBLE EMISSION OBSERVATION FORM

SOURCE NAME: GULF COAST LEAD CO.

PROJECT NUMBER: 79001

OBSERVATION DATE: 2-20-81

LOCATION: TAMPA, FL.

OBSERVER'S NAME (PRINT): CARL F. FINK

CERTIFIED BY: FDER

DATE: 10-17-80

PROCESS: CUT FOR SLAG TAP, LEAD TAP, & SLAG FURNACE

OPERATING MODE:

CONTROL EQUIPMENT: BAGHOUSE

OPERATING MODE:

DESCRIBE EMISSION POINT: FREE STANDING STACK

EMISSION POINT HEIGHT ABOVE GROUND LEVEL: 40 FT.

EMISSION POINT HEIGHT RELATIVE TO OBSERVER: 36 FT

DISTANCE TO EMISSION POINT: 75 FT.

DIRECTION TO EMISSION POINT: NW

DESCRIBE EMISSIONS: NONE

COLOR OF EMISSIONS: —

CONTINUOUS FUGITIVE

INTERMITTENT —

WATER VAPOR PRESENT: ( ) YES

IF YES, IS PLUME ATTACHED — DETACHED

WHAT POINT WAS OPACITY DETERMINED: LIP OF STACK

DESCRIBE BACKGROUND: SKY

COLOR OF BACKGROUND: BLUE

SKY CONDITIONS: 10 % OVERCAST

WIND SPEED: 0 - 4 mph

WIND DIRECTION: W to N

AMBIENT TEMPERATURE: 75°F

RELATIVE HUMIDITY: 60%

START TIME: 10:05

STOP TIME: 11:05

	0	15	30	45		0	15	30	45
1	0	0	0	0	31	0	0	0	0
2	0	0	0	0	32	0	0	0	0
3	0	0	0	0	33	0	0	0	0
4	0	0	0	0	34	0	0	0	0
5	0	0	0	0	35	0	0	0	0
6	0	0	0	0	36	0	0	0	0
7	0	0	0	0	37	0	0	0	0
8	0	0	0	0	38	0	0	0	0
9	0	0	0	0	39	0	0	0	0
10	0	0	0	0	40	0	0	0	0
11	0	0	0	0	41	0	0	0	0
12	0	0	0	0	42	0	0	0	0
13	0	0	0	0	43	0	0	0	0
14	0	0	0	0	44	0	0	0	0
15	0	0	0	0	45	0	0	0	0
16	0	0	0	0	46	0	0	0	0
17	0	0	0	0	47	0	0	0	0
18	0	0	0	0	48	0	0	0	0
19	0	0	0	0	49	0	0	0	0
20	0	0	0	0	50	0	0	0	0
21	0	0	0	0	51	0	0	0	0
22	0	0	0	0	52	0	0	0	0
23	0	0	0	0	53	0	0	0	0
24	0	0	0	0	54	0	0	0	0
25	0	0	0	0	55	0	0	0	0
26	0	0	0	0	56	0	0	0	0
27	0	0	0	0	57	0	0	0	0
28	0	0	0	0	58	0	0	0	0
29	0	0	0	0	59	0	0	0	0
30	0	0	0	0	60	0	0	0	0

AVERAGE OPACITY: 0 %

NUMBER OF READINGS ABOVE ____ % WERE

REMARKS: tapped slag 10:50 - 10:58

RANGE OF OPACITY READINGS FROM ____ TO ____

OBSERVER'S SIGNATURE: Carl F. Fink

DATE: 2-20-81

I HAVE RECEIVED A COPY OF THESE OPACITY OBSERVATIONS.

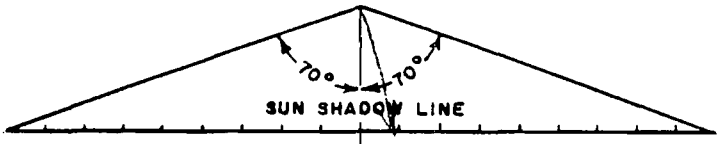
VERIFIED BY:

TITLE

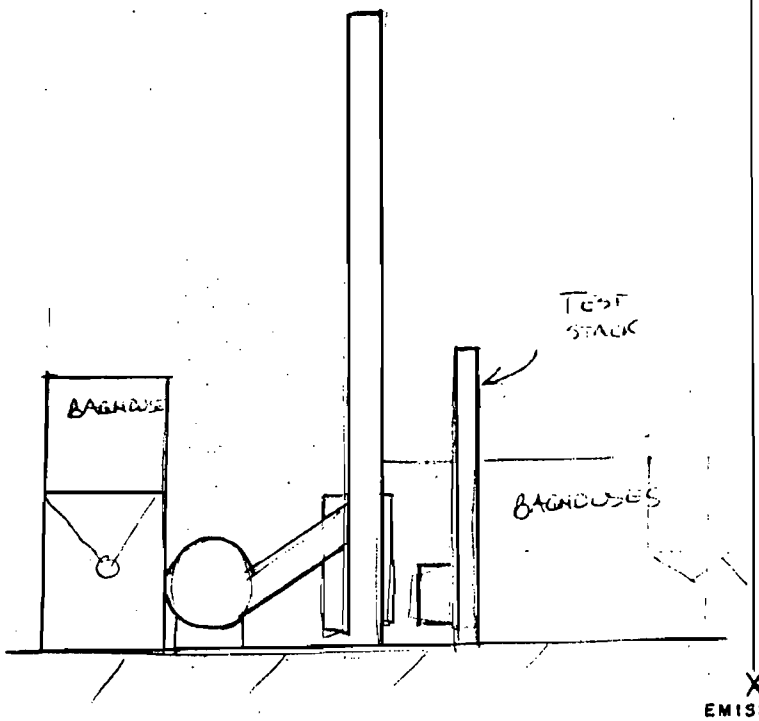
DATE

5500 N. FLORIDA AVENUE · P.O. BOX 8386 · TAMPA, FLORIDA 33604 (813) 237-3781

BEST AVAILABLE COPY



URCE LAYOUT SKETCH



EMISSION POINT

Looking South

SUN

$50.00 3/30/81 jr
PAID
H. C. E. P. C.

RECEIVED
MAR 27 1981
H.C.E.P.C.

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

AIR POLLUTION SOURCES
CERTIFICATE OF COMPLETION OF CONSTRUCTION*

P05702
Control No.

PERMIT NO. A029-27109/AC29-35694 DATE: March 18, 1981

Company Name: Gulf Coast Lead Co., Inc. County: Hillsborough

Source Identification(s): Modification of in-plant ventilation

Actual costs of serving pollution control purpose: $ 50,000.00

Operating Rates: Per A029-27109 Design Capacity: Per 29-109

Expected Normal Per A029-109 During Compliance Test

Date of Compliance Test: February 20, 1981 (Attach detailed test report)

Test Results:	Pollutant	Actual Discharge	Allowed Discharge
	Visible Opacity	0 %	less than 5 %

Date plant placed in operation: January 12, 1981

This is to certify that, with the exception of deviations noted**, the construction of the project has been completed in accordance with the application to construct and Construction Permit No. AC29-35694 dated Jan. 6, 1981.

A. Applicant:
Lonnie A. Payne
Name of Person Signing (Type)

Lonnie A Payne
Signature of Owner or Authorized Representative and Title

Date: March , 1981 Telephone: 813 626 6151

B. Professional Engineer:
Robert E. Wallace III, P.E.
Name of Person Signing (Type)

Robert E. Wallace
Signature of Professional Engineer

Environmental Engineering Consultants, Inc.
Company Name

Florida Registration No. 21608

Date: March 19, 1981

(Seal)

P.O. Box 8386, Tampa, Fl. 33674
Mailing Address

813 237 3781
Telephone Number

*This form, satisfactorily completed, submitted in conjunction with an existing application to construct permit and payment of application processing fee will be accepted in lieu of an application to operate.

**As built, if not built as indicated include process flow sketch, plot plan sketch, and updates of applicable pages of application form.

4-8-81 AB
A029-4831

AUG 18 1981
D.E.R. RECEIVED
H.C.E.P.C.
MAR 27 1981
H.C.E.P.C.

APR 8 1981
SOUTHWEST DISTRICT
TAMPA

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

AIR POLLUTION SOURCES
CERTIFICATE OF COMPLETION OF CONSTRUCTION*

PERMIT NO. A029-27109/AC29-35694 DATE: March 18, 1981

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Lonnie A. Payne
Name of Person Signing (Type)

Lonnie A Payne
Signature of Owner or Authorized Representative and Title

Date: March , 1981 Telephone: 813 626 6151

B. Professional Engineer:
Robert E. Wallace III, P.E.
Name of Person Signing (Type)

Robert E. Wallace III
Signature of Professional Engineer

Environmental Engineering Consultants, Inc.
Company Name

Florida Registration No. 21608

Date: March 19, 1981

(Seal)

P.O. Box 8386, Tampa, Fl. 33674
Mailing Address

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Telephone Number

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**As built, if not built as indicated include process flow sketch, plot plan sketch, and updates of applicable pages of application form.

ENVIRONMENTAL ENGINEERING CONSULTANTS, INC.

Consulting

Engineers • Chemists • Industrial Hygienists • Environmental Scientists

February 27, 1981

Anthony Jones
Hillsborough County Environmental
Protection Commission
1900 9th Avenue N
Tampa, Florida 33605

Dear Anthony:

Enclosed is the report of the Visible Emissions Test conducted at Gulf Coast Lead Company on February 20, 1981. The stack tested was the vent for the slagging furnace and the lead and slag top hoods at the blast furnace. The opacity density was 0 percent for the entire test.

If you have any questions, please call me.

Sincerely,

ENVIRONMENTAL ENGINEERING CONSULTANTS, INC.

Carl F. Fink

Carl F. Fink

CFF/vb

Encl.

cc: Joyce Morales
Gulf Coast Lead Company

5500 N. Florida Avenue • P.O. Box 8386 • Tampa, Florida 33604 (813) 237-3781

ENVIRONMENTAL ENGINEERING CONSULTANTS, INC.

Consulting

Engineers • Chemists • Industrial Hygienists • Environmental Scientists

VISIBLE EMISSION OBSERVATION FORM

SOURCE NAME: GULF COAST LEAD CO.

PROJECT NUMBER: 79201

OBSERVATION DATE: 2-20-81

LOCATION: TAMPA, FL.

OBSERVER'S NAME (PRINT): CARL F. FINK

CERTIFIED BY: FDER DATE: 10-17-80

PROCESS: CUT FOR SLAG TAP, LEAD TAP, SLAG FUMING — OPERATING MODE:

START TIME: 10:05 STOP TIME: 11:05

CONTROL EQUIPMENT: BAGHOUSE — OPERATING MODE:

DESCRIBE EMISSION POINT: FREE STANDING STACK

EMISSION POINT HEIGHT ABOVE GROUND LEVEL: 40 FT.

EMISSION POINT HEIGHT RELATIVE TO OBSERVER: 26 FT

DISTANCE TO EMISSION POINT: ~~75~~ FT.

DIRECTION TO EMISSION POINT: NW

DESCRIBE EMISSIONS: NONE

COLOR OF EMISSIONS: —

CONTINUOUS FUGITIVE

INTERMITTENT

WATER VAPOR PRESENT: ( ) YES

IF YES, IS PLUME ATTACHED DETACHED

WHAT POINT WAS OPACITY DETERMINED: LIP OF STACK

DESCRIBE BACKGROUND: SKY

COLOR OF BACKGROUND: BLUE

SKY CONDITIONS: 10 % OVERCAST

WIND SPEED: 0 - 4 mph

WIND DIRECTION: W to N

AMBIENT TEMPERATURE: 75°F

RELATIVE HUMIDITY: 60%

REMARKS: tapped slag 10:50 - 10:58

	0	15	30	45		0	15	30	45
1	0	0	0	0	31	0	0	0	0
2	0	0	0	0	32	0	0	0	0
3	0	0	0	0	33	0	0	0	0
4	0	0	0	0	34	0	0	0	0
5	0	0	0	0	35	0	0	0	0
6	0	0	0	0	36	0	0	0	0
7	0	0	0	0	37	0	0	0	0
8	0	0	0	0	38	0	0	0	0
9	0	0	0	0	39	0	0	0	0
10	0	0	0	0	40	0	0	0	0
11	0	0	0	0	41	0	0	0	0
12	0	0	0	0	42	0	0	0	0
13	0	0	0	0	43	0	0	0	0
14	0	0	0	0	44	0	0	0	0
15	0	0	0	0	45	0	0	0	0
16	0	0	0	0	46	0	0	0	0
17	0	0	0	0	47	0	0	0	0
18	0	0	0	0	48	0	0	0	0
19	0	0	0	0	49	0	0	0	0
20	0	0	0	0	50	0	0	0	0
21	0	0	0	0	51	0	0	0	0
22	0	0	0	0	52	0	0	0	0
23	0	0	0	0	53	0	0	0	0
24	0	0	0	0	54	0	0	0	0
25	0	0	0	0	55	0	0	0	0
26	0	0	0	0	56	0	0	0	0
27	0	0	0	0	57	0	0	0	0
28	0	0	0	0	58	0	0	0	0
29	0	0	0	0	59	0	0	0	0
30	0	0	0	0	60	0	0	0	0

AVERAGE OPACITY: 0 %

NUMBER OF READINGS ABOVE ____ % WERE

RANGE OF OPACITY READINGS FROM ____ TO ____

OBSERVER'S SIGNATURE: Carl F. Fink DATE: 2-20-81

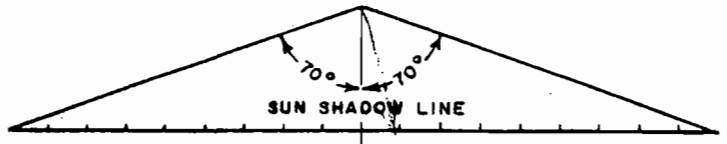
I HAVE RECEIVED A COPY OF THESE OPACITY OBSERVATIONS.

VERIFIED BY: [signature]

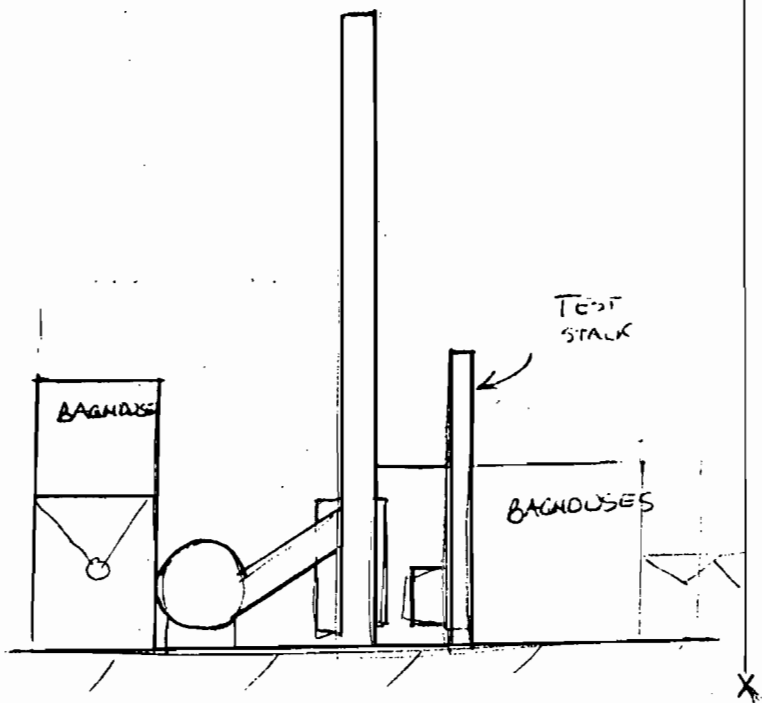
TITLE DATE

5500 N. FLORIDA AVENUE · P.O. BOX 8386 · TAMPA, FLORIDA 33604 (813) 237-3781

BEST AVAILABLE COPY



URCE LAYOUT SKETCH



EMISSION POINT

Looking South

75 FT.

OBSERVER

SUN

NE file. Gulf Coast Lead AC29-35694 1-6-81

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

SOUTHWEST DISTRICT
7601 HIGHWAY 301 NORTH
TAMPA, FLORIDA 33610

BOB GRAHAM
GOVERNOR

JACOB D. VARN
SECRETARY

WILLIAM K. HENNESSEY
DISTRICT MANAGER

Hillsborough County AP

Mr. Lonnie A. Payne
Gulf Coast Lead Company
1901 N. 66th Street
Tampa, Fla. 33619

Dear Mr. Payne:

Enclosed is Permit Number AC29-35694, dated January 6, 1981 to construct the subject air pollution source issued pursuant to Section _____, Florida Statutes.

Should you object to this permit, including any and all of the conditions contained therein, you may file an appropriate petition for administrative hearing. This petition must be filed within fourteen (14) days of the receipt of this letter. Further, the petition must conform to the requirements of Section 28-5.201, Florida Administrative Code, (see reverse side of this letter). The petition must be filed with the Office of General Counsel, Department of Environmental Regulation, Twin Towers Office Building, 2600 Blair Stone Road, Tallahassee, Florida 32301.

If no petition is filed within the prescribed time, you will be deemed to have accepted this permit and waived your right to request an administrative hearing on this matter.

Acceptance of the permit constitutes notice and agreement that the Department will periodically review this permit for compliance, including site inspections where applicable, and may initiate enforcement action for violation of the conditions and requirements thereof.

Sincerely,

RECEIVED
JAN 7 - 81
H.C.E.P.C.

W. K. Hennessey
District Manager

cc: Record Center
HCEPC
Robert E. Wallace, P.E.
Enclosure

DER Form 17-1.122(66) 1/2

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

SOUTHWEST DISTRICT
7601 HIGHWAY 301 NORTH
TAMPA, FLORIDA 33610

BOB GRAHAM
GOVERNOR

JACOB D. VARN
SECRETARY

WILLIAM K. HENNESSEY
DISTRICT MANAGER

APPLICANT:

Gulf Coast Lead Company
1901 N. 66th Street
Tampa, Fla. 33619

PERMIT/CERTIFICATION
NO. AC29-35694

COUNTY: Hillsborough

PROJECT:
Modify Permit
AO29-27109
Dust Collector

This permit is issued under the provisions of Chapter 403, Florida Statutes, and Chapter 17-2, Florida Administrative Code. The above named applicant, hereinafter called Permittee, is hereby authorized to perform the work or operate the facility shown on the approved drawing(s), plans, documents, and specifications attached hereto and made a part hereof and specifically described as follows:

For the modification of permit AO29-27109 adding a dust collector for the exhaust hoods of the slag and lead tap enclosures of the blast furnace and the slag tap enclosure for the slagging furnace. This dust collector will have a separate stack.

Located at 1901 N. 66th Street, Tampa.

UTM: 17-364.0 E 3093.5 N

Replaces Permit NO: N/A NEDS NO: 0057 Point ID: 04

Expires: June 30, 1981

DER FORM 17-1.122(63) 1/4 (1/80)

PERMIT NO.: AC29-35694
APPLICANT: Gulf Coast Lead Company

SPECIFIC CONDITIONS:

1. The construction of this facility shall be completed by 4/15/81. An application to operate this installation shall be submitted to the Department 60 days prior to expiration date of this permit.

2. This construction permit expires on 6/30/81 following an initial period of operation for appropriate testing to determine compliance with the Rules of the Florida Department of Environmental Regulation Commission. (Chapter 17-4.07(7) F.A.C.)

3. All applicable rules of the Department including design discharge limitations specified in the application shall be adhered to. The permit holder may also need to comply with county, municipal, federal, or other state regulations prior to construction. (Chapter 17-4.07(1), F.A.C.)

4. This unit shall be observed for visible emissions (plume density) within 30 days after completion of construction and prior to general operation. (Chapter 17-2.05(1)(a) During the test period this unit must be run within 10% of operating capacity.

5. All reasonable precautions shall be taken to prevent and control generation of fugitive particulate matter. (Chapter 17-2.05(3), F.A.C.)

6. This installation shall also be stack tested for lead and total suspended particulates in accordance with Chapter 17-2.08(4) which states testing to be according to methods set forth in the Standard Sampling Techniques and Methods of Analysis for the Determination of Air Pollutants from Point Sources.

7. The maximum allowable Visible Emissions rate shall not exceed 5% during the tapping operation. If the test exceeds 5% opacity the source shall be tested for particulate emission. The maximum allowable particulate emission rate from this source combined with the emissions from permits AO29-12482, AO29-27109, and AC29-31078 shall not exceed 6.7 pounds per hour.

Oct 13, 1980

AC29-35694

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

APPLICATION TO OPERATE/CONSTRUCT AIR POLLUTION SOURCES

SOURCE TYPE: SEC. LEAD SMELTER [ ] New[1] [X] Existing[1]

APPLICATION TYPE: [ ] Construction [ ] Operation [X] Modification

COMPANY NAME: GULF COAST LEAD COMPANY COUNTY: HILLSBOROUGH

Identify the specific emission point source(s) addressed in this application (i.e. Lime Kiln No. 4 with Venturi Scrubber; Peeking Unit No. 2, Gas Fired) Refining Kettles and associated ventilation

SOURCE LOCATION: Street 1901 N. 66th St. City Tampa

UTM: East 364.048 North 3093.548

Latitude ____ ° ____ ' ____ "N Longitude ____ ° ____ ' ____ "W

APPLICANT NAME AND TITLE: Lonnie A. Payne, Vice President

APPLICANT ADDRESS: 1901 N. 66th St., Tampa, Fl. 33619

SECTION I: STATEMENTS BY APPLICANT AND ENGINEER

A. APPLICANT

I am the undersigned owner or authorized representative* of Gulf Coast Lead Company

I certify that the statements made in this application for a Construction/Modification permit are true, correct and complete to the best of my knowledge and belief. Further, I agree to maintain and operate the pollution control source and pollution control facilities in such a manner as to comply with the provision of Chapter 403, Florida Statutes, and all the rules and regulations of the department and revisions thereof. I also understand that a permit, if granted by the department, will be non-transferable and I will promptly notify the department upon sale or legal transfer of the permitted establishment.

*Attach letter of authorization

Signed: Lonnie A Payne

Lonnie A. Payne, Vice President

Name and Title (Please Type)

Date: Oct 8, 1980 Telephone No. 813 626 6151

B. PROFESSIONAL ENGINEER REGISTERED IN FLORIDA (where required by Chapter 471, F.S.)

This is to certify that the engineering features of this pollution control project have been [redacted]/examined by me and found to be in conformity with modern engineering principles applicable to the treatment and disposal of pollutants characterized in the permit application. There is reasonable assurance, in my professional judgment, that the pollution control facilities, when properly maintained and operated, will discharge an effluent that complies with all applicable statutes of the State of Florida and the rules and regulations of the department. It is also agreed that the undersigned will furnish, if authorized by the owner, the applicant a set of instructions for the proper maintenance and operation of the pollution control facilities and, if applicable, pollution sources.

Signed: Robert E Wallace III

Robert E. Wallace III, P.E.

Name (Please Type)

(Affix Seal)

Environmental Engineering Consultants, Inc.

Company Name (Please Type)

5500 N. Florida Ave., PO Box 8386, Tampa

Mailing Address (Please Type) Fl. 33604

Florida Registration No. 21608 Date: Oct. 8, 1980 Telephone No. 813 237 3781

[1]See Section 17-2.02(15) and (22), Florida Administrative Code, (F.A.C.)

SECTION II: GENERAL PROJECT INFORMATION

A. Describe the nature and extent of the project. Refer to pollution control equipment, and expected improvements in source performance as a result of installation. State whether the project will result in full compliance. Attach additional sheet if necessary.

ATTACHMENT A

B. Schedule of project covered in this application (Construction Permit Application Only)

Start of Construction 11-15-80 Completion of Construction 2-1-81

C. Costs of pollution control system(s): (Note: Show breakdown of estimated costs only for individual components/units of the project serving pollution control purposes. Information on actual costs shall be furnished with the application for operation permit.)

Baghouse	13,000.00
Stack and Blower	4,000.00
Ductwork	5,000.00
Installation	2,500.00

D. Indicate any previous DER permits, orders and notices associated with the emission point, including permit issuance and expiration dates.

AC29-12606: Issued 9-25-78; Expired 2-15-79

AO29-27109: Issued 3-28=80; Expires 3-25-85

E. Is this application associated with or part of a Development of Regional Impact (DRI) pursuant to Chapter 380, Florida Statutes, and Chapter 22F-2, Florida Administrative Code? ____ Yes X No

F. Normal equipment operating time: hrs/day ____ ; days/wk ____ ; wks/yr ____ ; if power plant, hrs/yr ____ ; if seasonal, describe: ATTACHMENT A

G. If this is a new source or major modification, answer the following questions. (Yes or No) N/A

1. Is this source in a non-attainment area for a particular pollutant?
   a. If yes, has "offset" been applied?
   b. If yes, has "Lowest Achievable Emission Rate" been applied?
   c. If yes, list non-attainment pollutants.
2. Does best available control technology (BACT) apply to this source? If yes, see Section VI.
3. Does the State "Prevention of Significant Deterioriation" (PSD) requirements apply to this source? If yes, see Sections VI and VII.
4. Do "Standards of Performance for New Stationary Sources" (NSPS) apply to this source?
5. Do "National Emission Standards for Hazardous Air Pollutants" (NESHAP) apply to this source?

Attach all supportive information related to any answer of "Yes". Attach any justification for any answer of "No" that might be considered questionable.

SECTION III: AIR POLLUTION SOURCES & CONTROL DEVICES (Other than Incinerators)

A. Raw Materials and Chemicals Used in your Process, if applicable:

Description	Contaminants		Utilization Rate - lbs/hr	Relate to Flow Diagram
	Type	% Wt		
		ATTACHMENT B		

B. Process Rate, if applicable: (See Section V, Item 1)

1. Total Process Input Rate (lbs/hr): Blast Furnace = 5300; Refining Kettle = 100,000#/Charge.

2. Product Weight (lbs/hr): Blast Furnace = 2968; Refining Kettle = 98,000#/Charge.

C. Airborne Contaminants Emitted: ATTACHMENT C

Name of Contaminant	Emission[1]		Allowed Emission[2] Rate per Ch. 17-2, F.A.C.	Allowable[3] Emission lbs/hr	Potential Emission[4]		Relate to Flow Diagram
	Maximum lbs/hr	Actual T/yr			lbs/hr	T/yr	
Particulate	2.462	8.863	17-2.05	12.000	246.2	886.3	6&9
Sulfur Dioxide	175	630	-	-	175	630	"
Opacity	0%	-	17-2.05	20 %	-	-	"

D. Control Devices: (See Section V, Item 4) Proposed New Construction Only

Name and Type (Model & Serial No.)	Contaminant	Efficiency	Range of Particles[5] Size Collected (in microns)	Basis for Efficiency (Sec. V, It[5]
Baghouse (1-Unit)	PM and Lead	99+	greater than 1	Design
Wheelabrator-Frye Dustube Dust Collector, Size No. 1217, Model 126, Series 55 One Module Intermittent Type.				

[1] See Section V, Item 2.

[2] Reference applicable emission standards and units (e.g., Section 17-2.05(6) Table II, E. (1), F.A.C. – 0.1 pounds per million BTU heat input)

[3] Calculated from operating rate and applicable standard

[4] Emission, if source operated without control (See Section V, Item 3)

[5] If Applicable

E. Fuels

Type (Be Specific)	Consumption*		Maximum Heat Input (MMBTU/hr)
	avg/hr	max./hr	
Coke (Blast Furnace)	300 #	400#	Ala. ByProducts, Birm,Ala.
LP Gas (Refining Kettles)	7 gal	14 gal	1.28

*Units Natural Gas, MMCF/hr; Fuel Oils, barrels/hr; Coal, lbs/hr

Fuel Analysis:

Percent Sulfur: Coke = 0.58 Percent Ash: Coke = 5.4

Density: N/A lbs/gal Typical Percent Nitrogen: N/A

Heat Capacity: _____ BTU/lb LP Gas 91,500 BTU/gal

Other Fuel Contaminants (which may cause air pollution): N/A

F. If applicable, indicate the percent of fuel used for space heating. Annual Average N/A Maximum _____

G. Indicate liquid or solid wastes generated and method of disposal.

Baghouse dust, drosses and other recovered solids are recycled to the blast furnace to recover available antimony and lead. Slag is stored on-site.

H. Emission Stack Geometry and Flow Characteristics (Provide data for each stack): Proposed Construction Only

Stack Height: 35 ft. Stack Diameter: Square 12"X12" ft.

Gas Flow Rate: 3500 ACFM Gas Exit Temperature: Ambient °F.

Water Vapor Content: Ambient % Velocity: 58 FPS

SECTION IV: INCINERATOR INFORMATION

Type of Waste	Type 0 (Plastics)	Type I (Rubbish)	Type II (Refuse)	Type III (Garbage)	Type IV (Pathological)	Type V (Liq & Gas By-prod.)	Type VI (Solid By-prod.)
Lbs/hr Incinerated							

Description of Waste _____

Total Weight Incinerated (lbs/hr) _____ Design Capacity (lbs/hr) _____

Approximate Number of Hours of Operation per day _____ days/week _____

Manufacturer _____

Date Constructed _____ Model No. _____

ATTACHMENT A

SECTION II: GENERAL PROJECT INFORMATION

SECTION A:

Project consists of a modification of permit No. AO29-27109. The exhaust hoods for slag and lead tap enclosures of the blast furnace and the slag tap enclosure for the slagging furnace will be isolated from the present ventilation system and routed through a separate dust collector and exhausted through a separate stack. The modification will increase the ventilation efficiency in the furnace tap areas and by elimination of these processes increase the efficiency of the general plant ventilation.

No increase in production or total emission of any pollutant will accompany this modification. A net decrease in secondary emissions are expected however, because of this improvement in ventilation. The facility will continue to comply with the Rules of the Florida Department of Environmental Regulation.

SECTION F

Refining Kettle; Primary and secondary emissions: 8 Hours/day; 3 days/wk; 50 wk/yr.

Blast Furnace; Secondary emissions only during slag or lead tapping operations: 24 hr/day; 6 days/wk; 50 wk/yr.

ATTACHMENT B

SECTION III: AIR POLLUTION SOURCES & CONTROL DEVICES

SECTION A

Description	Utilizaton Rate	Flow Loc.
Blast Furnace		
Lead Bearing Material	4800 #/hr	1
Coke	300	1
Limestone	100	1
Cast Iron	100	1
Refining Kettle		
Blast Lead	100,000 #/chg.	3
Antimony, Tin and other alloying elements	As req'd to meet customer spec's.	3

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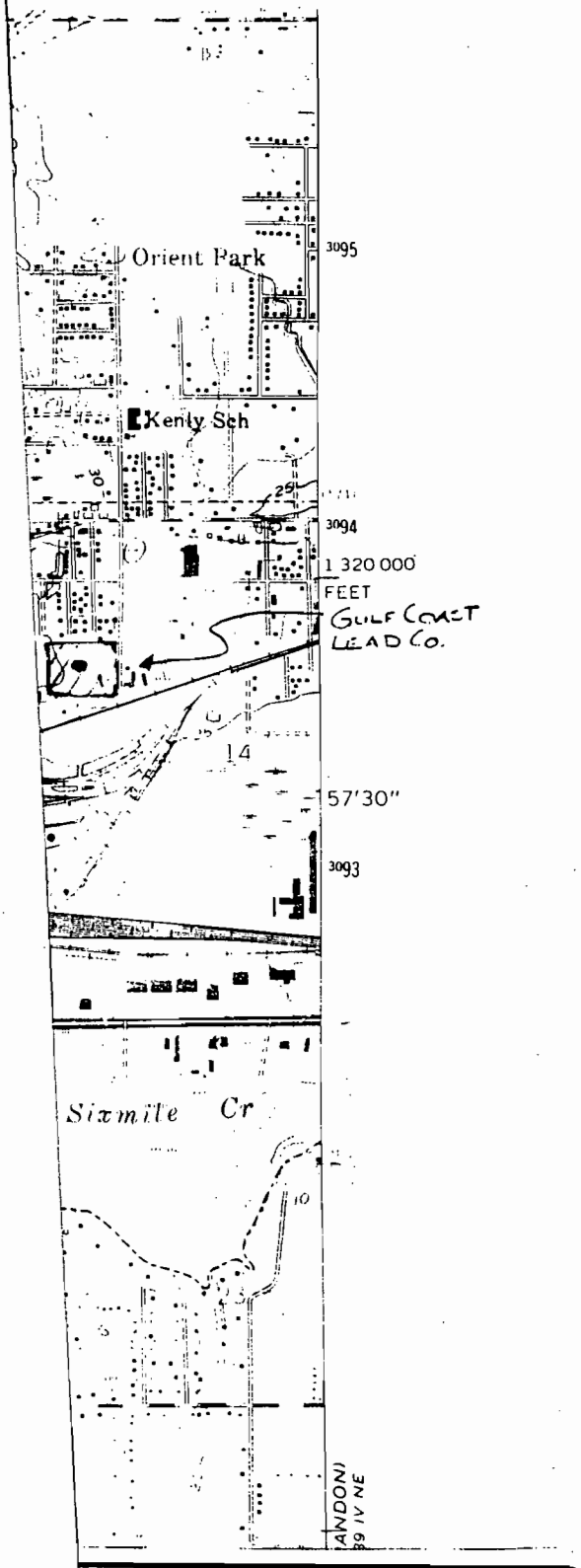
ATTACHMENT C

AIR POLLUTION SOURCES & CONTROL DEVICES

ll emissions, including the primary blast furnace
mit No. AO29-12482) are exhausted from a common stack.
osed modification, the secondary emissions from the blast
ion generated during slag and lead tapping operations,
cted separately, cleaned and exhausted through a separate
crease in total facility emission will accompany this
in fact a net decrease is expected through the improve-
lation, thereby decreasing the fugitive portion.

baghouse fabric area is 2856 ft^2. At 3500 CFM, the
ocity will be 1.23 fpm, well within good engineering
this source type and fabric choice.

th the Rules of the FDER, Chapter 17-2 will continue
established following construction using 40 CFR 60
, & 9.



LEAD Co. LOCATION

AL ENGINEERING
TANTS, INC.
FLORIDA

1"=2,000

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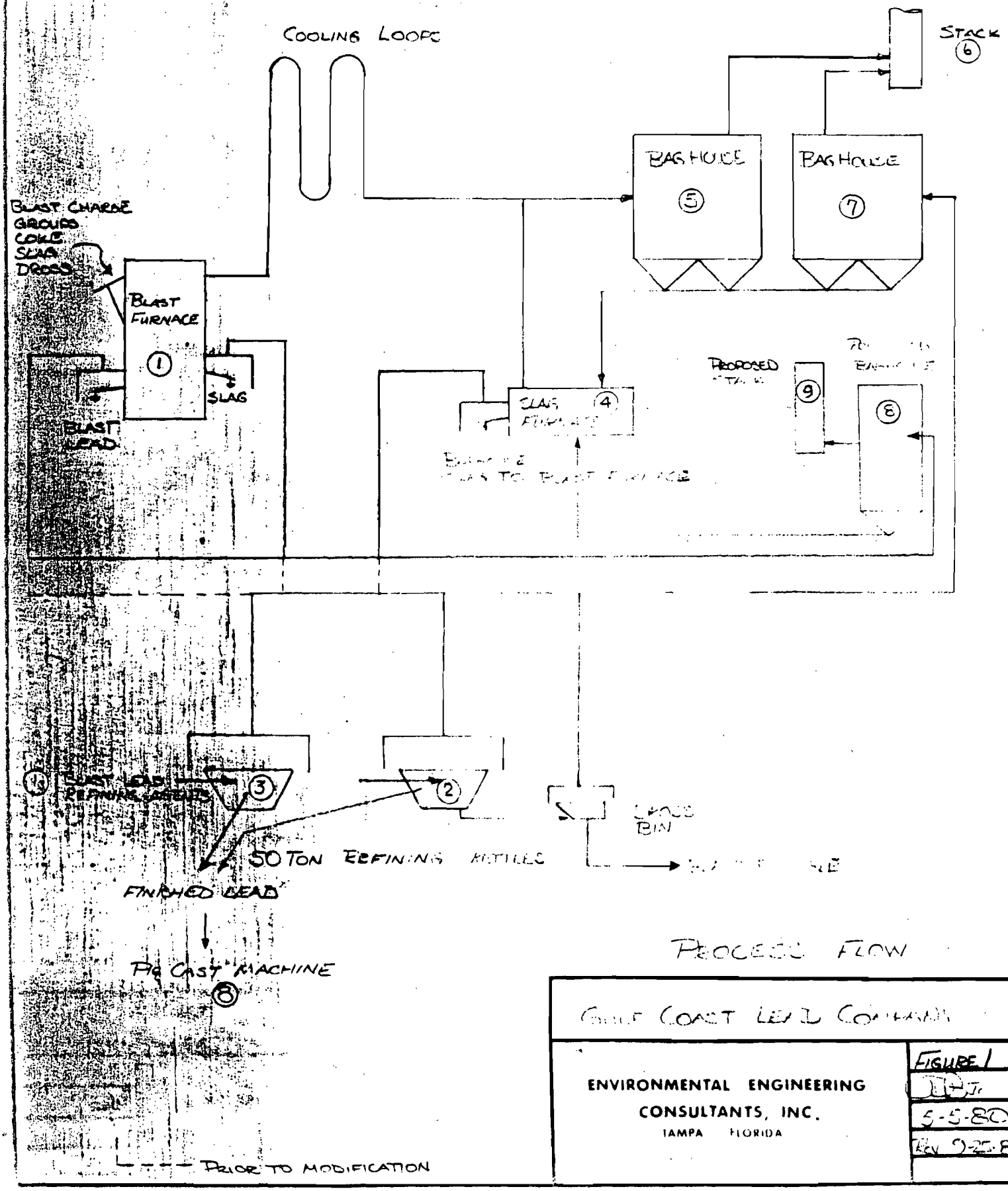

PROCESS FLOW

GULF COAST LEAD COMPANY

ENVIRONMENTAL ENGINEERING CONSULTANTS, INC.
TAMPA FLORIDA

FIGURE 1
JJ + Jr.
5-5-80
REV 9-25-80

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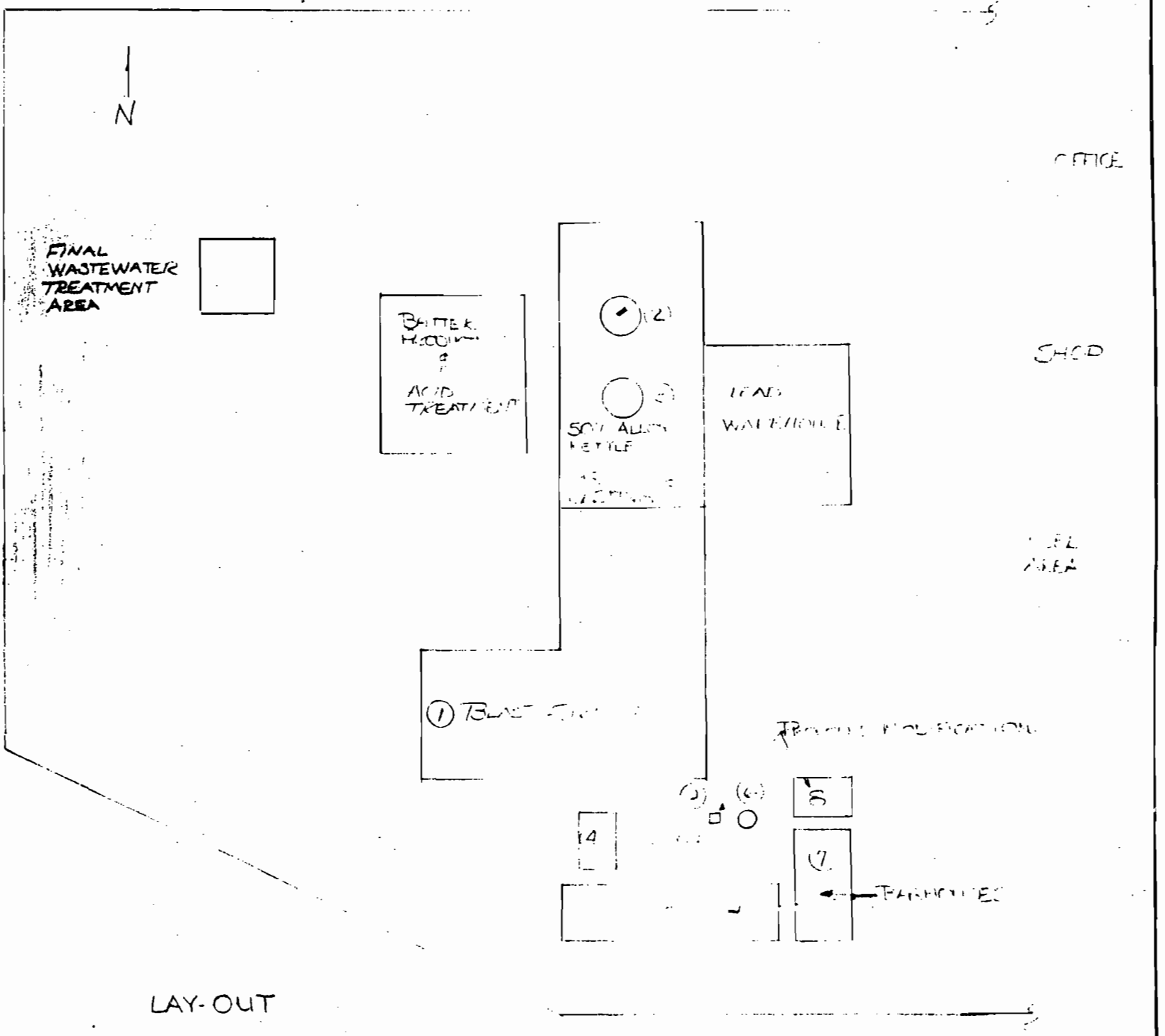

LAY-OUT

GULF COAST LEAD CO.

ENVIRONMENTAL ENGINEERING CONSULTANTS, INC.
TAMPA FLORIDA

FIGURE 2