AN APPLICATION FOR CONSTRUCTION PERMIT

PREPARED FOR:

GULF COAST RECYCLING, INC.
TAMPA, FLORIDA

SEPTEMBER 1994

KOOGLER & ASSOCIATES
ENVIRONMENTAL SERVICES

4014 NW THIRTEENTH STREET
GAINESVILLE, FLORIDA 32609
904/377-5822 ▪ FAX 377-7158

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1.0 SYNOPSIS OF APPLICATION

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

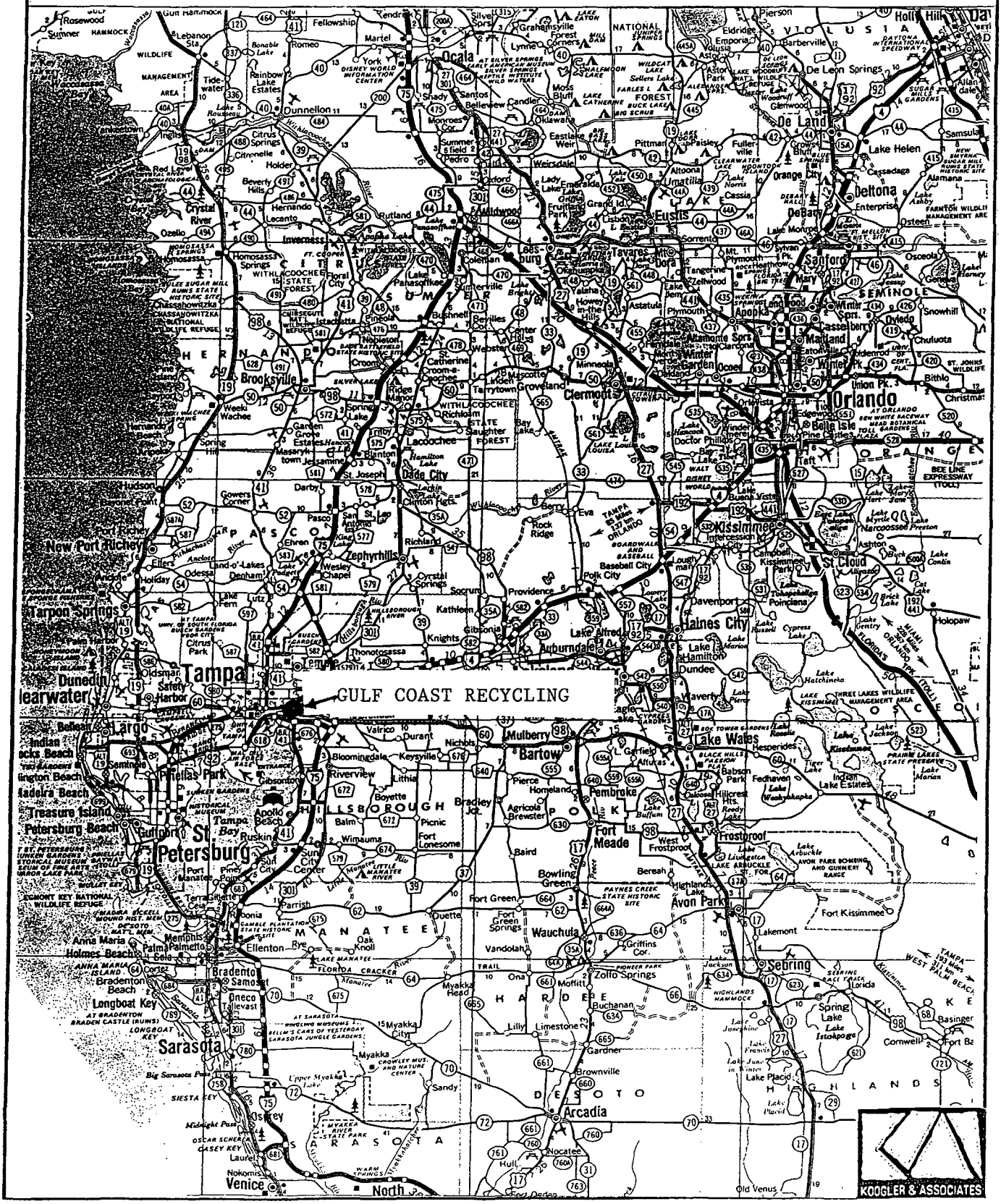
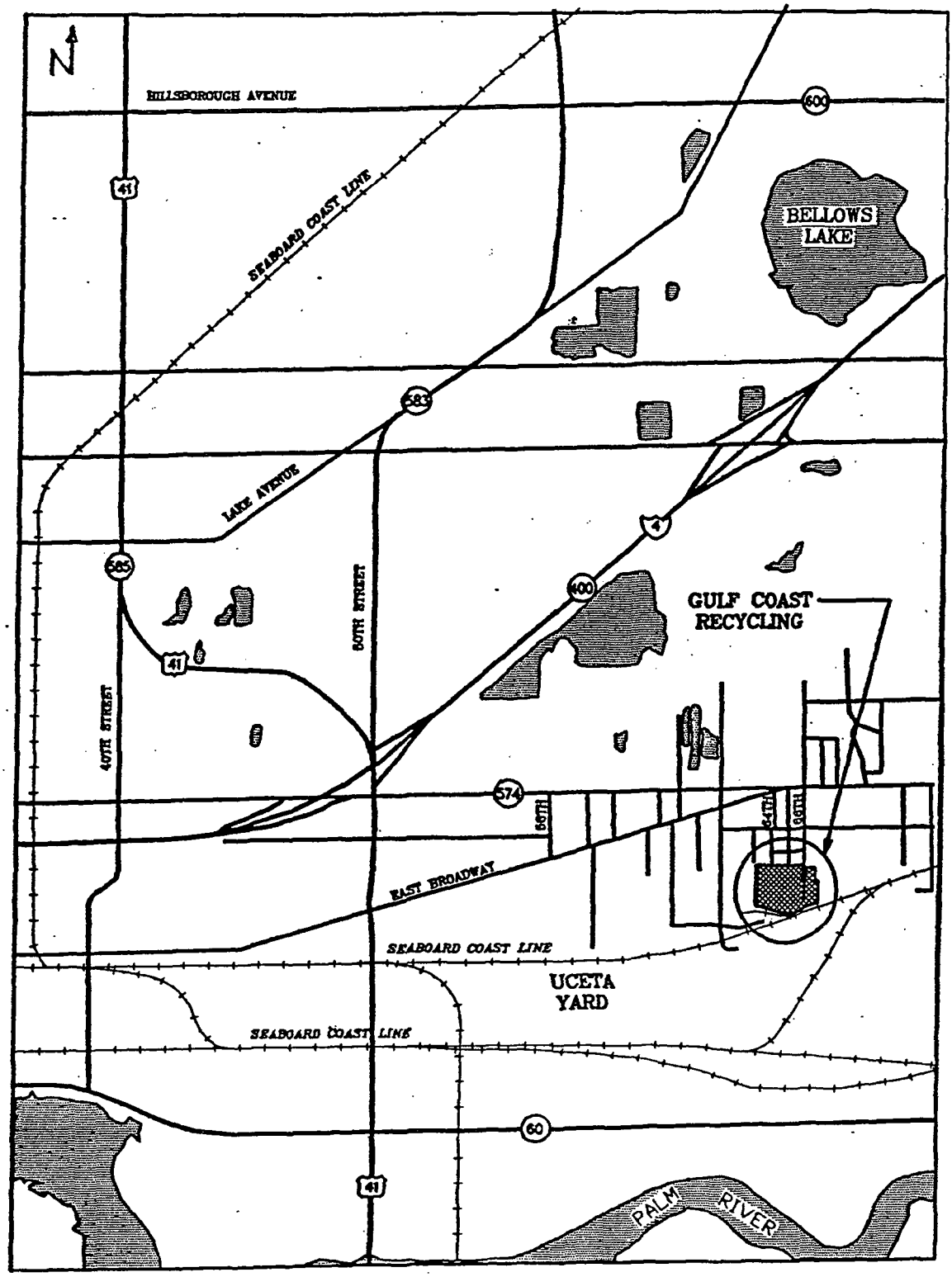


FIGURE 1-2

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.

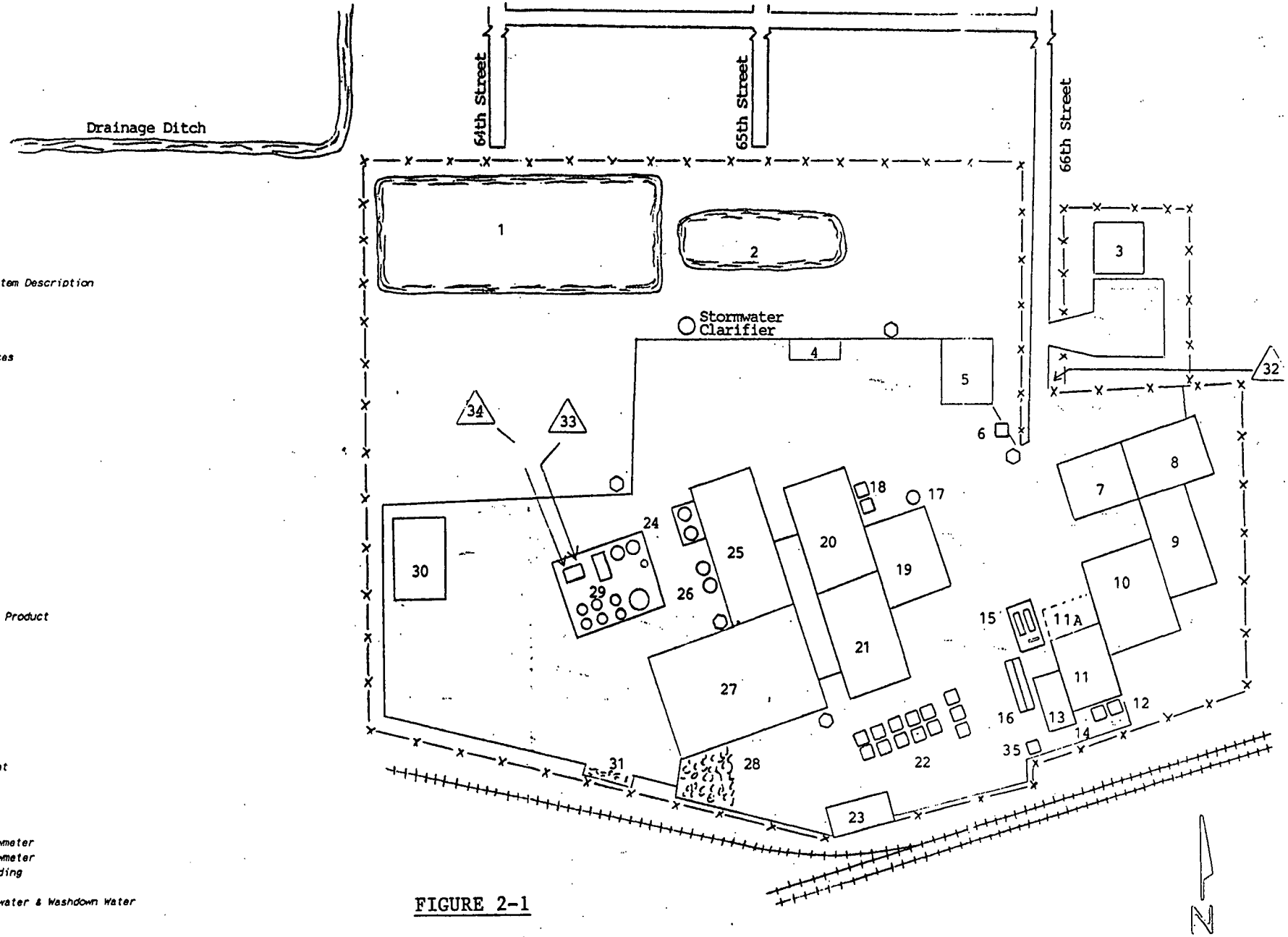
- Slide gates will be installed in the exit of the baghouse hoppers to prevent the re-entrainment of dust collected in the screw conveyor.

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



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

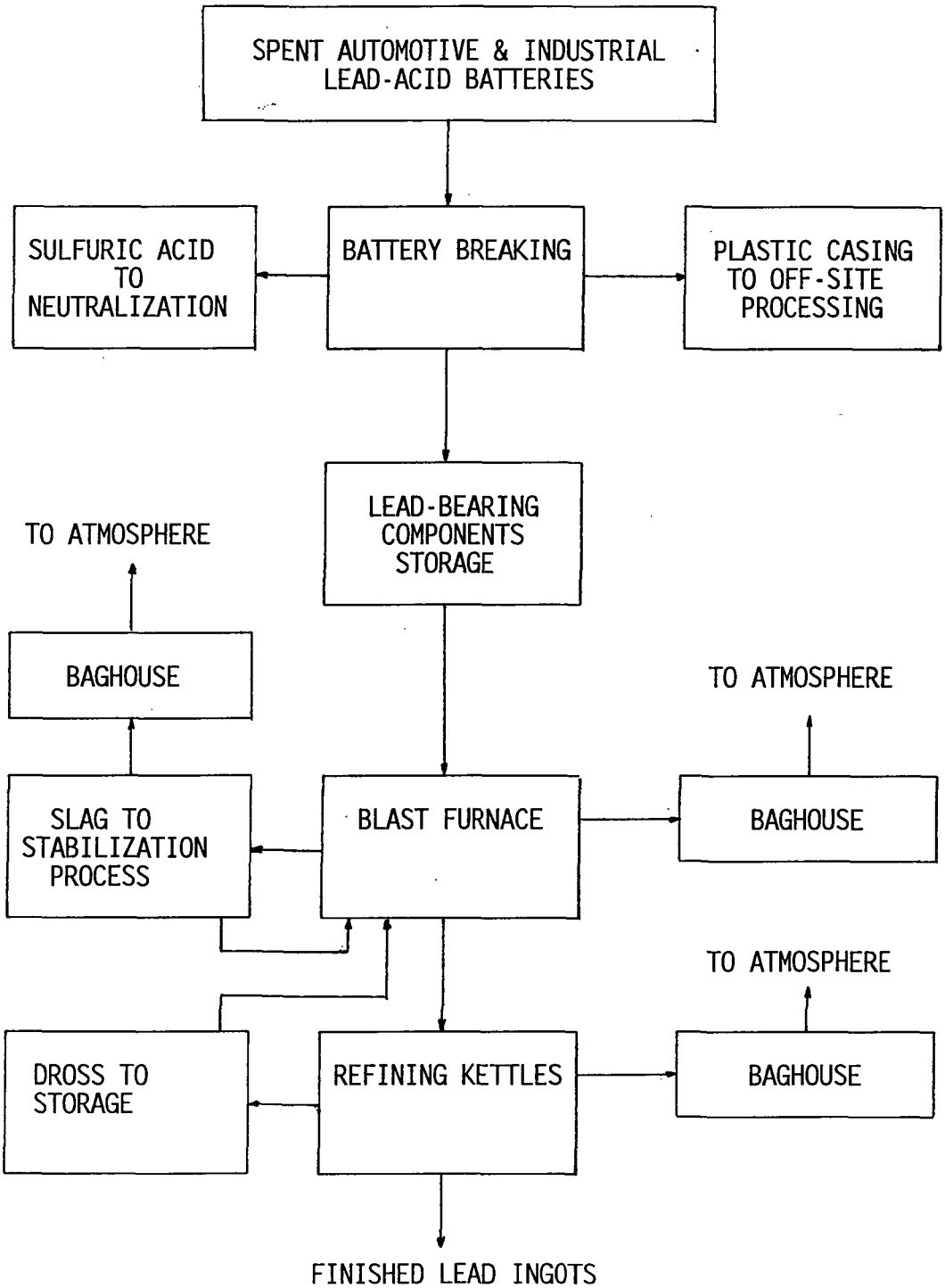
PLOT PLAN

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.

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.

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.

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

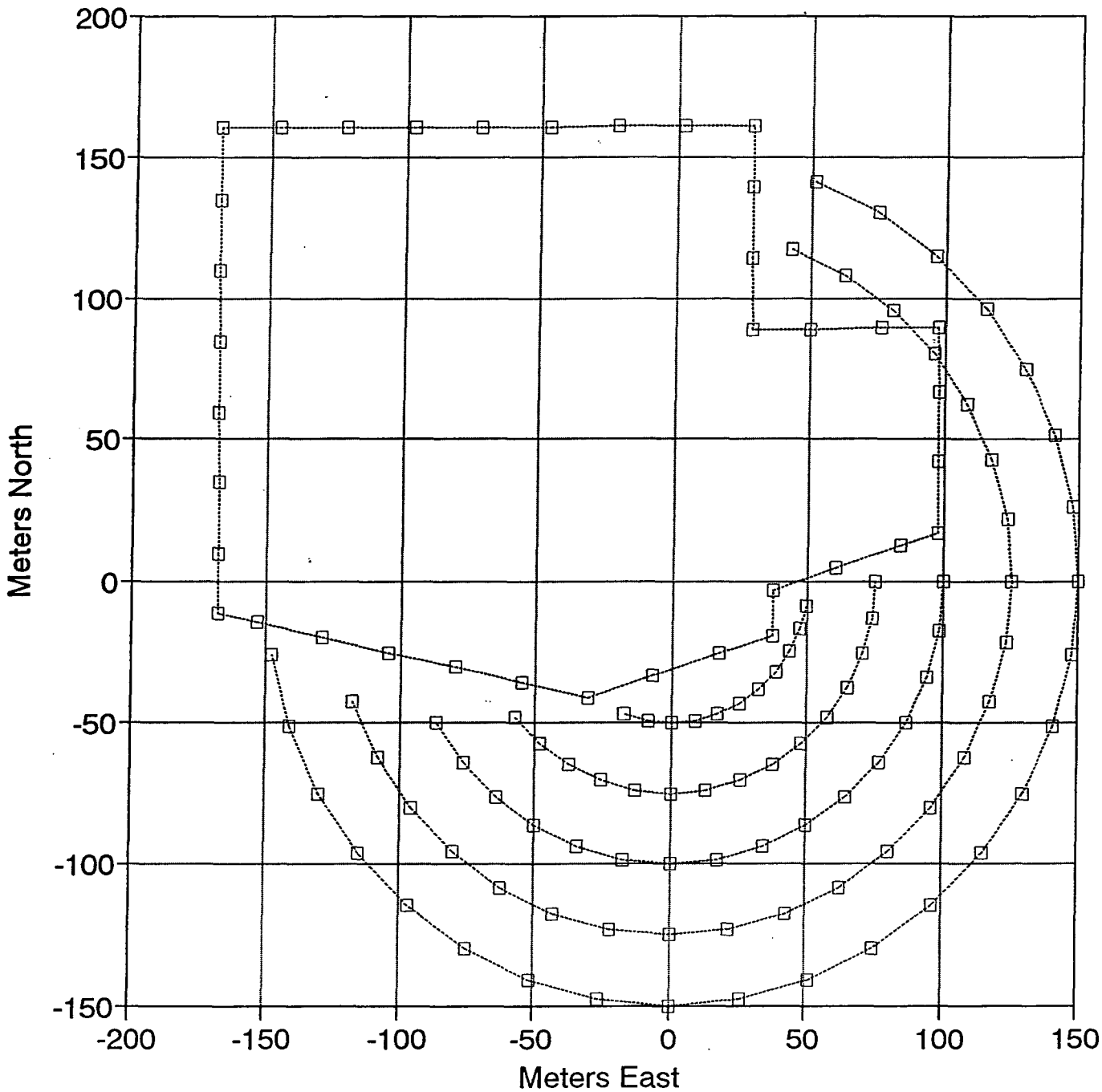


FIGURE 4-2
AREA SOURCE LOCATIONS - ROAD SOURCES
GULF COAST RECYCLING, INC.
TAMPA, FLORIDA

FIGURE 4-3

AREA SOURCE LOCATIONS - DROSS & SMELTER

GULF COAST RECYCLING, INC.
TAMPA, FLORIDA

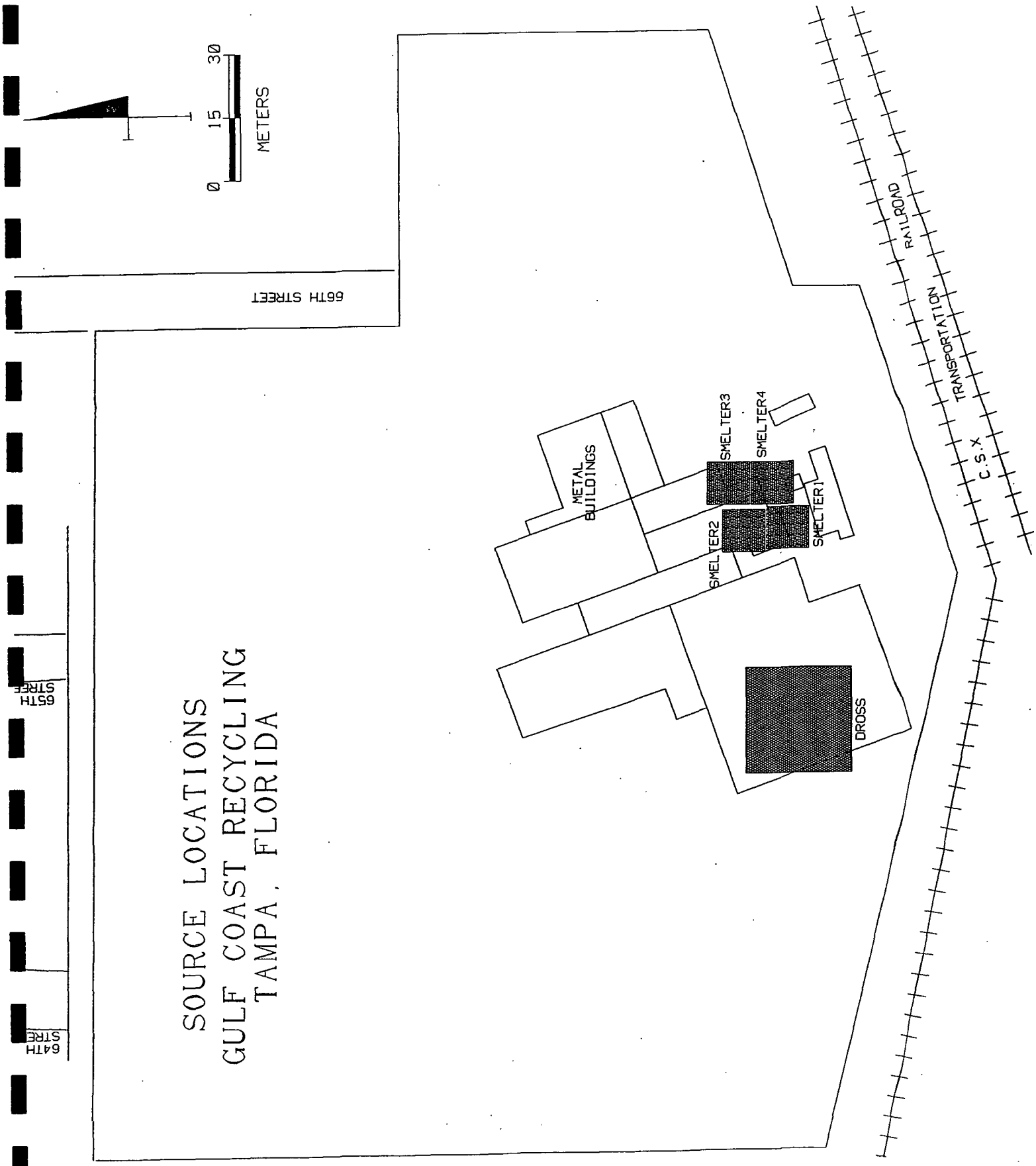
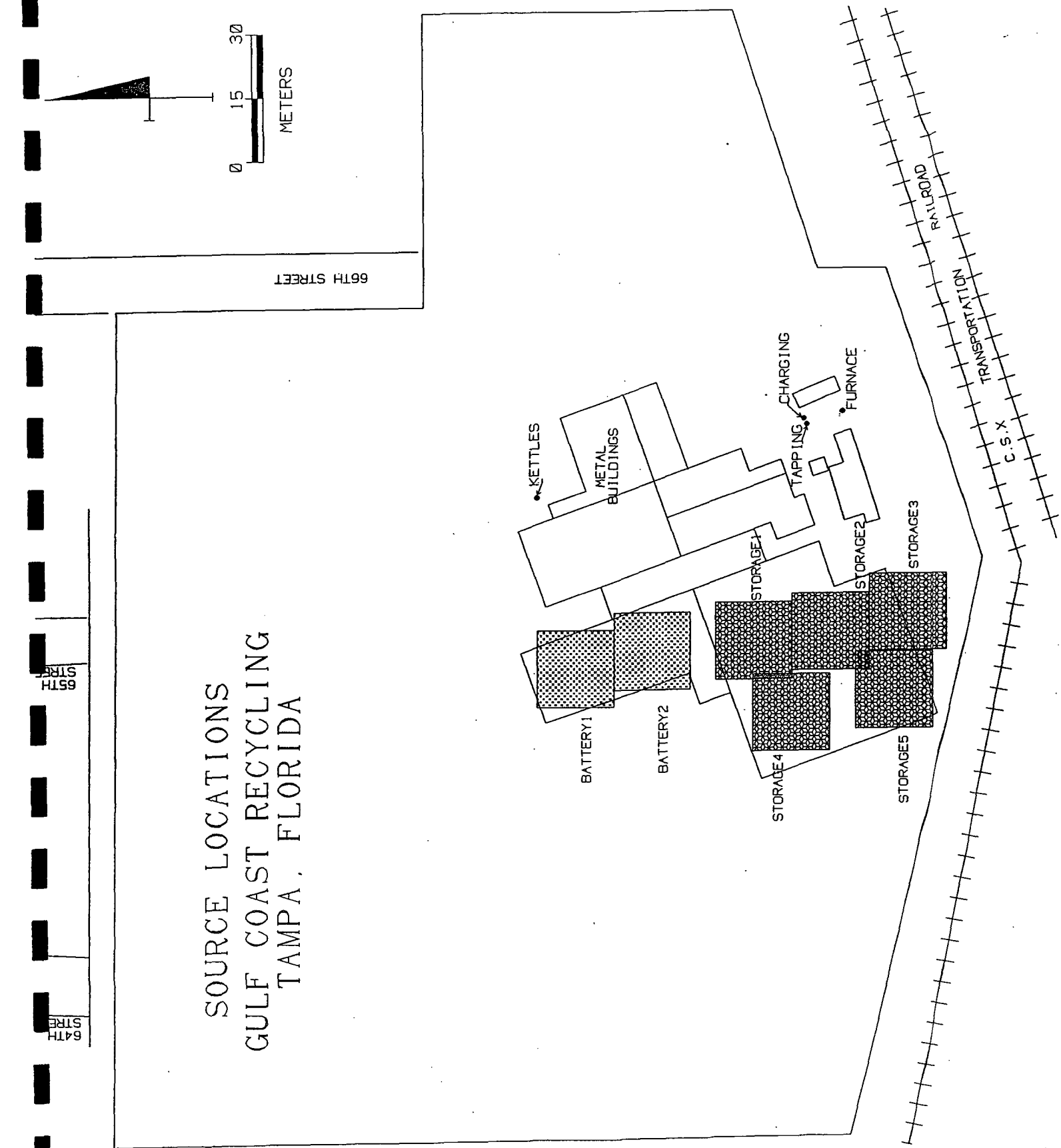


FIGURE 4-4

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.

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)

Northwest District
160 Governmental Center
Pensacola, Florida 32501-5794
904-436-8300

Northeast District
3426 Bay Rd
Jacksonville, Florida 32207
904-798-4200

Central District
3319 Maguire Blvd., Suite 232
Orlando, Florida 32803-3767
407-894-7555

Southwest District
4520 Oak Fair Blvd.
Tampa, Florida 33610-7347
813-623-5561

South District
2269 Bay St.
Fort Myers, Florida 33901-2896
813-332-6975

Southeast District
[illegible]

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. NA (Yes or No)

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 pollutants? 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

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.

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

NA

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.

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.

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.

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

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

1.8×10^{-3}

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.

Same control for 98% reduction from a similar study

(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%.

(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.

(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

```
CO STARTING
   TITLEONE  GULF COAST RECYCLING TAMPA FLORIDA LEAD EMISSIONS IMPACTS (Y87-Q1)
   MODELOPT  DFAULT CONC RURAL
   AVERTIME  PERIOD
   POLLUTID  OTHER
   RUNORNOT  RUN
   ERRORFIL  ERRORS.OUT
CO FINISHED

LO STARTING
   LOCATION  Tapping  POINT   0.0    0.0
             Charging POINT   1.0    1.0
             Kettles  POINT -16.0   62.0
             Furnace  POINT   3.0   -8.0
             Slag     POINT  40.0    6.0
             DrossStg AREA  -80.8   -8.0
             Roadway1 AREA  -54.0   47.0
             Roadway2 AREA  -47.0   29.0
             Roadway3 AREA  -41.0   11.0
             Roadway4 AREA  -41.0   -7.0
             Roadway5 AREA  -33.0  -25.0
             Roadway6 AREA  -60.0  -13.0
             Roadway7 AREA  -75.0    5.0
             Roadway8 AREA  -23.0   11.0
             Smelter1 AREA  -28.7    2.4
             Smelter2 AREA  -28.7   12.8
             Smelter3 AREA  -17.4   16.5
             Smelter4 AREA  -17.4    6.1
             MatsStg1 AREA  -62.0   12.0
             MatsStg2 AREA  -60.0   -6.0
             MatsStg3 AREA  -56.0  -24.0
             MatsStg4 AREA  -79.0   -3.0
             MatsStg5 AREA  -74.0  -21.0
             Battery1 AREA  -68.0   54.0
             Battery2 AREA  -64.0   36.0

LO EMISFACT  Battery1     HROFDY   8*0.0     8*1.0    8*0.0
LO EMISFACT  Battery2     HROFDY   8*0.0     8*1.0    8*0.0

** Point Source          QS        HS        TS        VS        DS
** Parameters:          ----      ----      ----      ----      ----
   SRCPARAM  Tapping    .0081      11.0      305.      18.9      0.32
             Charging   .0190      19.8      308.      15.8      0.61
             Kettles    .0060       9.1      308.      22.9      0.67
             Furnace    .2010      45.7      339.      17.4      0.61
             Slag       .0001      7.62      333.      5.49      0.61

** AREA:     SRCID                QS              HS       XINIT
   SRCPARAM  DrossStg          1.22E-07           1.5        25.0
             Roadway1          1.00E-07           1.0        18.0
             Roadway2          1.00E-07           1.0        18.0
             Roadway3          1.00E-07           1.0        18.0
             Roadway4          1.00E-07           1.0        18.0
             Roadway5          1.00E-07           1.0        18.0
             Roadway6          1.00E-07           1.0        18.0
             Roadway7          1.00E-07           1.0        18.0
             Roadway8          1.00E-07           1.0        18.0
             Smelter1          4.17E-06           3.7        10.0
             Smelter2          4.17E-06           3.7        10.0
             Smelter3          4.17E-06           3.7        10.0
             Smelter4          4.17E-06           3.7        10.0
             MatsStg1          1.78E-07           2.0        18.0
             MatsStg2          1.78E-07           2.0        18.0
             MatsStg3          1.78E-07           2.0        18.0
             MatsStg4          1.78E-07           2.0        18.0
             MatsStg5          1.78E-07           2.0        18.0
             Battery1          1.40E-06           2.0        18.0
             Battery2          1.40E-06           2.0        18.0

RE FINISHED

ME STARTING
   INPUTFIL  D:\ISC2\TAMPA87.ASC
   ANEMHGHT  10 FEET
   SURFDATA  12842  1987  TAMPA FL
   UAIRDATA  12842  1987  RUSKIN FL
   DAYRANGE  1-90
** DAYRANGE  91-181
** DAYRANGE  182-273
** DAYRANGE  274-365
ME FINISHED
```

```
OU STARTING
** MAXTABLE  ALLAVE  50
   RECTABLE  ALLAVE  FIRST-SECOND
OU FINISHED

***********************************
*** SETUP Finishes Successfully ***
***********************************
```



```
*** MODELING OPTIONS USED:  CONC   RURAL  FLAT          DFAULT

                                           *** THE SUMMARY OF MAXIMUM PERIOD ( 2160 HRS) RESULTS ***

                                       ** CONC OF OTHER    IN MICROGRAMS/M**3                                **

                                                                                                           NETWORK
GROUP ID                          AVERAGE CONC              RECEPTOR  (XR, YR, ZELEV, ZFLAG)   OF TYPE  GRID-ID
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

ALL      1ST HIGHEST VALUE IS       0.63192 AT (     -79.85,      -30.48,       0.00,       0.00)  DC
         2ND HIGHEST VALUE IS       0.61949 AT (    -104.54,      -25.30,       0.00,       0.00)  DC
         3RD HIGHEST VALUE IS       0.54383 AT (      38.30,      -32.14,       0.00,       0.00)  GP     POL1
         4TH HIGHEST VALUE IS       0.54049 AT (      43.30,      -25.00,       0.00,       0.00)  GP     POL1
         5TH HIGHEST VALUE IS       0.49783 AT (    -128.92,      -19.81,       0.00,       0.00)  DC
         6TH HIGHEST VALUE IS       0.47057 AT (    -117.46,      -42.75,       0.00,       0.00)  GP     POL4

*** RECEPTOR TYPES:  GC = GRIDCART
                     GP = GRIDPOLR
                     DC = DISCCART
                     DP = DISCPOLR
                     BD = BOUNDARY
```



```
*** MODELING OPTIONS USED:  CONC   RURAL  FLAT          DFAULT

*** Message Summary For ISC2 Model Execution ***

--------- Summary of Total Messages --------

  Total of           0 Fatal Error Message(s)
  Total of           0 Warning Message(s)
A Total of         531 Informational Message(s)

  Total of         531 Calm Hours Identified

   ******** FATAL ERROR MESSAGES ********
              ***  NONE  ***

   ********   WARNING MESSAGES   ********
              ***  NONE  ***

   ************************************
   *** ISCST2 Finishes Successfully ***
   ************************************
```

```
CO STARTING
   TITLEONE  GULF COAST RECYCLING TAMPA FLORIDA LEAD EMISSIONS IMPACTS (Y87-Q2)
   MODELOPT  DFAULT CONC RURAL
   AVERTIME  PERIOD
   POLLUTID  OTHER
   RUNORNOT  RUN
   ERRORFIL  ERRORS.OUT
CO FINISHED

SO STARTING
   LOCATION  Tapping  POINT   0.0    0.0
             Charging POINT   1.0    1.0
             Kettles  POINT -16.0   62.0
             Furnace  POINT   3.0   -8.0
             Slag     POINT  40.0    6.0
             DrossStg AREA  -80.8   -8.0
             Roadway1 AREA  -54.0   47.0
             Roadway2 AREA  -47.0   29.0
             Roadway3 AREA  -41.0   11.0
             Roadway4 AREA  -41.0   -7.0
             Roadway5 AREA  -33.0  -25.0
             Roadway6 AREA  -60.0  -13.0
             Roadway7 AREA  -75.0    5.0
             Roadway8 AREA  -23.0   11.0
             Smelter1 AREA  -28.7    2.4
             Smelter2 AREA  -28.7   12.8
             Smelter3 AREA  -17.4   16.5
             Smelter4 AREA  -17.4    6.1
             MatsStg1 AREA  -62.0   12.0
             MatsStg2 AREA  -60.0   -6.0
             MatsStg3 AREA  -56.0  -24.0
             MatsStg4 AREA  -79.0   -3.0
             MatsStg5 AREA  -74.0  -21.0
             Battery1 AREA  -68.0   54.0
             Battery2 AREA  -64.0   36.0

SO EMISFACT  Battery1     HROFDY   8*0.0     8*1.0     8*0.0
SO EMISFACT  Battery2     HROFDY   8*0.0     8*1.0     8*0.0

** Point Source          QS        HS        TS        VS        DS
   Parameters:           ----      ----      ----      ----      ----
   SRCPARAM  Tapping    .0081      11.0      305.      18.9      0.32
             Charging   .0190      19.8      308.      15.8      0.61
             Kettles    .0060       9.1      308.      22.9      0.67
             Furnace    .2010      45.7      339.      17.4      0.61
             Slag       .0001      7.62      333.      5.49      0.61

** AREA:    SRCID                QS              HS        XINIT
   SRCPARAM  DrossStg          1.22E-07          1.5        25.0
             Roadway1          1.00E-07          1.0        18.0
             Roadway2          1.00E-07          1.0        18.0
             Roadway3          1.00E-07          1.0        18.0
             Roadway4          1.00E-07          1.0        18.0
             Roadway5          1.00E-07          1.0        18.0
             Roadway6          1.00E-07          1.0        18.0
             Roadway7          1.00E-07          1.0        18.0
             Roadway8          1.00E-07          1.0        18.0
             Smelter1          4.17E-06          3.7        10.0
             Smelter2          4.17E-06          3.7        10.0
             Smelter3          4.17E-06          3.7        10.0
             Smelter4          4.17E-06          3.7        10.0
             MatsStg1          1.78E-07          2.0        18.0
             MatsStg2          1.78E-07          2.0        18.0
             MatsStg3          1.78E-07          2.0        18.0
             MatsStg4          1.78E-07          2.0        18.0
             MatsStg5          1.78E-07          2.0        18.0
             Battery1          1.40E-06          2.0        18.0
             Battery2          1.40E-06          2.0        18.0

RE FINISHED

ME STARTING
   INPUTFIL  D:\ISC2\TAMPA87.ASC
   ANEMHGHT  10 FEET
   SURFDATA  12842  1987  TAMPA FL
   UAIRDATA  12842  1987  RUSKIN FL
   DAYRANGE  1-90
   DAYRANGE  91-181
** DAYRANGE  182-273
   DAYRANGE  274-365
ME FINISHED
```

OU STARTING
** MAXTABLE ALLAVE 50
RECTABLE ALLAVE FIRST-SECOND
OU FINISHED

****
*** SETUP Finishes Successfully ***
****

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** THE SUMMARY OF MAXIMUM PERIOD (2184 HRS) RESULTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

GROUP ID		AVERAGE CONC	RECEPTOR (XR,	YR,	ZELEV,	ZFLAG)	OF TYPE	NETWORK GRID-ID
ALL	1ST HIGHEST VALUE IS	0.59294 AT (	49.24,	-8.68,	0.00,	0.00)	GP	POL1
	2ND HIGHEST VALUE IS	0.59235 AT (	-104.54,	-25.30,	0.00,	0.00)	DC	
	3RD HIGHEST VALUE IS	0.56993 AT (	-167.63,	9.75,	0.00,	0.00)	DC	
	4TH HIGHEST VALUE IS	0.56739 AT (	-128.92,	-19.81,	0.00,	0.00)	DC	
	5TH HIGHEST VALUE IS	0.56135 AT (	-167.94,	34.75,	0.00,	0.00)	DC	
	6TH HIGHEST VALUE IS	0.55763 AT (	46.98,	-17.10,	0.00,	0.00)	GP	POL1

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR
BD = BOUNDARY

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** Message Summary For ISC2 Model Execution ***

--------- Summary of Total Messages --------

Total of 0 Fatal Error Message(s)
Total of 0 Warning Message(s)
A Total of 531 Informational Message(s)

Total of 531 Calm Hours Identified

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********
*** NONE ***

****
*** ISCST2 Finishes Successfully ***
****

```
CO STARTING
   TITLEONE  GULF COAST RECYCLING TAMPA FLORIDA LEAD EMISSIONS IMPACTS (Y87-Q3)
   MODELOPT  DFAULT CONC RURAL
   AVERTIME  PERIOD
   POLLUTID  OTHER
   RUNORNOT  RUN
   ERRORFIL  ERRORS.OUT
CO FINISHED

LO STARTING
   LOCATION  Tapping  POINT   0.0    0.0
             Charging POINT   1.0    1.0
             Kettles  POINT -16.0   62.0
             Furnace  POINT   3.0   -8.0
             Slag     POINT  40.0    6.0
             DrossStg AREA  -80.8   -8.0
             Roadway1 AREA  -54.0   47.0
             Roadway2 AREA  -47.0   29.0
             Roadway3 AREA  -41.0   11.0
             Roadway4 AREA  -41.0   -7.0
             Roadway5 AREA  -33.0  -25.0
             Roadway6 AREA  -60.0  -13.0
             Roadway7 AREA  -75.0    5.0
             Roadway8 AREA  -23.0   11.0
             Smelter1 AREA  -28.7    2.4
             Smelter2 AREA  -28.7   12.8
             Smelter3 AREA  -17.4   16.5
             Smelter4 AREA  -17.4    6.1
             MatsStg1 AREA  -62.0   12.0
             MatsStg2 AREA  -60.0   -6.0
             MatsStg3 AREA  -56.0  -24.0
             MatsStg4 AREA  -79.0   -3.0
             MatsStg5 AREA  -74.0  -21.0
             Battery1 AREA  -68.0   54.0
             Battery2 AREA  -64.0   36.0

LO EMISFACT  Battery1     HROFDY   8*0.0    8*1.0    8*0.0
LO EMISFACT  Battery2     HROFDY   8*0.0    8*1.0    8*0.0

** Point Source          QS       HS       TS       VS       DS
** Parameters:          ----     ----     ----     ----     ----
   SRCPARAM  Tapping    .0081     11.0     305.     18.9     0.32
             Charging   .0190     19.8     308.     15.8     0.61
             Kettles    .0060      9.1     308.     22.9     0.67
             Furnace    .2010     45.7     339.     17.4     0.61
             Slag       .0001      7.62    333.      5.49    0.61

** AREA:    SRCID                QS              HS       XINIT
   SRCPARAM  DrossStg         1.22E-07           1.5       25.0
             Roadway1         1.00E-07           1.0       18.0
             Roadway2         1.00E-07           1.0       18.0
             Roadway3         1.00E-07           1.0       18.0
             Roadway4         1.00E-07           1.0       18.0
             Roadway5         1.00E-07           1.0       18.0
             Roadway6         1.00E-07           1.0       18.0
             Roadway7         1.00E-07           1.0       18.0
             Roadway8         1.00E-07           1.0       18.0
             Smelter1         4.17E-06           3.7       10.0
             Smelter2         4.17E-06           3.7       10.0
             Smelter3         4.17E-06           3.7       10.0
             Smelter4         4.17E-06           3.7       10.0
             MatsStg1         1.78E-07           2.0       18.0
             MatsStg2         1.78E-07           2.0       18.0
             MatsStg3         1.78E-07           2.0       18.0
             MatsStg4         1.78E-07           2.0       18.0
             MatsStg5         1.78E-07           2.0       18.0
             Battery1         1.40E-06           2.0       18.0
             Battery2         1.40E-06           2.0       18.0

RE FINISHED

E STARTING
   INPUTFIL  D:\ISC2\TAMPA87.ASC
   ANEMHGHT  10 FEET
   SURFDATA  12842  1987  TAMPA FL
   UAIRDATA  12842  1987  RUSKIN FL
*  DAYRANGE  1-90
** DAYRANGE  91-181
   DAYRANGE  182-273
** DAYRANGE  274-365
E FINISHED
```

```
OU STARTING
** MAXTABLE  ALLAVE  50
   RECTABLE  ALLAVE  FIRST-SECOND
 OU FINISHED

***********************************
*** SETUP Finishes Successfully ***
***********************************
```


*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** THE SUMMARY OF MAXIMUM PERIOD (2208 HRS) RESULTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

GROUP ID		AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZFLAG)				OF TYPE	NETWORK GRID-ID
ALL	1ST HIGHEST VALUE IS	0.64651 AT (	-104.54,	-25.30,	0.00,	0.00)	DC	
	2ND HIGHEST VALUE IS	0.61249 AT (	-128.92,	-19.81,	0.00,	0.00)	DC	
	3RD HIGHEST VALUE IS	0.55260 AT (	-168.24,	59.74,	0.00,	0.00)	DC	
	4TH HIGHEST VALUE IS	0.54468 AT (	-153.31,	-14.32,	0.00,	0.00)	DC	
	5TH HIGHEST VALUE IS	0.54248 AT (	-167.63,	9.75,	0.00,	0.00)	DC	
	6TH HIGHEST VALUE IS	0.54218 AT (	-79.85,	-30.48,	0.00,	0.00)	DC	

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR
BD = BOUNDARY

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

** Message Summary For ISC2 Model Execution ***

--------- Summary of Total Messages --------

Total of 0 Fatal Error Message(s)
Total of 0 Warning Message(s)
A Total of 531 Informational Message(s)

Total of 531 Calm Hours Identified

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********
*** NONE ***

****
*** ISCST2 Finishes Successfully ***
****

```
CO STARTING
   TITLEONE  GULF COAST RECYCLING TAMPA FLORIDA LEAD EMISSIONS IMPACTS (Y87-Q4)
   MODELOPT  DFAULT CONC RURAL
   AVERTIME  PERIOD
   POLLUTID  OTHER
   RUNORNOT  RUN
   ERRORFIL  ERRORS.OUT
CO FINISHED

SO STARTING
   LOCATION  Tapping  POINT   0.0    0.0
             Charging POINT   1.0    1.0
             Kettles  POINT -16.0   62.0
             Furnace  POINT   3.0   -8.0
             Slag     POINT  40.0    6.0
             DrossStg AREA  -80.8   -8.0
             Roadway1 AREA  -54.0   47.0
             Roadway2 AREA  -47.0   29.0
             Roadway3 AREA  -41.0   11.0
             Roadway4 AREA  -41.0   -7.0
             Roadway5 AREA  -33.0  -25.0
             Roadway6 AREA  -60.0  -13.0
             Roadway7 AREA  -75.0    5.0
             Roadway8 AREA  -23.0   11.0
             Smelter1 AREA  -28.7    2.4
             Smelter2 AREA  -28.7   12.8
             Smelter3 AREA  -17.4   16.5
             Smelter4 AREA  -17.4    6.1
             MatsStg1 AREA  -62.0   12.0
             MatsStg2 AREA  -60.0   -6.0
             MatsStg3 AREA  -56.0  -24.0
             MatsStg4 AREA  -79.0   -3.0
             MatsStg5 AREA  -74.0  -21.0
             Battery1 AREA  -68.0   54.0
             Battery2 AREA  -64.0   36.0

SO EMISFACT  Battery1     HROFDY   8*0.0    8*1.0    8*0.0
SO EMISFACT  Battery2     HROFDY   8*0.0    8*1.0    8*0.0

** Point Source          QS       HS       TS       VS       DS
** Parameters:          ----     ----     ----     ----     ----
   SRCPARAM  Tapping    .0081     11.0     305.     18.9     0.32
             Charging   .0190     19.8     308.     15.8     0.61
             Kettles    .0060      9.1     308.     22.9     0.67
             Furnace    .2010     45.7     339.     17.4     0.61
             Slag       .0001      7.62    333.      5.49    0.61

** AREA:    SRCID                QS              HS       XINIT
   SRCPARAM  DrossStg          1.22E-07          1.5       25.0
             Roadway1          1.00E-07          1.0       18.0
             Roadway2          1.00E-07          1.0       18.0
             Roadway3          1.00E-07          1.0       18.0
             Roadway4          1.00E-07          1.0       18.0
             Roadway5          1.00E-07          1.0       18.0
             Roadway6          1.00E-07          1.0       18.0
             Roadway7          1.00E-07          1.0       18.0
             Roadway8          1.00E-07          1.0       18.0
             Smelter1          4.17E-06          3.7       10.0
             Smelter2          4.17E-06          3.7       10.0
             Smelter3          4.17E-06          3.7       10.0
             Smelter4          4.17E-06          3.7       10.0
             MatsStg1          1.78E-07          2.0       18.0
             MatsStg2          1.78E-07          2.0       18.0
             MatsStg3          1.78E-07          2.0       18.0
             MatsStg4          1.78E-07          2.0       18.0
             MatsStg5          1.78E-07          2.0       18.0
             Battery1          1.40E-06          2.0       18.0
             Battery2          1.40E-06          2.0       18.0

RE FINISHED

ME STARTING
   INPUTFIL  D:\ISC2\TAMPA87.ASC
   ANEMHGHT  10 FEET
   SURFDATA  12842  1987  TAMPA FL
   UAIRDATA  12842  1987  RUSKIN FL
*  DAYRANGE  1-90
** DAYRANGE  91-181
** DAYRANGE  182-273
   DAYRANGE  274-365
ME FINISHED
```

```
OU STARTING
** MAXTABLE  ALLAVE  50
   RECTABLE  ALLAVE  FIRST-SECOND
 OU FINISHED

***********************************
** SETUP Finishes Successfully ***
***********************************
```


*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** THE SUMMARY OF MAXIMUM PERIOD (2208 HRS) RESULTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

GROUP ID		AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZFLAG)				OF TYPE	NETWORK GRID-ID
ALL	1ST HIGHEST VALUE IS	0.97103 AT (	-79.85,	-30.48,	0.00,	0.00)	DC	
	2ND HIGHEST VALUE IS	0.95688 AT (	-104.54,	-25.30,	0.00,	0.00)	DC	
	3RD HIGHEST VALUE IS	0.79964 AT (	-128.92,	-19.81,	0.00,	0.00)	DC	
	4TH HIGHEST VALUE IS	0.72554 AT (	-117.46,	-42.75,	0.00,	0.00)	GP	POL4
	5TH HIGHEST VALUE IS	0.70604 AT (	-55.17,	-35.66,	0.00,	0.00)	DC	
	6TH HIGHEST VALUE IS	0.68042 AT (	-147.72,	-26.05,	0.00,	0.00)	GP	POL5

*** RECEPTOR TYPES: GC = GRIDCART
                     GP = GRIDPOLR
                     DC = DISCCART
                     DP = DISCPOLR
                     BD = BOUNDARY

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

** Message Summary For ISC2 Model Execution ***

--------- Summary of Total Messages --------

Total of 0 Fatal Error Message(s)
Total of 0 Warning Message(s)
A Total of 531 Informational Message(s)

Total of 531 Calm Hours Identified

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********
*** NONE ***

****
*** ISCST2 Finishes Successfully ***
****

```
CO STARTING
   TITLEONE  GULF COAST RECYCLING TAMPA FLORIDA LEAD EMISSIONS IMPACTS (Y88-Q1)
   MODELOPT  DFAULT CONC RURAL
   AVERTIME  PERIOD
   POLLUTID  OTHER
   RUNORNOT  RUN
   ERRORFIL  ERRORS.OUT
CO FINISHED

SO STARTING
   LOCATION  Tapping  POINT   0.0    0.0
             Charging POINT   1.0    1.0
             Kettles  POINT -16.0   62.0
             Furnace  POINT   3.0   -8.0
             Slag     POINT  40.0    6.0
             DrossStg AREA  -80.8   -8.0
             Roadway1 AREA  -54.0   47.0
             Roadway2 AREA  -47.0   29.0
             Roadway3 AREA  -41.0   11.0
             Roadway4 AREA  -41.0   -7.0
             Roadway5 AREA  -33.0  -25.0
             Roadway6 AREA  -60.0  -13.0
             Roadway7 AREA  -75.0    5.0
             Roadway8 AREA  -23.0   11.0
             Smelter1 AREA  -28.7    2.4
             Smelter2 AREA  -28.7   12.8
             Smelter3 AREA  -17.4   16.5
             Smelter4 AREA  -17.4    6.1
             MatsStg1 AREA  -62.0   12.0
             MatsStg2 AREA  -60.0   -6.0
             MatsStg3 AREA  -56.0  -24.0
             MatsStg4 AREA  -79.0   -3.0
             MatsStg5 AREA  -74.0  -21.0
             Battery1 AREA  -68.0   54.0
             Battery2 AREA  -64.0   36.0

SO EMISFACT  Battery1     HROFDY   8*0.0    8*1.0    8*0.0
SO EMISFACT  Battery2     HROFDY   8*0.0    8*1.0    8*0.0

** Point Source          QS        HS       TS        VS        DS
** Parameters:          ----      ----     ----      ----      ----
   SRCPARAM  Tapping    .0081      11.0     305.      18.9      0.32
             Charging   .0190      19.8     308.      15.8      0.61
             Kettles    .0060       9.1     308.      22.9      0.67
             Furnace    .2010      45.7     339.      17.4      0.61
             Slag       .0001       7.62    333.       5.49     0.61

** AREA:     SRCID                QS              HS       XINIT
   SRCPARAM  DrossStg          1.22E-07           1.5       25.0
             Roadway1          1.00E-07           1.0       18.0
             Roadway2          1.00E-07           1.0       18.0
             Roadway3          1.00E-07           1.0       18.0
             Roadway4          1.00E-07           1.0       18.0
             Roadway5          1.00E-07           1.0       18.0
             Roadway6          1.00E-07           1.0       18.0
             Roadway7          1.00E-07           1.0       18.0
             Roadway8          1.00E-07           1.0       18.0
             Smelter1          4.17E-06           3.7       10.0
             Smelter2          4.17E-06           3.7       10.0
             Smelter3          4.17E-06           3.7       10.0
             Smelter4          4.17E-06           3.7       10.0
             MatsStg1          1.78E-07           2.0       18.0
             MatsStg2          1.78E-07           2.0       18.0
             MatsStg3          1.78E-07           2.0       18.0
             MatsStg4          1.78E-07           2.0       18.0
             MatsStg5          1.78E-07           2.0       18.0
             Battery1          1.40E-06           2.0       18.0
             Battery2          1.40E-06           2.0       18.0

RE FINISHED

ME STARTING
   INPUTFIL  D:\ISC2\TAMPA88.ASC
   ANEMHGHT  10 FEET
   SURFDATA  12842  1988  TAMPA FL
   UAIRDATA  12842  1988  RUSKIN FL
   DAYRANGE  1-91
** DAYRANGE  92-182
** DAYRANGE  183-274
** DAYRANGE  275-366
ME FINISHED
```

```
OU STARTING
** MAXTABLE  ALLAVE  50
   RECTABLE  ALLAVE  FIRST-SECOND
OU FINISHED

***********************************
** SETUP Finishes Successfully ***
***********************************

*** ISCST2 - VERSION 93109 ***    ***  GULF COAST RECYCLING TAMPA FLORIDA LEAD EMISSIONS IMPACTS (Y88-Q1)  ***        09/23/94
                                  ***                                                                   ***        17:16:31
                                                                                                                   PAGE  23
 *** MODELING OPTIONS USED:  CONC   RURAL  FLAT          DFAULT

                                        *** THE SUMMARY OF MAXIMUM PERIOD ( 2184 HRS) RESULTS ***


                                    ** CONC OF OTHER    IN MICROGRAMS/M**3                        **

                                                                                                    NETWORK
ROUP ID                      AVERAGE CONC              RECEPTOR  (XR, YR, ZELEV, ZFLAG)   OF TYPE  GRID-ID
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

LL      1ST HIGHEST VALUE IS      0.64486 AT (     -79.85,      -30.48,      0.00,      0.00)  DC
        2ND HIGHEST VALUE IS      0.61328 AT (    -104.54,      -25.30,      0.00,      0.00)  DC
        3RD HIGHEST VALUE IS      0.57973 AT (     -55.17,      -35.66,      0.00,      0.00)  DC
        4TH HIGHEST VALUE IS      0.50415 AT (    -128.92,      -19.81,      0.00,      0.00)  DC
        5TH HIGHEST VALUE IS      0.46667 AT (     -57.45,      -48.21,      0.00,      0.00)  GP   POL2
        6TH HIGHEST VALUE IS      0.46140 AT (     -86.60,      -50.00,      0.00,      0.00)  GP   POL3


 *** RECEPTOR TYPES:  GC = GRIDCART
                      GP = GRIDPOLR
                      DC = DISCCART
                      DP = DISCPOLR
                      BD = BOUNDARY
*** ISCST2 - VERSION 93109 ***    ***  GULF COAST RECYCLING TAMPA FLORIDA LEAD EMISSIONS IMPACTS (Y88-Q1)  ***        09/23/94
                                  ***                                                                   ***        17:16:31
                                                                                                                   PAGE  24
 *** MODELING OPTIONS USED:  CONC   RURAL  FLAT          DFAULT


** Message Summary For ISC2 Model Execution ***

 --------- Summary of Total Messages --------

 Total of            0 Fatal Error Message(s)
 Total of            0 Warning Message(s)
A Total of          494 Informational Message(s)

 Total of          493 Calm Hours Identified


  ******** FATAL ERROR MESSAGES ********
             *** NONE ***


  ********   WARNING MESSAGES   ********
             *** NONE ***


  ************************************
  *** ISCST2 Finishes Successfully ***
  ************************************
```

```
CO STARTING
   TITLEONE  GULF COAST RECYCLING TAMPA FLORIDA LEAD EMISSIONS IMPACTS (Y88-Q2)
   MODELOPT  DFAULT CONC RURAL
   AVERTIME  PERIOD
   POLLUTID  OTHER
   RUNORNOT  RUN
   ERRORFIL  ERRORS.OUT
CO FINISHED

SO STARTING
   LOCATION  Tapping  POINT   0.0    0.0
             Charging POINT   1.0    1.0
             Kettles  POINT -16.0   62.0
             Furnace  POINT   3.0   -8.0
             Slag     POINT  40.0    6.0
             DrossStg AREA  -80.8   -8.0
             Roadway1 AREA  -54.0   47.0
             Roadway2 AREA  -47.0   29.0
             Roadway3 AREA  -41.0   11.0
             Roadway4 AREA  -41.0   -7.0
             Roadway5 AREA  -33.0  -25.0
             Roadway6 AREA  -60.0  -13.0
             Roadway7 AREA  -75.0    5.0
             Roadway8 AREA  -23.0   11.0
             Smelter1 AREA  -28.7    2.4
             Smelter2 AREA  -28.7   12.8
             Smelter3 AREA  -17.4   16.5
             Smelter4 AREA  -17.4    6.1
             MatsStg1 AREA  -62.0   12.0
             MatsStg2 AREA  -60.0   -6.0
             MatsStg3 AREA  -56.0  -24.0
             MatsStg4 AREA  -79.0   -3.0
             MatsStg5 AREA  -74.0  -21.0
             Battery1 AREA  -68.0   54.0
             Battery2 AREA  -64.0   36.0

SO EMISFACT  Battery1     HROFDY   8*0.0    8*1.0    8*0.0
SO EMISFACT  Battery2     HROFDY   8*0.0    8*1.0    8*0.0

** Point Source          QS        HS       TS        VS       DS
   Parameters:           ----      ----     ----      ----     ----
   SRCPARAM  Tapping    .0081      11.0     305.      18.9     0.32
             Charging   .0190      19.8     308.      15.8     0.61
             Kettles    .0060       9.1     308.      22.9     0.67
             Furnace    .2010      45.7     339.      17.4     0.61
             Slag       .0001       7.62    333.       5.49    0.61

** AREA:    SRCID                QS              HS       XINIT
   SRCPARAM  DrossStg          1.22E-07          1.5       25.0
             Roadway1          1.00E-07          1.0       18.0
             Roadway2          1.00E-07          1.0       18.0
             Roadway3          1.00E-07          1.0       18.0
             Roadway4          1.00E-07          1.0       18.0
             Roadway5          1.00E-07          1.0       18.0
             Roadway6          1.00E-07          1.0       18.0
             Roadway7          1.00E-07          1.0       18.0
             Roadway8          1.00E-07          1.0       18.0
             Smelter1          4.17E-06          3.7       10.0
             Smelter2          4.17E-06          3.7       10.0
             Smelter3          4.17E-06          3.7       10.0
             Smelter4          4.17E-06          3.7       10.0
             MatsStg1          1.78E-07          2.0       18.0
             MatsStg2          1.78E-07          2.0       18.0
             MatsStg3          1.78E-07          2.0       18.0
             MatsStg4          1.78E-07          2.0       18.0
             MatsStg5          1.78E-07          2.0       18.0
             Battery1          1.40E-06          2.0       18.0
             Battery2          1.40E-06          2.0       18.0

RE FINISHED

ME STARTING
   INPUTFIL  D:\ISC2\TAMPA88.ASC
   ANEMHGHT  10 FEET
   SURFDATA  12842  1988  TAMPA FL
   UAIRDATA  12842  1988  RUSKIN FL
*  DAYRANGE  1-91
   DAYRANGE  92-182
** DAYRANGE  183-274
** DAYRANGE  275-366
ME FINISHED
```

```
U STARTING
* MAXTABLE  ALLAVE  50
  RECTABLE  ALLAVE  FIRST-SECOND
 OU FINISHED

**********************************
** SETUP Finishes Successfully ***
**********************************

*** ISCST2 - VERSION 93109 ***    *** GULF COAST RECYCLING TAMPA FLORIDA LEAD EMISSIONS IMPACTS (Y88-Q2) ***        09/23/94
                                  ***                                                                  ***        17:23:52
                                                                                                                  PAGE  23
 *** MODELING OPTIONS USED:  CONC   RURAL  FLAT          DFAULT

                                        *** THE SUMMARY OF MAXIMUM PERIOD ( 2184 HRS) RESULTS ***

                                     ** CONC OF OTHER    IN MICROGRAMS/M**3                          **

ROUP ID                    AVERAGE CONC              RECEPTOR  (XR, YR, ZELEV, ZFLAG)   OF TYPE  NETWORK GRID-ID
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

LL      1ST HIGHEST VALUE IS      0.54482 AT (      38.30,      -32.14,      0.00,      0.00)  GP   POL1
        2ND HIGHEST VALUE IS      0.52209 AT (      32.14,      -38.30,      0.00,      0.00)  GP   POL1
        3RD HIGHEST VALUE IS      0.48901 AT (      43.30,      -25.00,      0.00,      0.00)  GP   POL1
        4TH HIGHEST VALUE IS      0.46857 AT (      46.98,      -17.10,      0.00,      0.00)  GP   POL1
        5TH HIGHEST VALUE IS      0.46681 AT (     -79.85,      -30.48,      0.00,      0.00)  DC
        6TH HIGHEST VALUE IS      0.45337 AT (     -55.17,      -35.66,      0.00,      0.00)  DC

 *** RECEPTOR TYPES:  GC = GRIDCART
                      GP = GRIDPOLR
                      DC = DISCCART
                      DP = DISCPOLR
                      BD = BOUNDARY
*** ISCST2 - VERSION 93109 ***    *** GULF COAST RECYCLING TAMPA FLORIDA LEAD EMISSIONS IMPACTS (Y88-Q2) ***        09/23/94
                                  ***                                                                  ***        17:23:52
                                                                                                                  PAGE  24
 *** MODELING OPTIONS USED:  CONC   RURAL  FLAT          DFAULT

** Message Summary For ISC2 Model Execution ***

 --------- Summary of Total Messages --------

Total of            0 Fatal Error Message(s)
Total of            0 Warning Message(s)
A Total of        493 Informational Message(s)

Total of          493 Calm Hours Identified


  ******** FATAL ERROR MESSAGES ********
             ***  NONE  ***


  ********   WARNING MESSAGES   ********
             ***  NONE  ***


  ************************************
  *** ISCST2 Finishes Successfully ***
  ************************************
```

```
CO STARTING
   TITLEONE  GULF COAST RECYCLING TAMPA FLORIDA LEAD EMISSIONS IMPACTS (Y88-Q3)
   MODELOPT  DFAULT CONC RURAL
   AVERTIME  PERIOD
   POLLUTID  OTHER
   RUNORNOT  RUN
   ERRORFIL  ERRORS.OUT
 CO FINISHED

SO STARTING
   LOCATION  Tapping  POINT   0.0    0.0
             Charging POINT   1.0    1.0
             Kettles  POINT -16.0   62.0
             Furnace  POINT   3.0   -8.0
             Slag     POINT  40.0    6.0
             DrossStg AREA  -80.8   -8.0
             Roadway1 AREA  -54.0   47.0
             Roadway2 AREA  -47.0   29.0
             Roadway3 AREA  -41.0   11.0
             Roadway4 AREA  -41.0   -7.0
             Roadway5 AREA  -33.0  -25.0
             Roadway6 AREA  -60.0  -13.0
             Roadway7 AREA  -75.0    5.0
             Roadway8 AREA  -23.0   11.0
             Smelter1 AREA  -28.7    2.4
             Smelter2 AREA  -28.7   12.8
             Smelter3 AREA  -17.4   16.5
             Smelter4 AREA  -17.4    6.1
             MatsStg1 AREA  -62.0   12.0
             MatsStg2 AREA  -60.0   -6.0
             MatsStg3 AREA  -56.0  -24.0
             MatsStg4 AREA  -79.0   -3.0
             MatsStg5 AREA  -74.0  -21.0
             Battery1 AREA  -68.0   54.0
             Battery2 AREA  -64.0   36.0

SO EMISFACT  Battery1     HROFDY   8*0.0     8*1.0    8*0.0
SO EMISFACT  Battery2     HROFDY   8*0.0     8*1.0    8*0.0

** Point Source          QS        HS        TS        VS        DS
** Parameters:          ----      ----      ----      ----      ----
   SRCPARAM  Tapping    .0081      11.0      305.      18.9      0.32
             Charging   .0190      19.8      308.      15.8      0.61
             Kettles    .0060       9.1      308.      22.9      0.67
             Furnace    .2010      45.7      339.      17.4      0.61
             Slag       .0001      7.62      333.      5.49      0.61

** AREA:    SRCID                QS              HS       XINIT
   SRCPARAM  DrossStg         1.22E-07           1.5        25.0
             Roadway1         1.00E-07           1.0        18.0
             Roadway2         1.00E-07           1.0        18.0
             Roadway3         1.00E-07           1.0        18.0
             Roadway4         1.00E-07           1.0        18.0
             Roadway5         1.00E-07           1.0        18.0
             Roadway6         1.00E-07           1.0        18.0
             Roadway7         1.00E-07           1.0        18.0
             Roadway8         1.00E-07           1.0        18.0
             Smelter1         4.17E-06           3.7        10.0
             Smelter2         4.17E-06           3.7        10.0
             Smelter3         4.17E-06           3.7        10.0
             Smelter4         4.17E-06           3.7        10.0
             MatsStg1         1.78E-07           2.0        18.0
             MatsStg2         1.78E-07           2.0        18.0
             MatsStg3         1.78E-07           2.0        18.0
             MatsStg4         1.78E-07           2.0        18.0
             MatsStg5         1.78E-07           2.0        18.0
             Battery1         1.40E-06           2.0        18.0
             Battery2         1.40E-06           2.0        18.0

 RE FINISHED

 E STARTING
   INPUTFIL  D:\ISC2\TAMPA88.ASC
   ANEMHGHT  10 FEET
   SURFDATA  12842  1988  TAMPA FL
   UAIRDATA  12842  1988  RUSKIN FL
 * DAYRANGE  1-91
 * DAYRANGE  92-182
   DAYRANGE  183-274
** DAYRANGE  275-366
 E FINISHED
```

```
OU STARTING
** MAXTABLE  ALLAVE  50
   RECTABLE  ALLAVE  FIRST-SECOND
 OU FINISHED

***********************************
*** SETUP Finishes Successfully ***
***********************************
```


*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** THE SUMMARY OF MAXIMUM PERIOD (2208 HRS) RESULTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

GROUP ID		AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZFLAG)				OF TYPE	NETWORK GRID-ID
ALL	1ST HIGHEST VALUE IS	0.66320 AT (	-79.85,	-30.48,	0.00,	0.00)	DC	
	2ND HIGHEST VALUE IS	0.61370 AT (	-55.17,	-35.66,	0.00,	0.00)	DC	
	3RD HIGHEST VALUE IS	0.57429 AT (	-86.60,	-50.00,	0.00,	0.00)	GP	POL3
	4TH HIGHEST VALUE IS	0.55705 AT (	-57.45,	-48.21,	0.00,	0.00)	GP	POL2
	5TH HIGHEST VALUE IS	0.55635 AT (	-76.60,	-64.28,	0.00,	0.00)	GP	POL3
	6TH HIGHEST VALUE IS	0.54657 AT (	-104.54,	-25.30,	0.00,	0.00)	DC	

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR
BD = BOUNDARY

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** Message Summary For ISC2 Model Execution ***

--------- Summary of Total Messages --------

A Total of 0 Fatal Error Message(s)
A Total of 0 Warning Message(s)
A Total of 493 Informational Message(s)

A Total of 493 Calm Hours Identified

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********
*** NONE ***

****
*** ISCST2 Finishes Successfully ***
****

```
CO STARTING
   TITLEONE  GULF COAST RECYCLING TAMPA FLORIDA LEAD EMISSIONS IMPACTS (Y88-Q4)
   MODELOPT  DFAULT CONC RURAL
   AVERTIME  PERIOD
   POLLUTID  OTHER
   RUNORNOT  RUN
   ERRORFIL  ERRORS.OUT
CO FINISHED

LO STARTING
   LOCATION  Tapping  POINT   0.0    0.0
             Charging POINT   1.0    1.0
             Kettles  POINT -16.0   62.0
             Furnace  POINT   3.0   -8.0
             Slag     POINT  40.0    6.0
             DrossStg AREA  -80.8   -8.0
             Roadway1 AREA  -54.0   47.0
             Roadway2 AREA  -47.0   29.0
             Roadway3 AREA  -41.0   11.0
             Roadway4 AREA  -41.0   -7.0
             Roadway5 AREA  -33.0  -25.0
             Roadway6 AREA  -60.0  -13.0
             Roadway7 AREA  -75.0    5.0
             Roadway8 AREA  -23.0   11.0
             Smelter1 AREA  -28.7    2.4
             Smelter2 AREA  -28.7   12.8
             Smelter3 AREA  -17.4   16.5
             Smelter4 AREA  -17.4    6.1
             MatsStg1 AREA  -62.0   12.0
             MatsStg2 AREA  -60.0   -6.0
             MatsStg3 AREA  -56.0  -24.0
             MatsStg4 AREA  -79.0   -3.0
             MatsStg5 AREA  -74.0  -21.0
             Battery1 AREA  -68.0   54.0
             Battery2 AREA  -64.0   36.0

LO EMISFACT  Battery1     HROFDY   8*0.0    8*1.0    8*0.0
LO EMISFACT  Battery2     HROFDY   8*0.0    8*1.0    8*0.0

** Point Source          QS        HS       TS        VS        DS
** Parameters:          ----      ----     ----      ----      ----
   SRCPARAM  Tapping   .0081      11.0     305.      18.9      0.32
             Charging  .0190      19.8     308.      15.8      0.61
             Kettles   .0060       9.1     308.      22.9      0.67
             Furnace   .2010      45.7     339.      17.4      0.61
             Slag      .0001       7.62    333.       5.49     0.61

** AREA:    SRCID                QS              HS       XINIT
   SRCPARAM  DrossStg          1.22E-07          1.5       25.0
             Roadway1          1.00E-07          1.0       18.0
             Roadway2          1.00E-07          1.0       18.0
             Roadway3          1.00E-07          1.0       18.0
             Roadway4          1.00E-07          1.0       18.0
             Roadway5          1.00E-07          1.0       18.0
             Roadway6          1.00E-07          1.0       18.0
             Roadway7          1.00E-07          1.0       18.0
             Roadway8          1.00E-07          1.0       18.0
             Smelter1          4.17E-06          3.7       10.0
             Smelter2          4.17E-06          3.7       10.0
             Smelter3          4.17E-06          3.7       10.0
             Smelter4          4.17E-06          3.7       10.0
             MatsStg1          1.78E-07          2.0       18.0
             MatsStg2          1.78E-07          2.0       18.0
             MatsStg3          1.78E-07          2.0       18.0
             MatsStg4          1.78E-07          2.0       18.0
             MatsStg5          1.78E-07          2.0       18.0
             Battery1          1.40E-06          2.0       18.0
             Battery2          1.40E-06          2.0       18.0

RE FINISHED

ME STARTING
   INPUTFIL  D:\ISC2\TAMPA88.ASC
   ANEMHGHT  10 FEET
   SURFDATA  12842  1988  TAMPA FL
   UAIRDATA  12842  1988  RUSKIN FL
*  DAYRANGE  1-91
** DAYRANGE  92-182
** DAYRANGE  183-274
   DAYRANGE  275-366
ME FINISHED
```

```
U STARTING
* MAXTABLE  ALLAVE  50
  RECTABLE  ALLAVE  FIRST-SECOND
OU FINISHED

**********************************
** SETUP Finishes Successfully ***
**********************************
```


*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** THE SUMMARY OF MAXIMUM PERIOD (2208 HRS) RESULTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

GROUP ID		AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZFLAG)				OF TYPE	NETWORK GRID-ID
ALL	1ST HIGHEST VALUE IS	0.97146 AT	(-55.17,	-35.66,	0.00,	0.00)	DC	
	2ND HIGHEST VALUE IS	0.94473 AT	(-57.45,	-48.21,	0.00,	0.00)	GP	POL2
	3RD HIGHEST VALUE IS	0.90954 AT	(-48.21,	-57.45,	0.00,	0.00)	GP	POL2
	4TH HIGHEST VALUE IS	0.85511 AT	(-79.85,	-30.48,	0.00,	0.00)	DC	
	5TH HIGHEST VALUE IS	0.82280 AT	(-64.28,	-76.60,	0.00,	0.00)	GP	POL3
	6TH HIGHEST VALUE IS	0.79989 AT	(-76.60,	-64.28,	0.00,	0.00)	GP	POL3

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR
BD = BOUNDARY

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

** Message Summary For ISC2 Model Execution ***

--------- Summary of Total Messages --------

Total of 0 Fatal Error Message(s)
Total of 0 Warning Message(s)
A Total of 493 Informational Message(s)

Total of 493 Calm Hours Identified

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********
*** NONE ***

****
*** ISCST2 Finishes Successfully ***
****

```
CO STARTING
   TITLEONE  GULF COAST RECYCLING TAMPA FLORIDA LEAD EMISSIONS IMPACTS (Y89-Q1)
   MODELOPT  DFAULT CONC RURAL
   AVERTIME  PERIOD
   POLLUTID  OTHER
   RUNORNOT  RUN
   ERRORFIL  ERRORS.OUT
CO FINISHED

OU STARTING
   LOCATION  Tapping  POINT   0.0    0.0
             Charging POINT   1.0    1.0
             Kettles  POINT -16.0   62.0
             Furnace  POINT   3.0   -8.0
             Slag     POINT  40.0    6.0
             DrossStg AREA  -80.8   -8.0
             Roadway1 AREA  -54.0   47.0
             Roadway2 AREA  -47.0   29.0
             Roadway3 AREA  -41.0   11.0
             Roadway4 AREA  -41.0   -7.0
             Roadway5 AREA  -33.0  -25.0
             Roadway6 AREA  -60.0  -13.0
             Roadway7 AREA  -75.0    5.0
             Roadway8 AREA  -23.0   11.0
             Smelter1 AREA  -28.7    2.4
             Smelter2 AREA  -28.7   12.8
             Smelter3 AREA  -17.4   16.5
             Smelter4 AREA  -17.4    6.1
             MatsStg1 AREA  -62.0   12.0
             MatsStg2 AREA  -60.0   -6.0
             MatsStg3 AREA  -56.0  -24.0
             MatsStg4 AREA  -79.0   -3.0
             MatsStg5 AREA  -74.0  -21.0
             Battery1 AREA  -68.0   54.0
             Battery2 AREA  -64.0   36.0

OU EMISFACT  Battery1     HROFDY   8*0.0     8*1.0    8*0.0
OU EMISFACT  Battery2     HROFDY   8*0.0     8*1.0    8*0.0

** Point Source          QS        HS       TS        VS       DS
** Parameters:          ----      ----     ----      ----     ----
   SRCPARAM  Tapping    .0081      11.0     305.      18.9     0.32
             Charging   .0190      19.8     308.      15.8     0.61
             Kettles    .0060       9.1     308.      22.9     0.67
             Furnace    .2010      45.7     339.      17.4     0.61
             Slag       .0001       7.62    333.       5.49    0.61

** AREA:    SRCID              QS              HS       XINIT
   SRCPARAM  DrossStg       1.22E-07          1.5        25.0
             Roadway1       1.00E-07          1.0        18.0
             Roadway2       1.00E-07          1.0        18.0
             Roadway3       1.00E-07          1.0        18.0
             Roadway4       1.00E-07          1.0        18.0
             Roadway5       1.00E-07          1.0        18.0
             Roadway6       1.00E-07          1.0        18.0
             Roadway7       1.00E-07          1.0        18.0
             Roadway8       1.00E-07          1.0        18.0
             Smelter1       4.17E-06          3.7        10.0
             Smelter2       4.17E-06          3.7        10.0
             Smelter3       4.17E-06          3.7        10.0
             Smelter4       4.17E-06          3.7        10.0
             MatsStg1       1.78E-07          2.0        18.0
             MatsStg2       1.78E-07          2.0        18.0
             MatsStg3       1.78E-07          2.0        18.0
             MatsStg4       1.78E-07          2.0        18.0
             MatsStg5       1.78E-07          2.0        18.0
             Battery1       1.40E-06          2.0        18.0
             Battery2       1.40E-06          2.0        18.0

RE FINISHED

ME STARTING
   INPUTFIL  D:\ISC2\TAMPA89.ASC
   ANEMHGHT  10 FEET
   SURFDATA  12842  1989  TAMPA FL
   UAIRDATA  12842  1989  RUSKIN FL
   DAYRANGE  1-90
** DAYRANGE  91-181
** DAYRANGE  182-273
** DAYRANGE  274-365
ME FINISHED
```

```
U STARTING
* MAXTABLE  ALLAVE  50
  RECTABLE  ALLAVE  FIRST-SECOND
OU FINISHED

***********************************
** SETUP Finishes Successfully ***
***********************************

** ISCST2 - VERSION 93109 ***     ***  GULF COAST RECYCLING TAMPA FLORIDA LEAD EMISSIONS IMPACTS (Y89-Q1)  ***        09/23/94
                                  ***                                                                      ***        17:45:27
                                                                                                                      PAGE  23
 *** MODELING OPTIONS USED:  CONC   RURAL  FLAT          DFAULT

                                         *** THE SUMMARY OF MAXIMUM PERIOD ( 2160 HRS) RESULTS ***

                                    ** CONC OF OTHER    IN MICROGRAMS/M**3                                  **

                                                                                                           NETWORK
ROUP ID                       AVERAGE CONC              RECEPTOR  (XR, YR, ZELEV, ZFLAG)  OF TYPE  GRID-ID
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

LL      1ST HIGHEST VALUE IS       0.58774 AT (     -55.17,       -35.66,        0.00,        0.00)  DC
        2ND HIGHEST VALUE IS       0.55996 AT (     -57.45,       -48.21,        0.00,        0.00)  GP    POL2
        3RD HIGHEST VALUE IS       0.55104 AT (     -30.48,       -41.15,        0.00,        0.00)  DC
        4TH HIGHEST VALUE IS       0.51046 AT (     -48.21,       -57.45,        0.00,        0.00)  GP    POL2
        5TH HIGHEST VALUE IS       0.50372 AT (     -17.10,       -46.98,        0.00,        0.00)  GP    POL1
        6TH HIGHEST VALUE IS       0.49295 AT (     -79.85,       -30.48,        0.00,        0.00)  DC

*** RECEPTOR TYPES:  GC = GRIDCART
                     GP = GRIDPOLR
                     DC = DISCCART
                     DP = DISCPOLR
                     BD = BOUNDARY
*** ISCST2 - VERSION 93109 ***    ***  GULF COAST RECYCLING TAMPA FLORIDA LEAD EMISSIONS IMPACTS (Y89-Q1)  ***        09/23/94
                                  ***                                                                      ***        17:45:27
                                                                                                                      PAGE  24
*** MODELING OPTIONS USED:  CONC   RURAL  FLAT          DFAULT

** Message Summary For ISC2 Model Execution ***

--------- Summary of Total Messages --------

 Total of            0 Fatal Error Message(s)
 Total of            0 Warning Message(s)
A Total of          523 Informational Message(s)

 Total of          522 Calm Hours Identified

  ******** FATAL ERROR MESSAGES ********
           ***  NONE  ***

  ********   WARNING MESSAGES    ********
           ***  NONE  ***

  ************************************
  *** ISCST2 Finishes Successfully ***
  ************************************
```

```
CO STARTING
   TITLEONE  GULF COAST RECYCLING TAMPA FLORIDA LEAD EMISSIONS IMPACTS (Y89-Q2)
   MODELOPT  DFAULT CONC RURAL
   AVERTIME  PERIOD
   POLLUTID  OTHER
   RUNORNOT  RUN
   ERRORFIL  ERRORS.OUT
CO FINISHED

SO STARTING
   LOCATION  Tapping  POINT   0.0    0.0
             Charging POINT   1.0    1.0
             Kettles  POINT -16.0   62.0
             Furnace  POINT   3.0   -8.0
             Slag     POINT  40.0    6.0
             DrossStg AREA  -80.8   -8.0
             Roadway1 AREA  -54.0   47.0
             Roadway2 AREA  -47.0   29.0
             Roadway3 AREA  -41.0   11.0
             Roadway4 AREA  -41.0   -7.0
             Roadway5 AREA  -33.0  -25.0
             Roadway6 AREA  -60.0  -13.0
             Roadway7 AREA  -75.0    5.0
             Roadway8 AREA  -23.0   11.0
             Smelter1 AREA  -28.7    2.4
             Smelter2 AREA  -28.7   12.8
             Smelter3 AREA  -17.4   16.5
             Smelter4 AREA  -17.4    6.1
             MatsStg1 AREA  -62.0   12.0
             MatsStg2 AREA  -60.0   -6.0
             MatsStg3 AREA  -56.0  -24.0
             MatsStg4 AREA  -79.0   -3.0
             MatsStg5 AREA  -74.0  -21.0
             Battery1 AREA  -68.0   54.0
             Battery2 AREA  -64.0   36.0

SO EMISFACT  Battery1     HROFDY   8*0.0     8*1.0    8*0.0
SO EMISFACT  Battery2     HROFDY   8*0.0     8*1.0    8*0.0

** Point Source          QS        HS        TS        VS        DS
** Parameters:          ----      ----      ----      ----      ----
   SRCPARAM  Tapping   .0081      11.0      305.      18.9      0.32
             Charging  .0190      19.8      308.      15.8      0.61
             Kettles   .0060       9.1      308.      22.9      0.67
             Furnace   .2010      45.7      339.      17.4      0.61
             Slag      .0001      7.62      333.      5.49      0.61

** AREA:     SRCID                QS                HS       XINIT
   SRCPARAM  DrossStg          1.22E-07             1.5        25.0
             Roadway1          1.00E-07             1.0        18.0
             Roadway2          1.00E-07             1.0        18.0
             Roadway3          1.00E-07             1.0        18.0
             Roadway4          1.00E-07             1.0        18.0
             Roadway5          1.00E-07             1.0        18.0
             Roadway6          1.00E-07             1.0        18.0
             Roadway7          1.00E-07             1.0        18.0
             Roadway8          1.00E-07             1.0        18.0
             Smelter1          4.17E-06             3.7        10.0
             Smelter2          4.17E-06             3.7        10.0
             Smelter3          4.17E-06             3.7        10.0
             Smelter4          4.17E-06             3.7        10.0
             MatsStg1          1.78E-07             2.0        18.0
             MatsStg2          1.78E-07             2.0        18.0
             MatsStg3          1.78E-07             2.0        18.0
             MatsStg4          1.78E-07             2.0        18.0
             MatsStg5          1.78E-07             2.0        18.0
             Battery1          1.40E-06             2.0        18.0
             Battery2          1.40E-06             2.0        18.0

RE FINISHED

ME STARTING
   INPUTFIL  D:\ISC2\TAMPA89.ASC
   ANEMHGHT  10 FEET
   SURFDATA  12842  1989  TAMPA FL
   UAIRDATA  12842  1989  RUSKIN FL
*  DAYRANGE  1-90
   DAYRANGE  91-181
** DAYRANGE  182-273
** DAYRANGE  274-365
ME FINISHED
```

```
U STARTING
* MAXTABLE  ALLAVE  50
  RECTABLE  ALLAVE  FIRST-SECOND
OU FINISHED

**********************************
** SETUP Finishes Successfully ***
**********************************

*** ISCST2 - VERSION 93109 ***    ***  GULF COAST RECYCLING TAMPA FLORIDA LEAD EMISSIONS IMPACTS (Y89-Q2)  ***        09/23/94
                                  ***                                                                   ***        17:52:28
                                                                                                                   PAGE  23
 *** MODELING OPTIONS USED:  CONC   RURAL  FLAT          DFAULT

                                        *** THE SUMMARY OF MAXIMUM PERIOD ( 2184 HRS) RESULTS ***


                                     ** CONC OF OTHER    IN MICROGRAMS/M**3                          **

                                                                                                          NETWORK
ROUP ID                      AVERAGE CONC              RECEPTOR  (XR, YR, ZELEV, ZFLAG)   OF TYPE  GRID-ID
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

LL      1ST HIGHEST VALUE IS      0.46130 AT (     -55.17,      -35.66,      0.00,      0.00)  DC
        2ND HIGHEST VALUE IS      0.41141 AT (     -57.45,      -48.21,      0.00,      0.00)  GP   POL2
        3RD HIGHEST VALUE IS      0.40301 AT (     -30.48,      -41.15,      0.00,      0.00)  DC
        4TH HIGHEST VALUE IS      0.38412 AT (     -48.21,      -57.45,      0.00,      0.00)  GP   POL2
        5TH HIGHEST VALUE IS      0.38039 AT (     -79.85,      -30.48,      0.00,      0.00)  DC
        6TH HIGHEST VALUE IS      0.35285 AT (     -17.10,      -46.98,      0.00,      0.00)  GP   POL1


 *** RECEPTOR TYPES:  GC = GRIDCART
                      GP = GRIDPOLR
                      DC = DISCCART
                      DP = DISCPOLR
                      BD = BOUNDARY
*** ISCST2 - VERSION 93109 ***    ***  GULF COAST RECYCLING TAMPA FLORIDA LEAD EMISSIONS IMPACTS (Y89-Q2)  ***        09/23/94
                                  ***                                                                   ***        17:52:28
                                                                                                                   PAGE  24
 *** MODELING OPTIONS USED:  CONC   RURAL  FLAT          DFAULT

** Message Summary For ISC2 Model Execution ***

 --------- Summary of Total Messages --------

 Total of            0 Fatal Error Message(s)
 Total of            0 Warning Message(s)
A Total of          522 Informational Message(s)

 Total of          522 Calm Hours Identified


  ******** FATAL ERROR MESSAGES ********
             ***  NONE  ***


  ********   WARNING MESSAGES   ********
             ***  NONE  ***


  ************************************
  *** ISCST2 Finishes Successfully ***
  ************************************
```

```
CO STARTING
   TITLEONE  GULF COAST RECYCLING TAMPA FLORIDA LEAD EMISSIONS IMPACTS (Y89-Q3)
   MODELOPT  DFAULT CONC RURAL
   AVERTIME  PERIOD
   POLLUTID  OTHER
   RUNORNOT  RUN
   ERRORFIL  ERRORS.OUT
CO FINISHED

SO STARTING
   LOCATION  Tapping  POINT   0.0    0.0
             Charging POINT   1.0    1.0
             Kettles  POINT -16.0   62.0
             Furnace  POINT   3.0   -8.0
             Slag     POINT  40.0    6.0
             DrossStg AREA  -80.8   -8.0
             Roadway1 AREA  -54.0   47.0
             Roadway2 AREA  -47.0   29.0
             Roadway3 AREA  -41.0   11.0
             Roadway4 AREA  -41.0   -7.0
             Roadway5 AREA  -33.0  -25.0
             Roadway6 AREA  -60.0  -13.0
             Roadway7 AREA  -75.0    5.0
             Roadway8 AREA  -23.0   11.0
             Smelter1 AREA  -28.7    2.4
             Smelter2 AREA  -28.7   12.8
             Smelter3 AREA  -17.4   16.5
             Smelter4 AREA  -17.4    6.1
             MatsStg1 AREA  -62.0   12.0
             MatsStg2 AREA  -60.0   -6.0
             MatsStg3 AREA  -56.0  -24.0
             MatsStg4 AREA  -79.0   -3.0
             MatsStg5 AREA  -74.0  -21.0
             Battery1 AREA  -68.0   54.0
             Battery2 AREA  -64.0   36.0

SO EMISFACT  Battery1     HROFDY   8*0.0     8*1.0    8*0.0
SO EMISFACT  Battery2     HROFDY   8*0.0     8*1.0    8*0.0

** Point Source          QS        HS        TS        VS        DS
** Parameters:           ----      ----      ----      ----      ----
   SRCPARAM  Tapping    .0081      11.0      305.      18.9      0.32
             Charging   .0190      19.8      308.      15.8      0.61
             Kettles    .0060       9.1      308.      22.9      0.67
             Furnace    .2010      45.7      339.      17.4      0.61
             Slag       .0001      7.62      333.      5.49      0.61

** AREA:     SRCID                QS              HS       XINIT
   SRCPARAM  DrossStg          1.22E-07           1.5        25.0
             Roadway1          1.00E-07           1.0        18.0
             Roadway2          1.00E-07           1.0        18.0
             Roadway3          1.00E-07           1.0        18.0
             Roadway4          1.00E-07           1.0        18.0
             Roadway5          1.00E-07           1.0        18.0
             Roadway6          1.00E-07           1.0        18.0
             Roadway7          1.00E-07           1.0        18.0
             Roadway8          1.00E-07           1.0        18.0
             Smelter1          4.17E-06           3.7        10.0
             Smelter2          4.17E-06           3.7        10.0
             Smelter3          4.17E-06           3.7        10.0
             Smelter4          4.17E-06           3.7        10.0
             MatsStg1          1.78E-07           2.0        18.0
             MatsStg2          1.78E-07           2.0        18.0
             MatsStg3          1.78E-07           2.0        18.0
             MatsStg4          1.78E-07           2.0        18.0
             MatsStg5          1.78E-07           2.0        18.0
             Battery1          1.40E-06           2.0        18.0
             Battery2          1.40E-06           2.0        18.0

RE FINISHED

ME STARTING
   INPUTFIL  D:\ISC2\TAMPA89.ASC
   ANEMHGHT  10 FEET
   SURFDATA  12842  1989  TAMPA FL
   UAIRDATA  12842  1989  RUSKIN FL
** DAYRANGE  1-90
** DAYRANGE  91-181
   DAYRANGE  182-273
** DAYRANGE  274-365
ME FINISHED
```

```
U STARTING
* MAXTABLE  ALLAVE  50
  RECTABLE  ALLAVE  FIRST-SECOND
OU FINISHED

***********************************
** SETUP Finishes Successfully ***
***********************************

** ISCST2 - VERSION 93109 ***    ***  GULF COAST RECYCLING TAMPA FLORIDA LEAD EMISSIONS IMPACTS (Y89-Q3)  ***        09/23/94
                                 ***                                                                   ***         17:59:41
                                                                                                                   PAGE  23
 *** MODELING OPTIONS USED:  CONC   RURAL  FLAT          DFAULT

                                        *** THE SUMMARY OF MAXIMUM PERIOD ( 2208 HRS) RESULTS ***

                                     ** CONC OF OTHER    IN MICROGRAMS/M**3                          **

                                                                                                        NETWORK
ROUP ID                      AVERAGE CONC              RECEPTOR  (XR, YR, ZELEV, ZFLAG)   OF TYPE  GRID-ID
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

LL      1ST HIGHEST VALUE IS      0.73400 AT (     -55.17,      -35.66,      0.00,      0.00)  DC
        2ND HIGHEST VALUE IS      0.70683 AT (     -79.85,      -30.48,      0.00,      0.00)  DC
        3RD HIGHEST VALUE IS      0.68187 AT (     -57.45,      -48.21,      0.00,      0.00)  GP   POL2
        4TH HIGHEST VALUE IS      0.63919 AT (     -86.60,      -50.00,      0.00,      0.00)  GP   POL3
        5TH HIGHEST VALUE IS      0.62004 AT (     -76.60,      -64.28,      0.00,      0.00)  GP   POL3
        6TH HIGHEST VALUE IS      0.58909 AT (     -48.21,      -57.45,      0.00,      0.00)  GP   POL2


 *** RECEPTOR TYPES:  GC = GRIDCART
                      GP = GRIDPOLR
                      DC = DISCCART
                      DP = DISCPOLR
                      BD = BOUNDARY
*** ISCST2 - VERSION 93109 ***    ***  GULF COAST RECYCLING TAMPA FLORIDA LEAD EMISSIONS IMPACTS (Y89-Q3)  ***        09/23/94
                                 ***                                                                   ***         17:59:41
                                                                                                                   PAGE  24
 *** MODELING OPTIONS USED:  CONC   RURAL  FLAT          DFAULT

** Message Summary For ISC2 Model Execution ***

 --------- Summary of Total Messages --------

Total of            0 Fatal Error Message(s)
Total of            0 Warning Message(s)
A Total of        523 Informational Message(s)

Total of          522 Calm Hours Identified


 ******** FATAL ERROR MESSAGES ********
           ***  NONE  ***


 ********   WARNING MESSAGES   ********
           ***  NONE  ***


 ************************************
 *** ISCST2 Finishes Successfully ***
 ************************************
```

```
CO STARTING
   TITLEONE  GULF COAST RECYCLING TAMPA FLORIDA LEAD EMISSIONS IMPACTS (Y89-Q4)
   MODELOPT  DFAULT CONC RURAL
   AVERTIME  PERIOD
   POLLUTID  OTHER
   RUNORNOT  RUN
   ERRORFIL  ERRORS.OUT
CO FINISHED

LO STARTING
   LOCATION  Tapping  POINT   0.0    0.0
             Charging POINT   1.0    1.0
             Kettles  POINT -16.0   62.0
             Furnace  POINT   3.0   -8.0
             Slag     POINT  40.0    6.0
             DrossStg AREA  -80.8   -8.0
             Roadway1 AREA  -54.0   47.0
             Roadway2 AREA  -47.0   29.0
             Roadway3 AREA  -41.0   11.0
             Roadway4 AREA  -41.0   -7.0
             Roadway5 AREA  -33.0  -25.0
             Roadway6 AREA  -60.0  -13.0
             Roadway7 AREA  -75.0    5.0
             Roadway8 AREA  -23.0   11.0
             Smelter1 AREA  -28.7    2.4
             Smelter2 AREA  -28.7   12.8
             Smelter3 AREA  -17.4   16.5
             Smelter4 AREA  -17.4    6.1
             MatsStg1 AREA  -62.0   12.0
             MatsStg2 AREA  -60.0   -6.0
             MatsStg3 AREA  -56.0  -24.0
             MatsStg4 AREA  -79.0   -3.0
             MatsStg5 AREA  -74.0  -21.0
             Battery1 AREA  -68.0   54.0
             Battery2 AREA  -64.0   36.0

LO EMISFACT  Battery1     HROFDY   8*0.0    8*1.0    8*0.0
LO EMISFACT  Battery2     HROFDY   8*0.0    8*1.0    8*0.0

** Point Source          QS       HS       TS       VS       DS
** Parameters:           ----     ----     ----     ----     ----
   SRCPARAM  Tapping    .0081     11.0     305.     18.9     0.32
             Charging   .0190     19.8     308.     15.8     0.61
             Kettles    .0060      9.1     308.     22.9     0.67
             Furnace    .2010     45.7     339.     17.4     0.61
             Slag       .0001     7.62     333.     5.49     0.61

** AREA:    SRCID                QS              HS       XINIT
   SRCPARAM  DrossStg         1.22E-07           1.5        25.0
             Roadway1         1.00E-07           1.0        18.0
             Roadway2         1.00E-07           1.0        18.0
             Roadway3         1.00E-07           1.0        18.0
             Roadway4         1.00E-07           1.0        18.0
             Roadway5         1.00E-07           1.0        18.0
             Roadway6         1.00E-07           1.0        18.0
             Roadway7         1.00E-07           1.0        18.0
             Roadway8         1.00E-07           1.0        18.0
             Smelter1         4.17E-06           3.7        10.0
             Smelter2         4.17E-06           3.7        10.0
             Smelter3         4.17E-06           3.7        10.0
             Smelter4         4.17E-06           3.7        10.0
             MatsStg1         1.78E-07           2.0        18.0
             MatsStg2         1.78E-07           2.0        18.0
             MatsStg3         1.78E-07           2.0        18.0
             MatsStg4         1.78E-07           2.0        18.0
             MatsStg5         1.78E-07           2.0        18.0
             Battery1         1.40E-06           2.0        18.0
             Battery2         1.40E-06           2.0        18.0

RE FINISHED

ME STARTING
   INPUTFIL  D:\ISC2\TAMPA89.ASC
   ANEMHGHT  10 FEET
   SURFDATA  12842  1989  TAMPA FL
   UAIRDATA  12842  1989  RUSKIN FL
*  DAYRANGE  1-90
** DAYRANGE  91-181
** DAYRANGE  182-273
   DAYRANGE  274-365
ME FINISHED
```

```
OU STARTING
** MAXTABLE  ALLAVE  50
   RECTABLE  ALLAVE  FIRST-SECOND
OU FINISHED

************************************
*** SETUP Finishes Successfully ***
************************************
```


*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** THE SUMMARY OF MAXIMUM PERIOD (2208 HRS) RESULTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

GROUP ID		AVERAGE CONC	RECEPTOR (XR,	YR,	ZELEV,	ZFLAG)	OF TYPE	NETWORK GRID-ID
ALL	1ST HIGHEST VALUE IS	0.95793 AT (	-55.17,	-35.66,	0.00,	0.00)	DC	
	2ND HIGHEST VALUE IS	0.94459 AT (	-57.45,	-48.21,	0.00,	0.00)	GP	POL2
	3RD HIGHEST VALUE IS	0.92255 AT (	-48.21,	-57.45,	0.00,	0.00)	GP	POL2
	4TH HIGHEST VALUE IS	0.87356 AT (	-30.48,	-41.15,	0.00,	0.00)	DC	
	5TH HIGHEST VALUE IS	0.84484 AT (	-37.50,	-64.95,	0.00,	0.00)	GP	POL2
	6TH HIGHEST VALUE IS	0.79958 AT (	-64.28,	-76.60,	0.00,	0.00)	GP	POL3

```
*** RECEPTOR TYPES:  GC = GRIDCART
                     GP = GRIDPOLR
                     DC = DISCCART
                     DP = DISCPOLR
                     BD = BOUNDARY
```


*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

```
*** Message Summary For ISC2 Model Execution ***

--------- Summary of Total Messages --------

A Total of          0 Fatal Error Message(s)
A Total of          0 Warning Message(s)
A Total of        522 Informational Message(s)

A Total of        522 Calm Hours Identified

   ******** FATAL ERROR MESSAGES ********
              ***  NONE  ***

   ********   WARNING MESSAGES   ********
              ***  NONE  ***

   ************************************
   *** ISCST2 Finishes Successfully ***
   ************************************
```

```
CO STARTING
   TITLEONE  GULF COAST RECYCLING TAMPA FLORIDA LEAD EMISSIONS IMPACTS (Y90-Q1)
   MODELOPT  DFAULT CONC RURAL
   AVERTIME  PERIOD
   POLLUTID  OTHER
   RUNORNOT  RUN
   ERRORFIL  ERRORS.OUT
CO FINISHED

LO STARTING
   LOCATION  Tapping  POINT   0.0    0.0
             Charging POINT   1.0    1.0
             Kettles  POINT -16.0   62.0
             Furnace  POINT   3.0   -8.0
             Slag     POINT  40.0    6.0
             DrossStg AREA  -80.8   -8.0
             Roadway1 AREA  -54.0   47.0
             Roadway2 AREA  -47.0   29.0
             Roadway3 AREA  -41.0   11.0
             Roadway4 AREA  -41.0   -7.0
             Roadway5 AREA  -33.0  -25.0
             Roadway6 AREA  -60.0  -13.0
             Roadway7 AREA  -75.0    5.0
             Roadway8 AREA  -23.0   11.0
             Smelter1 AREA  -28.7    2.4
             Smelter2 AREA  -28.7   12.8
             Smelter3 AREA  -17.4   16.5
             Smelter4 AREA  -17.4    6.1
             MatsStg1 AREA  -62.0   12.0
             MatsStg2 AREA  -60.0   -6.0
             MatsStg3 AREA  -56.0  -24.0
             MatsStg4 AREA  -79.0   -3.0
             MatsStg5 AREA  -74.0  -21.0
             Battery1 AREA  -68.0   54.0
             Battery2 AREA  -64.0   36.0

LO EMISFACT  Battery1     HROFDY   8*0.0    8*1.0    8*0.0
LO EMISFACT  Battery2     HROFDY   8*0.0    8*1.0    8*0.0

** Point Source          QS       HS       TS       VS       DS
** Parameters:          ----     ----     ----     ----     ----
   SRCPARAM  Tapping    .0081     11.0     305.     18.9     0.32
             Charging   .0190     19.8     308.     15.8     0.61
             Kettles    .0060      9.1     308.     22.9     0.67
             Furnace    .2010     45.7     339.     17.4     0.61
             Slag       .0001      7.62    333.      5.49    0.61

** AREA:    SRCID                QS              HS       XINIT
   SRCPARAM  DrossStg          1.22E-07          1.5       25.0
             Roadway1          1.00E-07          1.0       18.0
             Roadway2          1.00E-07          1.0       18.0
             Roadway3          1.00E-07          1.0       18.0
             Roadway4          1.00E-07          1.0       18.0
             Roadway5          1.00E-07          1.0       18.0
             Roadway6          1.00E-07          1.0       18.0
             Roadway7          1.00E-07          1.0       18.0
             Roadway8          1.00E-07          1.0       18.0
             Smelter1          4.17E-06          3.7       10.0
             Smelter2          4.17E-06          3.7       10.0
             Smelter3          4.17E-06          3.7       10.0
             Smelter4          4.17E-06          3.7       10.0
             MatsStg1          1.78E-07          2.0       18.0
             MatsStg2          1.78E-07          2.0       18.0
             MatsStg3          1.78E-07          2.0       18.0
             MatsStg4          1.78E-07          2.0       18.0
             MatsStg5          1.78E-07          2.0       18.0
             Battery1          1.40E-06          2.0       18.0
             Battery2          1.40E-06          2.0       18.0

RE FINISHED

ME STARTING
   INPUTFIL  D:\ISC2\TAMPA90.ASC
   ANEMHGHT  10 FEET
   SURFDATA  12842  1990  TAMPA FL
   UAIRDATA  12842  1990  RUSKIN FL
   DAYRANGE  1-90
** DAYRANGE  91-181
** DAYRANGE  182-273
** DAYRANGE  274-365
ME FINISHED
```

```
U STARTING
* MAXTABLE  ALLAVE  50
  RECTABLE  ALLAVE  FIRST-SECOND
OU FINISHED

***********************************
** SETUP Finishes Successfully ***
***********************************

** ISCST2 - VERSION 93109 ***    ***  GULF COAST RECYCLING TAMPA FLORIDA LEAD EMISSIONS IMPACTS (Y90-Q1)  ***        09/23/94
                                 ***                                                                       ***        18:14:24
                                                                                                                      PAGE  23
 *** MODELING OPTIONS USED:  CONC   RURAL  FLAT          DFAULT

                                          *** THE SUMMARY OF MAXIMUM PERIOD ( 2160 HRS) RESULTS ***

                                      ** CONC OF OTHER    IN MICROGRAMS/M**3                              **

                                                                                                    NETWORK
ROUP ID                      AVERAGE CONC              RECEPTOR  (XR, YR, ZELEV, ZFLAG)   OF TYPE  GRID-ID
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

L       1ST HIGHEST VALUE IS      0.63429 AT (    -79.85,     -30.48,      0.00,      0.00)  DC
        2ND HIGHEST VALUE IS      0.60367 AT (   -104.54,     -25.30,      0.00,      0.00)  DC
        3RD HIGHEST VALUE IS      0.53358 AT (   -128.92,     -19.81,      0.00,      0.00)  DC
        4TH HIGHEST VALUE IS      0.49588 AT (    -55.17,     -35.66,      0.00,      0.00)  DC
        5TH HIGHEST VALUE IS      0.46034 AT (   -117.46,     -42.75,      0.00,      0.00)  GP    POL4
        6TH HIGHEST VALUE IS      0.44780 AT (   -147.72,     -26.05,      0.00,      0.00)  GP    POL5

 *** RECEPTOR TYPES:  GC = GRIDCART
                      GP = GRIDPOLR
                      DC = DISCCART
                      DP = DISCPOLR
                      BD = BOUNDARY
** ISCST2 - VERSION 93109 ***    ***  GULF COAST RECYCLING TAMPA FLORIDA LEAD EMISSIONS IMPACTS (Y90-Q1)  ***        09/23/94
                                 ***                                                                       ***        18:14:24
                                                                                                                      PAGE  24
 *** MODELING OPTIONS USED:  CONC   RURAL  FLAT          DFAULT

* Message Summary For ISC2 Model Execution ***

 --------- Summary of Total Messages --------

 Total of          0 Fatal Error Message(s)
 Total of          0 Warning Message(s)
A Total of        509 Informational Message(s)

 Total of        509 Calm Hours Identified

   ******** FATAL ERROR MESSAGES ********
              ***  NONE  ***

   ********   WARNING MESSAGES   ********
              ***  NONE  ***

   *************************************
   *** ISCST2 Finishes Successfully ***
   *************************************
```

```
CO STARTING
   TITLEONE  GULF COAST RECYCLING TAMPA FLORIDA LEAD EMISSIONS IMPACTS (Y90-Q2)
   MODELOPT  DFAULT CONC RURAL
   AVERTIME  PERIOD
   POLLUTID  OTHER
   RUNORNOT  RUN
   ERRORFIL  ERRORS.OUT
CO FINISHED

SO STARTING
   LOCATION  Tapping  POINT   0.0    0.0
             Charging POINT   1.0    1.0
             Kettles  POINT -16.0   62.0
             Furnace  POINT   3.0   -8.0
             Slag     POINT  40.0    6.0
             DrossStg AREA  -80.8   -8.0
             Roadway1 AREA  -54.0   47.0
             Roadway2 AREA  -47.0   29.0
             Roadway3 AREA  -41.0   11.0
             Roadway4 AREA  -41.0   -7.0
             Roadway5 AREA  -33.0  -25.0
             Roadway6 AREA  -60.0  -13.0
             Roadway7 AREA  -75.0    5.0
             Roadway8 AREA  -23.0   11.0
             Smelter1 AREA  -28.7    2.4
             Smelter2 AREA  -28.7   12.8
             Smelter3 AREA  -17.4   16.5
             Smelter4 AREA  -17.4    6.1
             MatsStg1 AREA  -62.0   12.0
             MatsStg2 AREA  -60.0   -6.0
             MatsStg3 AREA  -56.0  -24.0
             MatsStg4 AREA  -79.0   -3.0
             MatsStg5 AREA  -74.0  -21.0
             Battery1 AREA  -68.0   54.0
             Battery2 AREA  -64.0   36.0

SO EMISFACT  Battery1     HROFDY   8*0.0    8*1.0    8*0.0
SO EMISFACT  Battery2     HROFDY   8*0.0    8*1.0    8*0.0

** Point Source          QS       HS       TS       VS       DS
** Parameters:          ----     ----     ----     ----     ----
   SRCPARAM  Tapping    .0081     11.0     305.     18.9     0.32
             Charging   .0190     19.8     308.     15.8     0.61
             Kettles    .0060      9.1     308.     22.9     0.67
             Furnace    .2010     45.7     339.     17.4     0.61
             Slag       .0001      7.62    333.      5.49    0.61

** AREA:    SRCID                QS              HS       XINIT
   SRCPARAM  DrossStg         1.22E-07           1.5        25.0
             Roadway1         1.00E-07           1.0        18.0
             Roadway2         1.00E-07           1.0        18.0
             Roadway3         1.00E-07           1.0        18.0
             Roadway4         1.00E-07           1.0        18.0
             Roadway5         1.00E-07           1.0        18.0
             Roadway6         1.00E-07           1.0        18.0
             Roadway7         1.00E-07           1.0        18.0
             Roadway8         1.00E-07           1.0        18.0
             Smelter1         4.17E-06           3.7        10.0
             Smelter2         4.17E-06           3.7        10.0
             Smelter3         4.17E-06           3.7        10.0
             Smelter4         4.17E-06           3.7        10.0
             MatsStg1         1.78E-07           2.0        18.0
             MatsStg2         1.78E-07           2.0        18.0
             MatsStg3         1.78E-07           2.0        18.0
             MatsStg4         1.78E-07           2.0        18.0
             MatsStg5         1.78E-07           2.0        18.0
             Battery1         1.40E-06           2.0        18.0
             Battery2         1.40E-06           2.0        18.0

RE FINISHED

ME STARTING
   INPUTFIL  D:\ISC2\TAMPA90.ASC
   ANEMHGHT  10 FEET
   SURFDATA  12842  1990  TAMPA FL
   UAIRDATA  12842  1990  RUSKIN FL
*  DAYRANGE  1-90
   DAYRANGE  91-181
** DAYRANGE  182-273
** DAYRANGE  274-365
ME FINISHED
```

```
U STARTING
* MAXTABLE  ALLAVE  50
  RECTABLE  ALLAVE  FIRST-SECOND
OU FINISHED

**********************************
** SETUP Finishes Successfully ***
**********************************

*** ISCST2 - VERSION 93109 ***     ***  GULF COAST RECYCLING TAMPA FLORIDA LEAD EMISSIONS IMPACTS (Y90-Q2)  ***        09/23/94
                                   ***                                                                  ***        18:21:06
                                                                                                                   PAGE  23
 *** MODELING OPTIONS USED:  CONC   RURAL  FLAT          DFAULT

                                        *** THE SUMMARY OF MAXIMUM PERIOD ( 2184 HRS) RESULTS ***

                                     ** CONC OF OTHER     IN MICROGRAMS/M**3                          **

ROUP ID                      AVERAGE CONC              RECEPTOR  (XR, YR, ZELEV, ZFLAG)   OF TYPE  NETWORK GRID-ID
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

L      1ST HIGHEST VALUE IS      0.60959 AT (    -104.54,      -25.30,      0.00,      0.00)  DC
       2ND HIGHEST VALUE IS      0.58770 AT (      38.30,      -32.14,      0.00,      0.00)  GP   POL1
       3RD HIGHEST VALUE IS      0.57123 AT (    -128.92,      -19.81,      0.00,      0.00)  DC
       4TH HIGHEST VALUE IS      0.57091 AT (      49.24,       -8.68,      0.00,      0.00)  GP   POL1
       5TH HIGHEST VALUE IS      0.56222 AT (      43.30,      -25.00,      0.00,      0.00)  GP   POL1
       6TH HIGHEST VALUE IS      0.53986 AT (      60.35,        4.57,      0.00,      0.00)  DC


 *** RECEPTOR TYPES:  GC = GRIDCART
                      GP = GRIDPOLR
                      DC = DISCCART
                      DP = DISCPOLR
                      BD = BOUNDARY
*** ISCST2 - VERSION 93109 ***     ***  GULF COAST RECYCLING TAMPA FLORIDA LEAD EMISSIONS IMPACTS (Y90-Q2)  ***        09/23/94
                                   ***                                                                  ***        18:21:06
                                                                                                                   PAGE  24
 *** MODELING OPTIONS USED:  CONC   RURAL  FLAT          DFAULT

* Message Summary For ISC2 Model Execution ***

 --------- Summary of Total Messages --------

Total of            0 Fatal Error Message(s)
Total of            0 Warning Message(s)
A Total of        509 Informational Message(s)

Total of          509 Calm Hours Identified


  ******** FATAL ERROR MESSAGES ********
           ***  NONE  ***


  ********   WARNING MESSAGES   ********
           ***  NONE  ***


  ************************************
  *** ISCST2 Finishes Successfully ***
  ************************************
```

```
CO STARTING
   TITLEONE  GULF COAST RECYCLING TAMPA FLORIDA LEAD EMISSIONS IMPACTS (Y90-Q3)
   MODELOPT  DFAULT CONC RURAL
   AVERTIME  PERIOD
   POLLUTID  OTHER
   RUNORNOT  RUN
   ERRORFIL  ERRORS.OUT
CO FINISHED

SO STARTING
   LOCATION  Tapping  POINT   0.0    0.0
             Charging POINT   1.0    1.0
             Kettles  POINT -16.0   62.0
             Furnace  POINT   3.0   -8.0
             Slag     POINT  40.0    6.0
             DrossStg AREA  -80.8   -8.0
             Roadway1 AREA  -54.0   47.0
             Roadway2 AREA  -47.0   29.0
             Roadway3 AREA  -41.0   11.0
             Roadway4 AREA  -41.0   -7.0
             Roadway5 AREA  -33.0  -25.0
             Roadway6 AREA  -60.0  -13.0
             Roadway7 AREA  -75.0    5.0
             Roadway8 AREA  -23.0   11.0
             Smelter1 AREA  -28.7    2.4
             Smelter2 AREA  -28.7   12.8
             Smelter3 AREA  -17.4   16.5
             Smelter4 AREA  -17.4    6.1
             MatsStg1 AREA  -62.0   12.0
             MatsStg2 AREA  -60.0   -6.0
             MatsStg3 AREA  -56.0  -24.0
             MatsStg4 AREA  -79.0   -3.0
             MatsStg5 AREA  -74.0  -21.0
             Battery1 AREA  -68.0   54.0
             Battery2 AREA  -64.0   36.0

SO EMISFACT  Battery1     HROFDY   8*0.0    8*1.0    8*0.0
SO EMISFACT  Battery2     HROFDY   8*0.0    8*1.0    8*0.0

** Point Source          QS        HS       TS        VS        DS
** Parameters:          ----      ----     ----      ----      ----
   SRCPARAM  Tapping    .0081      11.0     305.      18.9      0.32
             Charging   .0190      19.8     308.      15.8      0.61
             Kettles    .0060       9.1     308.      22.9      0.67
             Furnace    .2010      45.7     339.      17.4      0.61
             Slag       .0001       7.62    333.       5.49     0.61

** AREA:    SRCID                QS              HS       XINIT
   SRCPARAM  DrossStg          1.22E-07          1.5       25.0
             Roadway1          1.00E-07          1.0       18.0
             Roadway2          1.00E-07          1.0       18.0
             Roadway3          1.00E-07          1.0       18.0
             Roadway4          1.00E-07          1.0       18.0
             Roadway5          1.00E-07          1.0       18.0
             Roadway6          1.00E-07          1.0       18.0
             Roadway7          1.00E-07          1.0       18.0
             Roadway8          1.00E-07          1.0       18.0
             Smelter1          4.17E-06          3.7       10.0
             Smelter2          4.17E-06          3.7       10.0
             Smelter3          4.17E-06          3.7       10.0
             Smelter4          4.17E-06          3.7       10.0
             MatsStg1          1.78E-07          2.0       18.0
             MatsStg2          1.78E-07          2.0       18.0
             MatsStg3          1.78E-07          2.0       18.0
             MatsStg4          1.78E-07          2.0       18.0
             MatsStg5          1.78E-07          2.0       18.0
             Battery1          1.40E-06          2.0       18.0
             Battery2          1.40E-06          2.0       18.0

RE FINISHED

ME STARTING
   INPUTFIL  D:\ISC2\TAMPA90.ASC
   ANEMHGHT  10 FEET
   SURFDATA  12842  1990  TAMPA FL
   UAIRDATA  12842  1990  RUSKIN FL
** DAYRANGE  1-90
** DAYRANGE  91-181
   DAYRANGE  182-273
** DAYRANGE  274-365
ME FINISHED
```

```
OU STARTING
** MAXTABLE  ALLAVE  50
   RECTABLE  ALLAVE  FIRST-SECOND
 OU FINISHED

***********************************
** SETUP Finishes Successfully ***
***********************************

*** ISCST2 - VERSION 93109 ***    ***  GULF COAST RECYCLING TAMPA FLORIDA LEAD EMISSIONS IMPACTS (Y90-Q3)  ***        09/23/94
                                  ***                                                                   ***        18:28:32
                                                                                                                   PAGE  23
  *** MODELING OPTIONS USED:  CONC   RURAL  FLAT          DFAULT

                                        *** THE SUMMARY OF MAXIMUM PERIOD ( 2208 HRS) RESULTS ***


                                    ** CONC OF OTHER    IN MICROGRAMS/M**3                          **

                                                                                                          NETWORK
ROUP ID                      AVERAGE CONC              RECEPTOR  (XR, YR, ZELEV, ZFLAG)   OF TYPE  GRID-ID
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

LL      1ST HIGHEST VALUE IS      0.93317 AT (    -104.54,      -25.30,      0.00,      0.00)  DC
        2ND HIGHEST VALUE IS      0.85441 AT (    -128.92,      -19.81,      0.00,      0.00)  DC
        3RD HIGHEST VALUE IS      0.78787 AT (     -79.85,      -30.48,      0.00,      0.00)  DC
        4TH HIGHEST VALUE IS      0.72840 AT (    -153.31,      -14.32,      0.00,      0.00)  DC
        5TH HIGHEST VALUE IS      0.72403 AT (    -147.72,      -26.05,      0.00,      0.00)  GP   POL5
        6TH HIGHEST VALUE IS      0.68627 AT (    -117.46,      -42.75,      0.00,      0.00)  GP   POL4


  *** RECEPTOR TYPES:  GC = GRIDCART
                       GP = GRIDPOLR
                       DC = DISCCART
                       DP = DISCPOLR
                       BD = BOUNDARY
*** ISCST2 - VERSION 93109 ***    ***  GULF COAST RECYCLING TAMPA FLORIDA LEAD EMISSIONS IMPACTS (Y90-Q3)  ***        09/23/94
                                  ***                                                                   ***        18:28:32
                                                                                                                   PAGE  24
  *** MODELING OPTIONS USED:  CONC   RURAL  FLAT          DFAULT

** Message Summary For ISC2 Model Execution ***

  --------- Summary of Total Messages --------

  Total of            0 Fatal Error Message(s)
  Total of            0 Warning Message(s)
A Total of          509 Informational Message(s)

  Total of          509 Calm Hours Identified


   ******** FATAL ERROR MESSAGES ********
              ***  NONE  ***


   ********   WARNING MESSAGES   ********
              ***  NONE  ***


   ************************************
   *** ISCST2 Finishes Successfully ***
   ************************************
```

```
CO STARTING
   TITLEONE  GULF COAST RECYCLING TAMPA FLORIDA LEAD EMISSIONS IMPACTS (Y90-Q4)
   MODELOPT  DFAULT CONC RURAL
   AVERTIME  PERIOD
   POLLUTID  OTHER
   RUNORNOT  RUN
   ERRORFIL  ERRORS.OUT
CO FINISHED

CO STARTING
   LOCATION  Tapping  POINT   0.0    0.0
             Charging POINT   1.0    1.0
             Kettles  POINT -16.0   62.0
             Furnace  POINT   3.0   -8.0
             Slag     POINT  40.0    6.0
             DrossStg AREA  -80.8   -8.0
             Roadway1 AREA  -54.0   47.0
             Roadway2 AREA  -47.0   29.0
             Roadway3 AREA  -41.0   11.0
             Roadway4 AREA  -41.0   -7.0
             Roadway5 AREA  -33.0  -25.0
             Roadway6 AREA  -60.0  -13.0
             Roadway7 AREA  -75.0    5.0
             Roadway8 AREA  -23.0   11.0
             Smelter1 AREA  -28.7    2.4
             Smelter2 AREA  -28.7   12.8
             Smelter3 AREA  -17.4   16.5
             Smelter4 AREA  -17.4    6.1
             MatsStg1 AREA  -62.0   12.0
             MatsStg2 AREA  -60.0   -6.0
             MatsStg3 AREA  -56.0  -24.0
             MatsStg4 AREA  -79.0   -3.0
             MatsStg5 AREA  -74.0  -21.0
             Battery1 AREA  -68.0   54.0
             Battery2 AREA  -64.0   36.0

CO EMISFACT  Battery1     HROFDY   8*0.0    8*1.0    8*0.0
CO EMISFACT  Battery2     HROFDY   8*0.0    8*1.0    8*0.0

** Point Source          QS        HS       TS        VS        DS
** Parameters:          ----      ----     ----      ----      ----
   SRCPARAM  Tapping    .0081      11.0     305.      18.9      0.32
             Charging   .0190      19.8     308.      15.8      0.61
             Kettles    .0060       9.1     308.      22.9      0.67
             Furnace    .2010      45.7     339.      17.4      0.61
             Slag       .0001       7.62    333.       5.49     0.61

** AREA:    SRCID                QS              HS       XINIT
   SRCPARAM  DrossStg          1.22E-07          1.5        25.0
             Roadway1          1.00E-07          1.0        18.0
             Roadway2          1.00E-07          1.0        18.0
             Roadway3          1.00E-07          1.0        18.0
             Roadway4          1.00E-07          1.0        18.0
             Roadway5          1.00E-07          1.0        18.0
             Roadway6          1.00E-07          1.0        18.0
             Roadway7          1.00E-07          1.0        18.0
             Roadway8          1.00E-07          1.0        18.0
             Smelter1          4.17E-06          3.7        10.0
             Smelter2          4.17E-06          3.7        10.0
             Smelter3          4.17E-06          3.7        10.0
             Smelter4          4.17E-06          3.7        10.0
             MatsStg1          1.78E-07          2.0        18.0
             MatsStg2          1.78E-07          2.0        18.0
             MatsStg3          1.78E-07          2.0        18.0
             MatsStg4          1.78E-07          2.0        18.0
             MatsStg5          1.78E-07          2.0        18.0
             Battery1          1.40E-06          2.0        18.0
             Battery2          1.40E-06          2.0        18.0

RE FINISHED

ME STARTING
   INPUTFIL  D:\ISC2\TAMPA90.ASC
   ANEMHGHT  10 FEET
   SURFDATA  12842  1990  TAMPA FL
   UAIRDATA  12842  1990  RUSKIN FL
** DAYRANGE  1-90
** DAYRANGE  91-181
** DAYRANGE  182-273
   DAYRANGE  274-365
ME FINISHED
```

```
U STARTING
* MAXTABLE  ALLAVE  50
  RECTABLE  ALLAVE  FIRST-SECOND
OU FINISHED

***********************************
** SETUP Finishes Successfully ***
***********************************

** ISCST2 - VERSION 93109 ***     ***  GULF COAST RECYCLING TAMPA FLORIDA LEAD EMISSIONS IMPACTS (Y90-Q4)  ***          09/23/94
                                  ***                                                                        ***          18:35:36
                                                                                                                          PAGE  23
 *** MODELING OPTIONS USED:  CONC   RURAL  FLAT          DFAULT

                                              *** THE SUMMARY OF MAXIMUM PERIOD ( 2208 HRS) RESULTS ***

                                          ** CONC OF OTHER    IN MICROGRAMS/M**3                            **

                                                                                                          NETWORK
ROUP ID                          AVERAGE CONC              RECEPTOR  (XR, YR, ZELEV, ZFLAG)   OF TYPE  GRID-ID
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

L       1ST HIGHEST VALUE IS       1.11440 AT (   -104.54,      -25.30,      0.00,      0.00)  DC
        2ND HIGHEST VALUE IS       1.00204 AT (    -79.85,      -30.48,      0.00,      0.00)  DC
        3RD HIGHEST VALUE IS       0.97311 AT (   -128.92,      -19.81,      0.00,      0.00)  DC
        4TH HIGHEST VALUE IS       0.83608 AT (   -147.72,      -26.05,      0.00,      0.00)  GP     POL5
        5TH HIGHEST VALUE IS       0.82767 AT (   -117.46,      -42.75,      0.00,      0.00)  GP     POL4
        6TH HIGHEST VALUE IS       0.77733 AT (   -153.31,      -14.32,      0.00,      0.00)  DC

*** RECEPTOR TYPES:  GC = GRIDCART
                     GP = GRIDPOLR
                     DC = DISCCART
                     DP = DISCPOLR
                     BD = BOUNDARY
** ISCST2 - VERSION 93109 ***     ***  GULF COAST RECYCLING TAMPA FLORIDA LEAD EMISSIONS IMPACTS (Y90-Q4)  ***          09/23/94
                                  ***                                                                        ***          18:35:36
                                                                                                                          PAGE  24
 *** MODELING OPTIONS USED:  CONC   RURAL  FLAT          DFAULT

* Message Summary For ISC2 Model Execution ***

--------- Summary of Total Messages --------

 Total of           0 Fatal Error Message(s)
 Total of           0 Warning Message(s)
A Total of        509 Informational Message(s)

 Total of         509 Calm Hours Identified

  ******** FATAL ERROR MESSAGES ********
           ***  NONE  ***

  ********   WARNING MESSAGES   ********
           ***  NONE  ***

  ************************************
  *** ISCST2 Finishes Successfully ***
  ************************************
```

```
CO STARTING
   TITLEONE  GULF COAST RECYCLING TAMPA FLORIDA LEAD EMISSIONS IMPACTS (Y91-Q1)
   MODELOPT  DFAULT CONC RURAL
   AVERTIME  PERIOD
   POLLUTID  OTHER
   RUNORNOT  RUN
   ERRORFIL  ERRORS.OUT
CO FINISHED

SO STARTING
   LOCATION  Tapping  POINT   0.0    0.0
             Charging POINT   1.0    1.0
             Kettles  POINT -16.0   62.0
             Furnace  POINT   3.0   -8.0
             Slag     POINT  40.0    6.0
             DrossStg AREA  -80.8   -8.0
             Roadway1 AREA  -54.0   47.0
             Roadway2 AREA  -47.0   29.0
             Roadway3 AREA  -41.0   11.0
             Roadway4 AREA  -41.0   -7.0
             Roadway5 AREA  -33.0  -25.0
             Roadway6 AREA  -60.0  -13.0
             Roadway7 AREA  -75.0    5.0
             Roadway8 AREA  -23.0   11.0
             Smelter1 AREA  -28.7    2.4
             Smelter2 AREA  -28.7   12.8
             Smelter3 AREA  -17.4   16.5
             Smelter4 AREA  -17.4    6.1
             MatsStg1 AREA  -62.0   12.0
             MatsStg2 AREA  -60.0   -6.0
             MatsStg3 AREA  -56.0  -24.0
             MatsStg4 AREA  -79.0   -3.0
             MatsStg5 AREA  -74.0  -21.0
             Battery1 AREA  -68.0   54.0
             Battery2 AREA  -64.0   36.0

SO EMISFACT  Battery1     HROFDY   8*0.0    8*1.0    8*0.0
SO EMISFACT  Battery2     HROFDY   8*0.0    8*1.0    8*0.0

** Point Source          QS        HS       TS        VS        DS
** Parameters:          ----      ----     ----      ----      ----
   SRCPARAM  Tapping   .0081      11.0     305.      18.9      0.32
             Charging  .0190      19.8     308.      15.8      0.61
             Kettles   .0060       9.1     308.      22.9      0.67
             Furnace   .2010      45.7     339.      17.4      0.61
             Slag      .0001       7.62    333.       5.49     0.61

** AREA:    SRCID                QS              HS       XINIT
   SRCPARAM  DrossStg          1.22E-07          1.5        25.0
             Roadway1          1.00E-07          1.0        18.0
             Roadway2          1.00E-07          1.0        18.0
             Roadway3          1.00E-07          1.0        18.0
             Roadway4          1.00E-07          1.0        18.0
             Roadway5          1.00E-07          1.0        18.0
             Roadway6          1.00E-07          1.0        18.0
             Roadway7          1.00E-07          1.0        18.0
             Roadway8          1.00E-07          1.0        18.0
             Smelter1          4.17E-06          3.7        10.0
             Smelter2          4.17E-06          3.7        10.0
             Smelter3          4.17E-06          3.7        10.0
             Smelter4          4.17E-06          3.7        10.0
             MatsStg1          1.78E-07          2.0        18.0
             MatsStg2          1.78E-07          2.0        18.0
             MatsStg3          1.78E-07          2.0        18.0
             MatsStg4          1.78E-07          2.0        18.0
             MatsStg5          1.78E-07          2.0        18.0
             Battery1          1.40E-06          2.0        18.0
             Battery2          1.40E-06          2.0        18.0

RE FINISHED

ME STARTING
   INPUTFIL  D:\ISC2\TAMPA91.ASC
   ANEMHGHT  10 FEET
   SURFDATA  12842  1991  TAMPA FL
   UAIRDATA  12842  1991  RUSKIN FL
   DAYRANGE  1-90
** DAYRANGE  91-181
** DAYRANGE  182-273
** DAYRANGE  274-365
ME FINISHED
```

U STARTING
* MAXTABLE ALLAVE 50
RECTABLE ALLAVE FIRST-SECOND
OU FINISHED

****
** SETUP Finishes Successfully ***
****

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** THE SUMMARY OF MAXIMUM PERIOD (2160 HRS) RESULTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

ROUP ID		AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZFLAG)				OF TYPE	NETWORK GRID-ID
LL	1ST HIGHEST VALUE IS	0.62613 AT (	-79.85,	-30.48,	0.00,	0.00)	DC	
	2ND HIGHEST VALUE IS	0.60069 AT (	-104.54,	-25.30,	0.00,	0.00)	DC	
	3RD HIGHEST VALUE IS	0.52523 AT (	38.30,	-32.14,	0.00,	0.00)	GP	POL1
	4TH HIGHEST VALUE IS	0.52056 AT (	-128.92,	-19.81,	0.00,	0.00)	DC	
	5TH HIGHEST VALUE IS	0.48095 AT (	43.30,	-25.00,	0.00,	0.00)	GP	POL1
	6TH HIGHEST VALUE IS	0.47216 AT (	-55.17,	-35.66,	0.00,	0.00)	DC	

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR
BD = BOUNDARY

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

* Message Summary For ISC2 Model Execution ***

--------- Summary of Total Messages --------

Total of 0 Fatal Error Message(s)
Total of 0 Warning Message(s)
A Total of 571 Informational Message(s)

Total of 571 Calm Hours Identified

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********
*** NONE ***

****
*** ISCST2 Finishes Successfully ***
****

```
CO STARTING
   TITLEONE  GULF COAST RECYCLING TAMPA FLORIDA LEAD EMISSIONS IMPACTS (Y91-Q2)
   MODELOPT  DFAULT CONC RURAL
   AVERTIME  PERIOD
   POLLUTID  OTHER
   RUNORNOT  RUN
   ERRORFIL  ERRORS.OUT
CO FINISHED

SO STARTING
   LOCATION  Tapping  POINT   0.0    0.0
             Charging POINT   1.0    1.0
             Kettles  POINT -16.0   62.0
             Furnace  POINT   3.0   -8.0
             Slag     POINT  40.0    6.0
             DrossStg AREA  -80.8   -8.0
             Roadway1 AREA  -54.0   47.0
             Roadway2 AREA  -47.0   29.0
             Roadway3 AREA  -41.0   11.0
             Roadway4 AREA  -41.0   -7.0
             Roadway5 AREA  -33.0  -25.0
             Roadway6 AREA  -60.0  -13.0
             Roadway7 AREA  -75.0    5.0
             Roadway8 AREA  -23.0   11.0
             Smelter1 AREA  -28.7    2.4
             Smelter2 AREA  -28.7   12.8
             Smelter3 AREA  -17.4   16.5
             Smelter4 AREA  -17.4    6.1
             MatsStg1 AREA  -62.0   12.0
             MatsStg2 AREA  -60.0   -6.0
             MatsStg3 AREA  -56.0  -24.0
             MatsStg4 AREA  -79.0   -3.0
             MatsStg5 AREA  -74.0  -21.0
             Battery1 AREA  -68.0   54.0
             Battery2 AREA  -64.0   36.0

SO EMISFACT  Battery1     HROFDY   8*0.0     8*1.0    8*0.0
SO EMISFACT  Battery2     HROFDY   8*0.0     8*1.0    8*0.0

** Point Source          QS        HS        TS        VS        DS
   Parameters:          ----      ----      ----      ----      ----
   SRCPARAM  Tapping    .0081      11.0     305.      18.9      0.32
             Charging   .0190      19.8     308.      15.8      0.61
             Kettles    .0060       9.1     308.      22.9      0.67
             Furnace    .2010      45.7     339.      17.4      0.61
             Slag       .0001       7.62    333.       5.49     0.61

** AREA:     SRCID                QS              HS       XINIT
   SRCPARAM  DrossStg          1.22E-07           1.5        25.0
             Roadway1          1.00E-07           1.0        18.0
             Roadway2          1.00E-07           1.0        18.0
             Roadway3          1.00E-07           1.0        18.0
             Roadway4          1.00E-07           1.0        18.0
             Roadway5          1.00E-07           1.0        18.0
             Roadway6          1.00E-07           1.0        18.0
             Roadway7          1.00E-07           1.0        18.0
             Roadway8          1.00E-07           1.0        18.0
             Smelter1          4.17E-06           3.7        10.0
             Smelter2          4.17E-06           3.7        10.0
             Smelter3          4.17E-06           3.7        10.0
             Smelter4          4.17E-06           3.7        10.0
             MatsStg1          1.78E-07           2.0        18.0
             MatsStg2          1.78E-07           2.0        18.0
             MatsStg3          1.78E-07           2.0        18.0
             MatsStg4          1.78E-07           2.0        18.0
             MatsStg5          1.78E-07           2.0        18.0
             Battery1          1.40E-06           2.0        18.0
             Battery2          1.40E-06           2.0        18.0

RE FINISHED

   STARTING
   INPUTFIL  D:\ISC2\TAMPA91.ASC
   ANEMHGHT  10 FEET
   SURFDATA  12842  1991  TAMPA FL
   UAIRDATA  12842  1991  RUSKIN FL
   DAYRANGE  1-90
   DAYRANGE  91-181
** DAYRANGE  182-273
** DAYRANGE  274-365
   FINISHED
```

```
OU STARTING
** MAXTABLE  ALLAVE  50
   RECTABLE  ALLAVE  FIRST-SECOND
 OU FINISHED

***********************************
** SETUP Finishes Successfully ***
***********************************
```


*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** THE SUMMARY OF MAXIMUM PERIOD (2184 HRS) RESULTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

GROUP ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZFLAG)	OF TYPE	NETWORK GRID-ID
ALL	1ST HIGHEST VALUE IS	0.60690 AT (-104.54, -25.30, 0.00, 0.00)	DC	
	2ND HIGHEST VALUE IS	0.60100 AT (-128.92, -19.81, 0.00, 0.00)	DC	
	3RD HIGHEST VALUE IS	0.57367 AT (-168.24, 59.74, 0.00, 0.00)	DC	
	4TH HIGHEST VALUE IS	0.53519 AT (-153.31, -14.32, 0.00, 0.00)	DC	
	5TH HIGHEST VALUE IS	0.52941 AT (-168.24, 84.73, 0.00, 0.00)	DC	
	6TH HIGHEST VALUE IS	0.52881 AT (-167.63, 9.75, 0.00, 0.00)	DC	

*** RECEPTOR TYPES: GC = GRIDCART
                     GP = GRIDPOLR
                     DC = DISCCART
                     DP = DISCPOLR
                     BD = BOUNDARY

*** ISCST2 - VERSION 93109 *** *** GULF COAST RECYCLING TAMPA FLORIDA LEAD EMISSIONS IMPACTS (Y91-Q2) *** 09/23/94
                               ***   *** 18:49:56

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

** Message Summary For ISC2 Model Execution ***

--------- Summary of Total Messages --------

Total of 0 Fatal Error Message(s)
Total of 0 Warning Message(s)
A Total of 572 Informational Message(s)

Total of 571 Calm Hours Identified

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********
*** NONE ***

****
*** ISCST2 Finishes Successfully ***
****

```
CO STARTING
   TITLEONE  GULF COAST RECYCLING TAMPA FLORIDA LEAD EMISSIONS IMPACTS (Y91-Q3)
   MODELOPT  DFAULT CONC RURAL
   AVERTIME  PERIOD
   POLLUTID  OTHER
   RUNORNOT  RUN
   ERRORFIL  ERRORS.OUT
 CO FINISHED

 SO STARTING
   LOCATION  Tapping  POINT   0.0    0.0
             Charging POINT   1.0    1.0
             Kettles  POINT -16.0   62.0
             Furnace  POINT   3.0   -8.0
             Slag     POINT  40.0    6.0
             DrossStg AREA  -80.8   -8.0
             Roadway1 AREA  -54.0   47.0
             Roadway2 AREA  -47.0   29.0
             Roadway3 AREA  -41.0   11.0
             Roadway4 AREA  -41.0   -7.0
             Roadway5 AREA  -33.0  -25.0
             Roadway6 AREA  -60.0  -13.0
             Roadway7 AREA  -75.0    5.0
             Roadway8 AREA  -23.0   11.0
             Smelter1 AREA  -28.7    2.4
             Smelter2 AREA  -28.7   12.8
             Smelter3 AREA  -17.4   16.5
             Smelter4 AREA  -17.4    6.1
             MatsStg1 AREA  -62.0   12.0
             MatsStg2 AREA  -60.0   -6.0
             MatsStg3 AREA  -56.0  -24.0
             MatsStg4 AREA  -79.0   -3.0
             MatsStg5 AREA  -74.0  -21.0
             Battery1 AREA  -68.0   54.0
             Battery2 AREA  -64.0   36.0

 SO EMISFACT  Battery1     HROFDY   8*0.0     8*1.0    8*0.0
 SO EMISFACT  Battery2     HROFDY   8*0.0     8*1.0    8*0.0

 ** Point Source          QS        HS        TS        VS        DS
 ** Parameters:          ----      ----      ----      ----      ----
   SRCPARAM  Tapping    .0081      11.0      305.      18.9      0.32
             Charging   .0190      19.8      308.      15.8      0.61
             Kettles    .0060       9.1      308.      22.9      0.67
             Furnace    .2010      45.7      339.      17.4      0.61
             Slag       .0001      7.62      333.      5.49      0.61

 ** AREA:    SRCID                QS              HS       XINIT
   SRCPARAM  DrossStg          1.22E-07           1.5        25.0
             Roadway1          1.00E-07           1.0        18.0
             Roadway2          1.00E-07           1.0        18.0
             Roadway3          1.00E-07           1.0        18.0
             Roadway4          1.00E-07           1.0        18.0
             Roadway5          1.00E-07           1.0        18.0
             Roadway6          1.00E-07           1.0        18.0
             Roadway7          1.00E-07           1.0        18.0
             Roadway8          1.00E-07           1.0        18.0
             Smelter1          4.17E-06           3.7        10.0
             Smelter2          4.17E-06           3.7        10.0
             Smelter3          4.17E-06           3.7        10.0
             Smelter4          4.17E-06           3.7        10.0
             MatsStg1          1.78E-07           2.0        18.0
             MatsStg2          1.78E-07           2.0        18.0
             MatsStg3          1.78E-07           2.0        18.0
             MatsStg4          1.78E-07           2.0        18.0
             MatsStg5          1.78E-07           2.0        18.0
             Battery1          1.40E-06           2.0        18.0
             Battery2          1.40E-06           2.0        18.0

 RE FINISHED

 ME STARTING
   INPUTFIL  D:\ISC2\TAMPA91.ASC
   ANEMHGHT  10 FEET
   SURFDATA  12842  1991  TAMPA FL
   UAIRDATA  12842  1991  RUSKIN FL
 ** DAYRANGE  1-90
 ** DAYRANGE  91-181
   DAYRANGE  182-273
 ** DAYRANGE  274-365
 ME FINISHED
```

U STARTING
* MAXTABLE ALLAVE 50
RECTABLE ALLAVE FIRST-SECOND
OU FINISHED

****
** SETUP Finishes Successfully ***
****

** ISCST2 - VERSION 93109 *** *** GULF COAST RECYCLING TAMPA FLORIDA LEAD EMISSIONS IMPACTS (Y91-Q3) *** 09/23/94
*** *** 18:56:36
PAGE 23

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** THE SUMMARY OF MAXIMUM PERIOD (2208 HRS) RESULTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

GROUP ID		AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZFLAG)				OF TYPE	NETWORK GRID-ID
L	1ST HIGHEST VALUE IS	0.77008 AT (	-104.54,	-25.30,	0.00,	0.00)	DC	
	2ND HIGHEST VALUE IS	0.71089 AT (	-79.85,	-30.48,	0.00,	0.00)	DC	
	3RD HIGHEST VALUE IS	0.63565 AT (	-117.46,	-42.75,	0.00,	0.00)	GP	POL4
	4TH HIGHEST VALUE IS	0.60221 AT (	-128.92,	-19.81,	0.00,	0.00)	DC	
	5TH HIGHEST VALUE IS	0.54546 AT (	-140.95,	-51.30,	0.00,	0.00)	GP	POL5
	6TH HIGHEST VALUE IS	0.52750 AT (	-168.24,	84.73,	0.00,	0.00)	DC	

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR
BD = BOUNDARY

** ISCST2 - VERSION 93109 *** *** GULF COAST RECYCLING TAMPA FLORIDA LEAD EMISSIONS IMPACTS (Y91-Q3) *** 09/23/94
*** *** 18:56:36
PAGE 24

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

* Message Summary For ISC2 Model Execution ***

--------- Summary of Total Messages --------

Total of 0 Fatal Error Message(s)
Total of 0 Warning Message(s)
A Total of 571 Informational Message(s)

Total of 571 Calm Hours Identified

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********
*** NONE ***

****
*** ISCST2 Finishes Successfully ***
****

```
CO STARTING
   TITLEONE  GULF COAST RECYCLING TAMPA FLORIDA LEAD EMISSIONS IMPACTS (Y91-Q4)
   MODELOPT  DFAULT CONC RURAL
   AVERTIME  PERIOD
   POLLUTID  OTHER
   RUNORNOT  RUN
   ERRORFIL  ERRORS.OUT
CO FINISHED

SO STARTING
   LOCATION  Tapping  POINT   0.0    0.0
             Charging POINT   1.0    1.0
             Kettles  POINT -16.0   62.0
             Furnace  POINT   3.0   -8.0
             Slag     POINT  40.0    6.0
             DrossStg AREA  -80.8   -8.0
             Roadway1 AREA  -54.0   47.0
             Roadway2 AREA  -47.0   29.0
             Roadway3 AREA  -41.0   11.0
             Roadway4 AREA  -41.0   -7.0
             Roadway5 AREA  -33.0  -25.0
             Roadway6 AREA  -60.0  -13.0
             Roadway7 AREA  -75.0    5.0
             Roadway8 AREA  -23.0   11.0
             Smelter1 AREA  -28.7    2.4
             Smelter2 AREA  -28.7   12.8
             Smelter3 AREA  -17.4   16.5
             Smelter4 AREA  -17.4    6.1
             MatsStg1 AREA  -62.0   12.0
             MatsStg2 AREA  -60.0   -6.0
             MatsStg3 AREA  -56.0  -24.0
             MatsStg4 AREA  -79.0   -3.0
             MatsStg5 AREA  -74.0  -21.0
             Battery1 AREA  -68.0   54.0
             Battery2 AREA  -64.0   36.0

SO EMISFACT  Battery1     HROFDY   8*0.0     8*1.0    8*0.0
SO EMISFACT  Battery2     HROFDY   8*0.0     8*1.0    8*0.0

** Point Source          QS        HS        TS        VS        DS
** Parameters:          ----      ----      ----      ----      ----
   SRCPARAM  Tapping    .0081      11.0      305.      18.9      0.32
             Charging   .0190      19.8      308.      15.8      0.61
             Kettles    .0060       9.1      308.      22.9      0.67
             Furnace    .2010      45.7      339.      17.4      0.61
             Slag       .0001      7.62      333.      5.49      0.61

** AREA:    SRCID                QS                HS       XINIT
   SRCPARAM  DrossStg          1.22E-07            1.5        25.0
             Roadway1          1.00E-07            1.0        18.0
             Roadway2          1.00E-07            1.0        18.0
             Roadway3          1.00E-07            1.0        18.0
             Roadway4          1.00E-07            1.0        18.0
             Roadway5          1.00E-07            1.0        18.0
             Roadway6          1.00E-07            1.0        18.0
             Roadway7          1.00E-07            1.0        18.0
             Roadway8          1.00E-07            1.0        18.0
             Smelter1          4.17E-06            3.7        10.0
             Smelter2          4.17E-06            3.7        10.0
             Smelter3          4.17E-06            3.7        10.0
             Smelter4          4.17E-06            3.7        10.0
             MatsStg1          1.78E-07            2.0        18.0
             MatsStg2          1.78E-07            2.0        18.0
             MatsStg3          1.78E-07            2.0        18.0
             MatsStg4          1.78E-07            2.0        18.0
             MatsStg5          1.78E-07            2.0        18.0
             Battery1          1.40E-06            2.0        18.0
             Battery2          1.40E-06            2.0        18.0

RE FINISHED

ME STARTING
   INPUTFIL  D:\ISC2\TAMPA91.ASC
   ANEMHGHT  10 FEET
   SURFDATA  12842  1991  TAMPA FL
   UAIRDATA  12842  1991  RUSKIN FL
** DAYRANGE  1-90
** DAYRANGE  91-181
** DAYRANGE  182-273
   DAYRANGE  274-365
ME FINISHED
```

U STARTING
* MAXTABLE ALLAVE 50
RECTABLE ALLAVE FIRST-SECOND
OU FINISHED

****
** SETUP Finishes Successfully ***
****

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** THE SUMMARY OF MAXIMUM PERIOD (2208 HRS) RESULTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

ROUP ID		AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZFLAG)				OF TYPE	NETWORK GRID-ID
LL	1ST HIGHEST VALUE IS	1.06597 AT (	-79.85,	-30.48,	0.00,	0.00)	DC	
	2ND HIGHEST VALUE IS	1.01081 AT (	-104.54,	-25.30,	0.00,	0.00)	DC	
	3RD HIGHEST VALUE IS	0.84184 AT (	-117.46,	-42.75,	0.00,	0.00)	GP	POL4
	4TH HIGHEST VALUE IS	0.80517 AT (	-55.17,	-35.66,	0.00,	0.00)	DC	
	5TH HIGHEST VALUE IS	0.76173 AT (	-128.92,	-19.81,	0.00,	0.00)	DC	
	6TH HIGHEST VALUE IS	0.74298 AT (	-86.60,	-50.00,	0.00,	0.00)	GP	POL3

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR
BD = BOUNDARY

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

** Message Summary For ISC2 Model Execution ***

--------- Summary of Total Messages --------

Total of 0 Fatal Error Message(s)
Total of 0 Warning Message(s)
A Total of 571 Informational Message(s)

Total of 571 Calm Hours Identified

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********
*** NONE ***

****
*** ISCST2 Finishes Successfully ***
****

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

Florida Department of Environmental Regulation

Southwest District • 3804 Coconut Palm • Tampa, Florida 33619

Lawton Chiles, Governor 813-744-6100 Virginia B. Wetherell, Secretary

APR 2 2 1993

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.

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

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

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.

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.

GULF COAST RECYCLING, INC.

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

July 6, 1994

Aug 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 Tampa
63-469
631

029889

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

Willis M. Kitchen

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

JUL 1 8 1990

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

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:

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.

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) Sulfur Oxides*
(X) Opacity	(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.

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.

MAY 0 1 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;

(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

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.