



1-24-2002

PSD-FL-326

0570057-012-AC

January 18, 2002

Mr. Jerry Campbell
Environmental Protection
Commission of Hillsborough County
1900 - 9th Avenue
Tampa, FL 33605

Mr. John Reynolds
Florida Department of Environmental Protection
Division of Air Resource Management
Mail Station 5505
2600 Blair Stone Road
Tallahassee, FL 32399-2400

RE: Gulf Coast Recycling, Inc. PSD Permit Applications

Dear Sirs:

Please find attached air permit applications for the proposed new secondary lead furnace and refining kettles to be installed at the Gulf Coast Recycling, Inc. (GCR) facility in Tampa, Florida. Due to necessary operational and production requirements, GCR has determined that it must install an additional blast furnace, identical in size to the existing furnace. Also, two more refining kettles, in addition to the ones recently permitted, will be required to handle the proposed increase in production.

In order to satisfy environmental permitting requirements, GCR proposes to install a new afterburner to control THC and CO emissions from the combined furnaces, and operate a soda ash slurry injection system downstream of the afterburner to control sulfur dioxide (SO₂) emissions. The recently installed SO₂ continuous emission monitor will be utilized to control the slurry injection to assure compliance with SO₂ allowable limits. All baghouses used to control particulate and lead emissions have, or will have, Gore Technology or equivalent bag filters which provide the maximum achievable emissions reduction for this industry. Bag leak detectors have been installed on all existing baghouse stacks, and will be installed on the new stacks as part of the standard operating procedures to assure continued compliance.

In preparing the applications, a netting analysis (see Appendix A) was performed for all pollutants known to potentially have a significant net emissions increase due to the proposed expansion. As discussed, this analysis was performed assuming that the recently requested emission increases for the CRT permit and the new Kettle permit were part of the new increase. Based on the analysis, it was determined that all pollutants except for carbon monoxide (CO) and lead (Pb) can be maintained below the PSD significant increase increments. For these two pollutants, an air impact analysis and

URS Corporation
263 Seaboard Lane, Suite 200
Franklin, TN 37067
Tel: 615.771.2480
Fax: 615.771.2459





BACT evaluation was performed and is included as part of the application. Appendix D contains all modeling files and supporting information.

For SO₂, with the installation of the second furnace and the associated controls, GCR will be operating the source so that the annual emissions will not increase more than 39 tons per year over the previous two-year average, thus avoiding PSD. The SO₂ CEM system will also monitor flow rate so that a mass rate can be determined and an annual total can be calculated.

For CO, although there will also be times that only one furnace will be operating, a single hourly emission limit is requested since no emission monitor will be installed. The afterburner temperature will be measured continuously, as required by the MACT standard, and will be used to demonstrate on-going compliance with the proposed limit.

For VOC limit, it is requested that an annual limit of 139.9 tons per year, based on EPA Method 25A, propane equivalent, be established so that PSD increments will not be exceeded. See spreadsheet in Appendix A. The MACT requirements are concentration standards and are estimated to be less than 139.9 tons; however, due to possible variations in air flow at the respected compliance points, the higher limit is requested.

For NO_x, currently there are no permit limits for this pollutant; however, the emissions estimates have been included to demonstrate that there will not be a significant emission increase. The only available emission factors that could be found are provided in Appendix B.

We are aware of the complexity of these applications and will be happy to meet with you to discuss any questions that you may have.

Sincerely

URS Corporation

Billy R. Nichols, P. E.
Senior Department Head,
Air Services

Enclosures

cc: Mrs. Joyce Morales-Caramella

GULF COAST RECYCLING, INC.
1901 N. 66th Street
Tampa, Florida 33619
Ph: 813/626-6151 Fax: 813/622-8388

TRANSMITTAL LETTER

TO: John Reynolds, FDEP-Tallahassee

FROM: Joyce Morales-Caramella



DATE: January 22, 2002

SUBJECT: PSD Permit Application

Enclosed are three copies of Gulf Coast Recycling, Inc.'s application to construct a second blast furnace and two additional refining kettles. Two of the copies include a CD, Appendix D, which contain complete copies of the modeling files.

Three copies of the application, including two copies of the modeling CDs were delivered today to Jerry Campbell at the Environmental Protection Commission of Hillsborough County.

GULF COAST RECYCLING, INC PSD APPLICATION

JANUARY, 2002
URS PROJECT NO. 29-00000234.00

Prepared for
Gulf Coast Recycling, Inc
Tampa, Florida

The logo for URS, consisting of the letters 'URS' in a large, bold, sans-serif font. The letters are filled with a dense, stippled or textured pattern, giving them a three-dimensional appearance.

263 Seaboard Lane
Suite 200
Franklin, Tennessee 37067
(615) 771-2480

TABLE OF CONTENTS

	<u>Page No.</u>
INTRODUCTION	1
PRODUCTION PROCESS	4
APPLICABLE REGULATORY REQUIREMENTS	6
BEST AVAILABLE CONTROL TECHNOLOGY	11
MODELING RESULTS	24
ADDITIONAL IMPACT ANALYSIS	38
GEP STACK HEIGHT ANALYSIS	43

APPENDIX

APPENDIX A	Emission Calculations/Netting Analysis
APPENDIX B	NO _x Emission Factors
APPENDIX C	Permit Applications
APPENDIX D	Modeling Files

ATTACHMENTS

ATTACHMENT A	Facility Site Map
ATTACHMENT B	Facility Plot Plan
ATTACHMENT C	Process Flow Diagram
ATTACHMENT D	Fugitive Dust Plan

INTRODUCTION

New major stationary sources of air pollution and major modifications to major stationary sources are required by the Clean Air Act to obtain an air pollution permit before commencing construction. Permits for sources in attainment areas are referred to as Prevention of Significant Air Quality Deterioration (PSD) permits.

The basic goals of the PSD regulations are: (1) to ensure that economic growth will occur in harmony with the preservation of existing clean air resources; (2) to protect the public health and welfare from any adverse effect which might occur even at air pollution levels better than the National Ambient Air Quality Standards (NAAQS); and (3) to preserve, protect and enhance the air quality in areas of special natural recreational, scenic or historic value, such as national parks and wilderness areas. The primary provisions of the PSD regulations require that major new stationary sources and major modifications be carefully reviewed prior to construction to ensure compliance with the NAAQS, the applicable PSD air quality increments and the requirement to apply BACT to the emissions of air pollutants.

A "major stationary source" is any source type belonging to a list of 28 source categories which emits or has the potential to emit 100 tons per year or more of any pollutant subject to regulation under the Act, or any other source type which emits or has the potential to emit such pollutants in amounts equal to or greater than 250 tons per year.

A "major modification" is generally a physical change or a change in the method of operation of a major stationary source, which would result in a contemporaneous significant net emissions increase in the emissions of any regulated pollutant.

For PSD to apply, a proposed source or modification must qualify as major and be located in a PSD area. A PSD area is one formally designated by the state as "attainment" or "unclassifiable" for any pollutant for which a national ambient air quality standard exists. Gulf

Coast Recycling, Inc. (GCR) is located in a county which is designated as either attainment or unclassified for all the criteria pollutants.

To obtain a PSD permit the following must be met: (1) apply the Best Available Control Technology (BACT); (2) conduct an ambient air quality analysis; (3) analyze impacts to soils, vegetation and visibility; (4) not adversely impact a Class I area and (5) undergo public participation.

GCR is in one of the 28 source categories under Rule 62-212.300 of the Florida Air Pollution Control Regulations. It is in the source category secondary metal production plants and emits or has the potential to emit 100 tons or more of a regulated air pollutant. Therefore, it is a "major stationary source". The proposed modification will result in a net emissions increase of a regulated pollutant above the significant level according to Table 212.400-2 of the above regulations. The proposed modification will increase the CO emissions above the significant level of 100 tons per year and lead emissions above the significant level of 0.60 tons per year. Therefore, the proposed modification is subject to a Prevention of Significant Deterioration (PSD) review for Carbon Monoxide and Lead.

GCR is located at 1901 North 66th Street, Tampa, Florida in Hillsborough County in west central Florida. GCR is one of approximately 15 remaining secondary lead smelters in the United States. The GCR facility is located in an industrial area on approximately 9.1 acre site and employs approximately 72 people.

GCR is proposing to increase its lead recycling capacity with the construction of an additional blast furnace, identical in size to the one that is currently being operated. The existing furnace baghouse will be modified to handle approximately 50,000 acfm and will be utilized to collect emissions from both blast furnaces. In addition, GCR will be adding two additional refining kettles in the refining area in addition to those included in the applications originally

submitted on June 29, 2000 and permits dated March 22, 2001. The new construction will increase production capacity to approximately 50,000 tons of lead per year.

Additionally, as part of this project, GCR will be constructing a new afterburner with the capacity to control emissions from both furnaces. Following the afterburner, a soda ash injection system (with a new silo) will be installed to control sulfur dioxide emissions. Particulate emissions from the new soda ash silo (applications to be submitted simultaneously with this application) will be contained with a filter vent.

A dust slurry system has also been installed which allowed for the shutting down of the agglomeration furnace.

PRODUCTION PROCESS

The GCR facility recycles spent automotive and industrial lead-acid batteries to produce lead ingots. Batteries arrive at the facility by truck and are off-loaded directly to the battery process area. The batteries are broken open in a pre-crusher or shredder and most of the acid is drained. A hammer mill serves as the primary crusher followed by two screens/operating in series. Soda ash is mixed with the slurry to form lead carbonate, which is separated out in a filter process. The press cake, lead contaminated smaller plastic and rubber parts, and the mechanically separated larger pieces of lead scrap are all three sent to the material charging storage area. The M.A. 41DS Battery Recycling System is designed to reduce the sulfur content of the blast furnace feed stock and resulting sulfur dioxide emissions from the furnace.

The lead bearing materials generated from the battery breaking process are stored in piles in a partially enclosed structure. Lead bearing materials for the blast furnace charge are taken from the older piles, and a single 36" x 72" oval Blast Furnace is used for the smelting of lead bearing materials from the batteries and other scrap lead. A blast furnace charge is composed of lead bearing materials, coke, lime rock, cast iron, and return slag. Material is charged via a mechanical skip hoist with automatically opened charge doors at the top of the furnace. A slurry system has been installed to process the flue dust that is collected from the baghouse that controls the blast furnace emissions. This material is re-fed to the blast furnace.

Lead and slag are both tapped and collected at the base of the furnace. Lead is tapped to form buttons, and then are transported to the refining area by forklift. Refining lead includes soft lead, hard lead, and calcium lead. Refining is currently accomplished in four Refining Kettles all indirectly fired with natural gas. During the refining process, dross is removed, and lead is cast into ingots by a pigging machine. The drosses are returned to the blast furnace or sold. Some lead is imported and processed in the refining operation.

Slag from the bottom of the Blast Furnace is stored in an enclosed area. The slag is disposed of off site in accordance with the applicable waste management rules.

Currently particulate matter and lead emissions from the blast furnace are controlled by enclosure hoods and an approximately 29,000 ACFM baghouse fabricated by Gulf Coast Recycling (GCR) that was modeled after a Wheelabrator-Frye Dustube Model 126, Series 55 shaker baghouse. Emissions from the blast furnace charging, skiphoist and tapping areas are captured by hoods and vented to an approximately 20,000 ACFM three-compartment shaker-type baghouse, similar to the previously mentioned baghouse. Particulate matter and lead emissions from the pallet and CRT crusher will be controlled with the use of a 30,000 ACFM shaker-type baghouse. Fugitive emissions of particulate matter and lead from process and grounds are controlled through the use of water spray, reasonable precautions, and specific work practices. CO and VOC flue gas emissions from the blast furnace are controlled by the use of an afterburner.

APPLICABLE REGULATORY REQUIREMENTS

The existing facility is subject to PM and Pb RACT, along with the MACT requirements of Subpart X of the NESHAP regulations for both Pb and VOC. The Hillsborough County Environmental Protection commission (EPC) has previously determined that the monitoring and record keeping requirements of these regulations meet the requirements of periodic monitoring. The blast furnace is also subject to SO₂ and CO limits and is required to perform annual testing, operate a SO₂ continuous emission monitor (CEM), and maintain adequate record keeping. Additionally, annual opacity tests, as well as daily Method 22-like observations are being required to meet the requirements of periodic monitoring. The blast furnace is are also subject to CAM, and GCR is required to submit a CAM Plan for SO₂ and CO, since the MACT (Pb, VOC) and Pb RACT meets the requirements of CAM.

Also included in GCR's permit are miscellaneous unregulated/insignificant emissions units and/or activities.

The facility is not a major source of hazardous air pollutants (HAPs).

Summary of Existing Emissions Unit ID No(s). and Brief Description(s).

E.U. ID

<u>No.</u>	<u>Brief Description</u>
001	Blast Furnace Exhaust
004	Furnace Tapping and Charging
008	Soda Ash Silo
009	Facility Grounds and Miscellaneous Operations
011	Four Refining Kettles
012	CRT Crusher & Conveyance System
013	Exhaust Stacks from Indirect Firing of Refining Kettles

The proposed project includes the construction of a new lead blast furnace identical in size of the existing furnace and two additional refining kettles identical to the ones installed this past year. Pollutants of interest associated with the proposed modification include sulfur dioxide (SO₂), nitrogen oxide (NO_x) particulate matter less than 10 microns (PM₁₀), carbon monoxide (CO), volatile organic compounds, (VOC), and lead (Pb). Other regulated non-criteria pollutants are not of concern since the control of VOC's and lead have been determined through the MACT rule making process to be adequate surrogates for both organic and metallic HAP's.

The U.S. Environmental Protection Agency (EPA) regulations establish air quality standards and air contaminant emission limits to which all new sources must comply. These regulations affect the design and operation of the new air pollution emitting processes. This section describes the regulations and their impact on this project.

Ambient Air Quality Standards

EPA has developed National Ambient Air Quality Standards (NAAQS) for six pollutants, referred to as criteria pollutants, for the protection of public health and welfare. The criteria pollutants are sulfur dioxide (SO₂), nitrogen dioxide (NO₂), carbon monoxide (CO), particulate matter (PM₁₀), ozone (O₃), and lead (Pb). The Florida Department of Environmental Protection (FDEP) enforces the NAAQS as state air quality standards.

Primary standards protect human health with a margin of safety and secondary standards protect public welfare (e.g., avoid damage to property or vegetation). Different averaging periods are established for the criteria pollutants based on their potential environmental effects.

Attaining and maintaining compliance with the state and national ambient air quality standards is the primary goal of all air regulations evolving from the original Clean Air Act and is subsequent amendments. All areas of the nation have been classified as to their status with regard to attaining the standards. The facility is located in an area designated, in accordance with Rule

62-204-304, F.A.C., and attainment for CO. Hillsborough County is designated as an unclassified area for lead.

Non-attainment New Source Review

Because Hillsborough County is designated as “unclassified” or “attainment” with respect to the NAAQS. Hillsborough County is classified as such for all criteria pollutants.

As part of an air quality impact analysis, a facility as a new major source or major modification must demonstrate compliance with the NAAQS, and with the PSD increments for certain pollutants. The PSD regulations also require assessment of potential impacts to soils and vegetation and to growth and visibility in the area surrounding the proposed plant.

Additionally, facilities within 100 kilometers (km) of a Class I (wilderness) area must also perform an assessment of potential impacts to Class I area(s). The Class I areas closest to the Project are the Chassahowitzka NWA. This Class I area is located approximately 90 km from the facility site.

A new major source in “unclassified” or “attainment” areas that will result in net emissions increases greater than the significant emissions increase levels presented in Table A are subject to PSD review. The annual emission thresholds shown in Table A are exceeded for CO and Pb. Accordingly, the addition of a new furnace and refining equipment is subject to PSD permitting requirements for these air pollutants.

TABLE A

**PSD Significant Emissions Increase and
Proposed Plant-Wide Annual Emission Rate**

**Gulf Coast Recycling, Inc.
Tampa Florida**

<u>Pollutant</u>	<u>Significant Emissions Increase Level (T/yr)</u>	<u>Previous Two- Year Plant-wide Average Emissions (T/yr)</u>	<u>Current Allowable Emissions (T/yr)</u>	<u>Proposed Plant-wide Allowables (T/yr)</u>	<u>Annual Net Emissions Increase (T/yr)</u>	<u>BACT Applicability (Y/N)</u>
PM/PM ₁₀	15	3.6	20.3	18.4	14.8	No
Lead	0.6	0.32	2.0	2.32	2.0	Yes
SO ₂	40	670	1015	709	39	No
NO _x	40	34.3	N.A.	72.5	38.2	No
CO	100	940	1400	1752	813	Yes
VOC	40	102	116	139.9	38	No

New Source Performance Standards (NSPS)

The new furnace and refining kettles are subject to the provisions of 40 CFR Part 60 Subpart L (New Source Performance Standards for Secondary Lead Smelters). The emission standards, contained in the NSPS rule, limit PM concentrations from the furnace stack to 0.022 grains per dry standard cubic foot and visible emissions from the refining kettles to 10%.

National Emission Standards for Hazardous Air Pollutants

The proposed additions are subject to 40 CFR part 63 Subpart X Requirements for Secondary Lead Smelters. These are facility-wide standards for which the facility must be in compliance at the time of modified source start-up.

Operating Permit

The GCR facility is subject to the Federal Clean Air Act (CAA) Title V operating permit program. The FDEP regulations implementing the CAA Title V program are contained in Rule 62-213. The operating permit, issued on October 10, 2000, specifies the applicable regulatory requirements with which the Gulf Coast Recycling facility must comply and the methods used to demonstrate compliance.

BEST AVAILABLE CONTROL TECHNOLOGY

Any major stationary source or major modification subject to PSD must conduct an analysis to ensure the application of Best Available Control Technology (BACT). The requirement to conduct a BACT analysis and determination is set forth in section 165(a)(4) of the Clean Air Act, in federal regulations at 40 CFR 52.21(j), in regulations setting forth the requirements for State Implementation Plan (SIP) approval of a State PSD program at 40 CFR 51.166(j), and in the SIP's of the various States at 40 CFR Part 52, Subpart A - Subpart FFF. The BACT requirement is defined as:

“an emissions limitation (including a visible emission standard) based on the maximum degree of reduction for each pollutant subject to regulation under the Clean Air Act which would be emitted from any proposed major stationary source or major modification which the Administrator, on a case-by-case basis, taking into account energy, environmental, and economic impacts and other costs, determines is achievable for such source or modification through application of production processes or available methods, systems, and techniques, including fuel cleaning or treatment or innovative fuel combustion techniques for control of such pollutant. In no event shall application of Best Available Control Technology result in emissions of any pollutant, which would exceed the emissions allowed by any applicable standard under 40 CFR Parts 60 and 61. If the Administrator determines that technological or economic methodology to a particular emissions unit would make the imposition of an emissions standard infeasible, a design, equipment, work practice, operational standard, or combination thereof, may be prescribed instead to satisfy the requirement for the application of Best Available Control Technology. Such standard shall, to the degree possible, set forth the emissions reduction achievable by implementation of such design, equipment, work practice or operation, and shall provide for compliance by means which achieve equivalent results.”

On December 1, 1987, the EPA Assistant Administrator for Air and Radiation issued a memorandum that implemented certain program initiatives designed to improve the effectiveness

of the NSR programs within the confines of existing regulations and state implementation plans. Among these was the “top-down” method for determining Best Available Control Technology (BACT).

“The top-down process provides that all available control technologies be ranked in descending order of control effectiveness. The most stringent or “top” alternative is examined first and established as BACT unless it is determined based upon technical considerations, or energy, environmental or economic impacts that the most stringent technology is not “achievable”. If the most stringent technology is eliminated in this fashion, then the next most stringent alternative is considered, and so on.”

The BACT review for the GCR expansion is outlined in the following sections. The supporting data and calculations for the netting study to determine which pollutants are subject to BACT analysis can be found in Appendix A. Due to the anticipated timing of this application, the two year period starting November 1, 1999 through October 31, 2001 were utilized to determine production and emission parameters.

BACT Review for Carbon Monoxide

The RACT/BACT/LAER Clearinghouse (RBLC) was reviewed for carbon monoxide (CO) emission control from secondary lead furnaces. The review found that there were no previous determinations in this source category for control of CO emissions.

Thermal oxidation has been utilized throughout the industry and is MACT for the control of VOC (measured as THC) emissions from secondary lead furnaces. Although there are currently no known BACT (nor MACT) requirements for CO, thermal oxidation is also most effective in reducing CO emissions. Thermal oxidation involves the installation of a major piece of equipment and will be installed upstream of the existing furnace baghouse. Catalytic incineration is the only

other type of add-on control technology that possibly could be installed on the exhaust stream; however, for this application it would be impractical due to the fouling of the catalyst from the variety of pollutants associated with the blast furnace emissions.

In order to comply with the MACT total hydrocarbon standards, incineration temperatures in the 1400 to 1500 degree Fahrenheit range are currently being employed throughout the industry. Since this is a modification to an existing facility whereby the existing baghouse has sufficient capacity to handle the total airflow from both the existing furnace and the new furnace, the exhaust from both furnaces will be combined into one new afterburner system. Due to the existing baghouse size and materials of construction, it would be impractical to operate the afterburner significantly above these temperatures.

Therefore, since the afterburner will be required in order to comply with MACT standards regardless of the need for CO controls, there would be no incremental cost for an afterburner operated at 1450 degrees Fahrenheit.

BACT Review for Lead

The RBLC was reviewed for lead (Pb) control for the furnace. Baghouses are used exclusively in the secondary lead smelter industry to control lead and metal HAP emissions, based on review of EPA's RBLC database and EPA's research in developing the secondary lead smelter MACT standard. Therefore, baghouse control is the only add-on control option evaluated. Baghouse design, operating parameters, and filter media play an important role in particulate collection; however, neither of the above parameters have an absolute effect on lead emissions.

For baghouse controls, Gulf Coast Recycling was informed in a meeting on December 7, 1999 that emission limits for particulate matter from baghouse controls would be established based

on measured emission levels times a factor of 2 to allow for performance variability. EPA recognized the variability by making the following statement in the preamble to the final MACT rule published on June 23, 1995.

“The EPA determined, however, that a well-designed and well-operated baghouse will show variable performance over time, and that this variability cannot be predicted. The EPA also determined that a limit more stringent than 2.0 mg/dscm [0.00087 gr/dscf, lead] was not achievable on a continuous basis with this technology in the source category. For example, some sources showed higher emissions when tested by the EPA than indicated by compliance data collected before EPA testing (see docket item II-B-32). Because of variability, the best five emission tests do not represent the long-term performance of baghouses. Therefore, the lead emission limit was set at a level that was determined to be representative of the performance of well designed and well-operated baghouse control technology, considering normal variability in performance.”

Therefore, GCR will be incorporating a well designed (best filter technology available) baghouse system which will be operated in accordance with EPA's MACT standard operating procedures requirements including bag leak detectors. The proposed BACT lead limits have been determined, based on the above, as follows:

- 1) Historical test data for all tests conducted at GCR since the new baghouse technology (Gore Technology or equivalent coated bags) became available were averaged, then multiplied by 2 to determine equivalent BACT limits for particulate matter (PM).
- 2) Due to the variability of lead content in the particulate catch, which is dictated more by process conditions than control technology, the historical average lead content in the particulate catch was determined.
- 3) Lead BACT limits were then determined by multiplying the PM level by the percent lead in the catch to determine a concentration which can be used to calculate maximum emission limits.

- 4) Due to the possibility of varying flow rates from time to time due to operation level changes, the maximum design flow for each baghouse is multiplied by the lead concentration to determine the maximum hourly emission rate.

The following pages are printouts from EPA's RACT/BACT/LAER clearinghouse which indicate no record of any previous CO determinations.

RBLC ID : MO-0025
*COMPANY : DOE RUN CO.
ADDRESS : HWY KK
CITY : BOSS
COUNTY : IRON
STATE : MO
ZIP CODE : 65440-
EPA REGION : 7
AGENCY CODE : MO001
AGENCY NAME : MISSOURI DNR, AIR POLL CONTROL PROGRAM
CONTACT : MICHAEL J. STANSFIELD
PHONE : (573) 751-4817
EMAIL :
*PERMIT/FILE # : 0989-003
*SIC : 3339
AIRS ID : 093-0009
FUEL :
ABATEMENT :
UTM ZONE :
X COORDINATE :
Y COORDINATE :
APPLICATION RECEIVED DATE : 10/19/1988 ACT
PERMIT ISSUANCE DATE : 09/12/1989 ACT
START UP DATE :
COMPLIANCE VALIDATION DATE: 04/09/1992 ACT
ENTRY DATE : 10/06/1997
LAST UPDATE : 10/06/1997

NOTES

THE MODIFICATION AT THE BUICK SMELTER WILL RESULT IN A NET DECREASE IN THE EMISSIONS OF LEAD, DE MINIMIS NET INCREASE IN THE EMISSIONS OF PARTICULATE MATTER, NOX, CO, VOC, & A MAJOR INCREASE IN THE EMISSIONS OF SO2. THE SO2 INCREASE WILL BE SUFFICIENT TO TRIGGER A PSD REVIEW.

Report Date: 03/21/2000 CONTROL TECHNOLOGY DETERMINATIONS (FREEFORM)

* PROCESS : SECONDARY LEAD OPERATION (BLAST FURNACE)
* PROCESS TYPE : 82.013
* SCC CODE : 3-04-004-03
PRIMARY FUEL : PROPANE GAS
THROUGHPUT : 60000
THROUGHPUT UNIT : SHORT TONS/YR.
COMPLIANCE VERIFIED : No
STACK TESTING : No
INSPECTIONS : No
CALCULATIONS : No
OTHER TESTING : No
OTHER TESTING METHOD : 6/27/96 STACK TEST
PROCESS/COMPLIANCE NOTES:

CONTROL DEVICES ARE TO BE ABLE TO REMOVE 98.4% OF PARTICULATE MATTER, & 99.2% OF THE FUGITIVE EMISSIONS. THE SECONDARY FEED SHALL BE LIMITED TO 400 TONS PER DAY.

* POLLUTANT : PM10
* CAS NUMBER : PM
* CONTROL METHOD CODE : A
* CONTROL METHOD DESCRIPTION :
SCRUBBER
NUMBER OF OPTIONS CONSIDERED : 1
RANK OF OPTION SELECTED : 1
PRIMARY EMISSIONS : 24.4
PRIMARY EMISSIONS UNIT : TPY
* BASIS : BACT-PSD
* PERCENT EFFICIENCY : 90
ALTERNATE EMISSION : 0
ALTERNATE EMISSION UNIT :
STANDARD EMISSION : 0
STANDARD EMISSION UNIT :
* EMISSION TYPE : P
CAP COST OF CONTROL EQUIPMENT :
ANNUALIZED COST :
COST EFFECTIVENESS :
COST VERIFIED BY AGENCY : No
DOLLAR YEAR USED IN COST ESTIMATES :

* POLLUTANT : PB
* CAS NUMBER : 7439-92-1
* CONTROL METHOD CODE : A
* CONTROL METHOD DESCRIPTION :
SCRUBBER
NUMBER OF OPTIONS CONSIDERED : 1
RANK OF OPTION SELECTED : 1
PRIMARY EMISSIONS : 8.3
PRIMARY EMISSIONS UNIT : TPY
* BASIS : BACT-PSD
* PERCENT EFFICIENCY : 90
ALTERNATE EMISSION : 0

ALTERNATE EMISSION UNIT :
 STANDARD EMISSION : 0
 STANDARD EMISSION UNIT :
 * EMISSION TYPE : P
 CAP COST OF CONTROL EQUIPMENT :
 ANNUALIZED COST :
 COST EFFECTIVENESS :
 COST VERIFIED BY AGENCY : No
 DOLLAR YEAR USED IN COST ESTIMATES :

* PROCESS : SECONDARY LEAD OPERATION (REVERBERATORY FURNACE)
 * PROCESS TYPE : 82.013
 * SCC CODE : 3-04-004-02
 PRIMARY FUEL : PROPANE
 THROUGHPUT : 46200
 THROUGHPUT UNIT : TON OF PB BULLION/YR
 COMPLIANCE VERIFIED : No
 STACK TESTING : No
 INSPECTIONS : No
 CALCULATIONS : No
 OTHER TESTING : No
 OTHER TESTING METHOD : 6/27/96 STACK TEST
 PROCESS/COMPLIANCE NOTES:

CONTROL DEVICES SHALL CAPTURE 99.2% OF DIRECT AND FUGITIVE PARTICULATE EMISSIONS.

* POLLUTANT : SO2
 * CAS NUMBER : 7446-09-5
 * CONTROL METHOD CODE : A
 * CONTROL METHOD DESCRIPTION :
 ACID PLANT & BAGHOUSE
 NUMBER OF OPTIONS CONSIDERED : 1
 RANK OF OPTION SELECTED : 1
 PRIMARY EMISSIONS : 830
 PRIMARY EMISSIONS UNIT : TPY
 * BASIS : BACT-PSD
 * PERCENT EFFICIENCY : 99
 ALTERNATE EMISSION : 0
 ALTERNATE EMISSION UNIT :
 STANDARD EMISSION : 0
 STANDARD EMISSION UNIT :
 * EMISSION TYPE : P
 CAP COST OF CONTROL EQUIPMENT :
 ANNUALIZED COST :
 COST EFFECTIVENESS :
 COST VERIFIED BY AGENCY : No
 DOLLAR YEAR USED IN COST ESTIMATES :

* POLLUTANT : PB
 * CAS NUMBER : 7439-92-1
 * CONTROL METHOD CODE : A

* CONTROL METHOD DESCRIPTION :
 BAGHOUSE
 NUMBER OF OPTIONS CONSIDERED : 1
 RANK OF OPTION SELECTED : 1
 PRIMARY EMISSIONS : 12.6
 PRIMARY EMISSIONS UNIT : TPY
 * BASIS : BACT-PSD
 * PERCENT EFFICIENCY : 99
 ALTERNATE EMISSION : 0
 ALTERNATE EMISSION UNIT :
 STANDARD EMISSION : 0
 STANDARD EMISSION UNIT :
 * EMISSION TYPE : P
 CAP COST OF CONTROL EQUIPMENT :
 ANNUALIZED COST :
 COST EFFECTIVENESS :
 COST VERIFIED BY AGENCY : No
 DOLLAR YEAR USED IN COST ESTIMATES :

* POLLUTANT : PM10
 * CAS NUMBER : PM
 * CONTROL METHOD CODE : A
 * CONTROL METHOD DESCRIPTION :
 BAGHOUSE
 NUMBER OF OPTIONS CONSIDERED : 1
 RANK OF OPTION SELECTED : 1
 PRIMARY EMISSIONS : 60.6
 PRIMARY EMISSIONS UNIT : TPY
 * BASIS : BACT-PSD
 * PERCENT EFFICIENCY : 99
 ALTERNATE EMISSION : 0
 ALTERNATE EMISSION UNIT :
 STANDARD EMISSION : 0
 STANDARD EMISSION UNIT :
 * EMISSION TYPE : P
 CAP COST OF CONTROL EQUIPMENT :
 ANNUALIZED COST :
 COST EFFECTIVENESS :
 COST VERIFIED BY AGENCY : No
 DOLLAR YEAR USED IN COST ESTIMATES :

* PROCESS : LEAD SMELTING FURNACE
 * PROCESS TYPE : 82.013
 * SCC CODE : 3-04-004
 PRIMARY FUEL : PROPANE
 THROUGHPUT : 42150
 THROUGHPUT UNIT : TON OF PB BULLION/YR
 COMPLIANCE VERIFIED : No
 STACK TESTING : No
 INSPECTIONS : No
 CALCULATIONS : No
 OTHER TESTING : No
 OTHER TESTING METHOD : 6/27/96 STACK TEST

PROCESS/COMPLIANCE NOTES:
CONTROL DEVICES SHALL CAPTURE AT LEAST 99.2% OF DIRECT AND FUGITIVE EMISSIONS.

* POLLUTANT : PM10
* CAS NUMBER : PM
* CONTROL METHOD CODE : A
* CONTROL METHOD DESCRIPTION :
SCRUBBER
NUMBER OF OPTIONS CONSIDERED : 1
RANK OF OPTION SELECTED : 1
PRIMARY EMISSIONS : 24.4
PRIMARY EMISSIONS UNIT : TPY
* BASIS : BACT-PSD
* PERCENT EFFICIENCY : 90
ALTERNATE EMISSION : 0
ALTERNATE EMISSION UNIT :
STANDARD EMISSION : 0
STANDARD EMISSION UNIT :
* EMISSION TYPE : P
CAP COST OF CONTROL EQUIPMENT :
ANNUALIZED COST :
COST EFFECTIVENESS :
COST VERIFIED BY AGENCY : No
DOLLAR YEAR USED IN COST ESTIMATES :

* POLLUTANT : PB
* CAS NUMBER : 7439-92-1
* CONTROL METHOD CODE : A
* CONTROL METHOD DESCRIPTION :
SCRUBBER
NUMBER OF OPTIONS CONSIDERED : 1
RANK OF OPTION SELECTED : 1
PRIMARY EMISSIONS : 8.3
PRIMARY EMISSIONS UNIT : TPY
* BASIS : BACT-PSD
* PERCENT EFFICIENCY : 90
ALTERNATE EMISSION : 0
ALTERNATE EMISSION UNIT :
STANDARD EMISSION : 0
STANDARD EMISSION UNIT :
* EMISSION TYPE : P
CAP COST OF CONTROL EQUIPMENT :
ANNUALIZED COST :
COST EFFECTIVENESS :
COST VERIFIED BY AGENCY : No
DOLLAR YEAR USED IN COST ESTIMATES :

RBLC ID : AL-0049
*COMPANY : INTERSTATE LEAD COMPANY, INC.
ADDRESS :
CITY : LEEDS
COUNTY :
STATE : AL
ZIP CODE :
EPA REGION : 4
AGENCY CODE : AL003
AGENCY NAME : JEFFERSON COUNTY DEPT OF HEALTH, AL
CONTACT : ROBERT H. BARRETT
PHONE : (205)-930-1280
EMAIL :
*PERMIT/FILE # : 4-07-0170-9101, 9102
*SIC :
AIRS ID : 0170
FUEL :
ABATEMENT :
UTM ZONE :
X COORDINATE :
Y COORDINATE :
APPLICATION RECEIVED DATE :
PERMIT ISSUANCE DATE : 04/09/1991 ACT
START UP DATE : 06/11/1991 EST
COMPLIANCE VALIDATION DATE:
ENTRY DATE : 05/31/1991
LAST UPDATE : 05/28/1991

NOTES

UNCONTROLLED SO2 EMISSIONS ARE APPROXIMATELY 930 LB/H. SCRUBBER EXHAUST STACK WILL BE 65 METERS TALL TO ENSURE NO EXCEEDENCES OF THE NAAQS PER MODELING RESULTS. EXCEPT FOR BATTERY BREAKING, THE BUILDING ENCLOSES ALL OPERATIONS INCLUDING STORAGE AND TRANSPORT OF ALL LEAD-CONTAINING RAW MATERIALS.

* PROCESS : FURNACE, BLAST 1, REVERB 1
* PROCESS TYPE : 82.013
* SCC CODE :
PRIMARY FUEL :
THROUGHPUT : 73
THROUGHPUT UNIT : MT/YR
COMPLIANCE VERIFIED : No
STACK TESTING : No
INSPECTIONS : No
CALCULATIONS : No
OTHER TESTING : No
OTHER TESTING METHOD :
PROCESS/COMPLIANCE NOTES:

* POLLUTANT : SO2
* CAS NUMBER : 7446-09-5
* CONTROL METHOD CODE : A
* CONTROL METHOD DESCRIPTION :
WET SCRUBBER USING NH3 AS SCRUBBING MEDIUM TRAY COLUMN
NUMBER OF OPTIONS CONSIDERED : 0
RANK OF OPTION SELECTED : 0
PRIMARY EMISSIONS : 132
PRIMARY EMISSIONS UNIT : LB/H
* BASIS : RACT
* PERCENT EFFICIENCY : 94.2
ALTERNATE EMISSION : 0
ALTERNATE EMISSION UNIT :
STANDARD EMISSION : 0
STANDARD EMISSION UNIT :
* EMISSION TYPE :
CAP COST OF CONTROL EQUIPMENT :
ANNUALIZED COST :
COST EFFECTIVENESS :
COST VERIFIED BY AGENCY : No
DOLLAR YEAR USED IN COST ESTIMATES :

* PROCESS : FURNACE, BLAST, REVERB, REFINING
* PROCESS TYPE : 82.013
* SCC CODE :
PRIMARY FUEL :
THROUGHPUT : 73
THROUGHPUT UNIT : MT/YR
COMPLIANCE VERIFIED : No
STACK TESTING : No
INSPECTIONS : No
CALCULATIONS : No
OTHER TESTING : No
OTHER TESTING METHOD :
PROCESS/COMPLIANCE NOTES:

*	POLLUTANT	:	PB
*	CAS NUMBER	:	7439-92-1
*	CONTROL METHOD CODE	:	A
*	CONTROL METHOD DESCRIPTION	:	
	FABRIC FILTER, BUILDING ENCLOSURE		
	NUMBER OF OPTIONS CONSIDERED	:	0
	RANK OF OPTION SELECTED	:	0
	PRIMARY EMISSIONS	:	1
	PRIMARY EMISSIONS UNIT	:	EE-4 GR/DSCF
*	BASIS	:	RACT
*	PERCENT EFFICIENCY	:	98.7
	ALTERNATE EMISSION	:	0
	ALTERNATE EMISSION UNIT	:	
	STANDARD EMISSION	:	0
	STANDARD EMISSION UNIT	:	
*	EMISSION TYPE	:	
	CAP COST OF CONTROL EQUIPMENT	:	
	ANNUALIZED COST	:	
	COST EFFECTIVENESS	:	
	COST VERIFIED BY AGENCY	:	No
	DOLLAR YEAR USED IN COST ESTIMATES	:	

MODELING RESULTS

Introduction

A National Ambient Air Quality Standards (NAAQS) analysis was performed in response to the proposed changes in Carbon Monoxide (CO) and Lead (Pb) emissions from the Gulf Coast Recycling facility in Tampa, Florida. There are no PSD air quality increments established for CO or Pb.

The Florida Department of Environmental Protection (FDEP) completed an "Air Quality Modeling Analysis (Revised) for Lead in Hillsborough County" in May 2000. To maintain consistency with the FDEP analysis GCR used the FDEP model receptor grid, building downwash parameters, and meteorological data for this analysis.

Meteorological Data

The meteorological data used was five years of data (1987-1991) for Tampa provided by the FDEP and used in the FDEP May 2000 modeling demonstration for lead. The FDEP provided the pre-processed data for both the ISCST and ISCLT models.

Model Selection

The most recent versions of the ISC3 atmospheric dispersion model were used to determine compliance. Version 00101 of the ISCST3 model was used to model CO, and version 96113 of the ISCLT3 model was used to model Pb. Version 95086 of the BPIP Processor was used to calculate direction-dependent building parameters for both ISC3 models.

Model Receptor Grid

The receptor grid was provided by FDEP from the SIP modeling performed in March 2000 for the pollutant lead. The receptor grid included the GCR property line, and receptors spaced at intervals between 25 and 500 meters apart. The spacing between receptors increased as distance from the GCR facility increased. The maximum modeled impacts were determined to the nearest 25 meters for all model averaging periods.

Urban/Rural Classification

The land-use within three kilometers of the facility was determined to be rural by the FDEP for the SIP modeling in March 2000.

Background Concentration

The FDEP determined the background Pb concentration in Hillsborough County was 0.00 $\mu\text{g}/\text{m}^3$ in May 2000. This value was determined using monitoring data collected around the GCR facility. The FDEP value will be used in this analysis.

Modeling Analysis for Lead

The May 2000 modeling conducted by FDEP included all off-site sources of Pb. Rather than perform a preliminary analysis of the net change in GCR emissions to determine the significant distance for Pb and then select which off-site sources to include, all off-site sources and all GCR sources were modeled to assess compliance with the NAAQS. Figure 1 shows the location of the off-site sources and the preliminary modeling receptor grid.

Table 1 lists the GCR facility model input parameters for Pb and CO. There have been several changes or proposed changes at the facility since the FDEP modeling analysis. The major changes include relocating the refining stack, raising the height of the refining stack to 60

feet above grade, and adding a new tapping/charging stack. In addition, emissions from the kettle flues and fugitive emissions from the refining building and parking lot were included in the modeling analysis. The GCR facility no longer operates the slag processing operation, and this source was removed from the modeling analysis. Figure 2 contains the GCR facility plot plan.

There have been a couple of minor changes in the proposed applications than were planned at the time the modeling analysis was performed. First of all, the proposed emission limit for the lead sources has decreased slightly for the lead emitting sources; however, since this was a decrease, the results are bias slightly high and thus not remodeled. Secondly, a decision has been made to exhaust the indirect combustion flue gases from the refining kettles from six individual stacks instead of the two as indicated in the modeling. The CO from these stacks is insignificant in comparison to that being emitted from the furnace stack; therefore again a decision was made not to redo the modeling.

There were no changes made to the FDEP off-site sources of lead (City of Tampa Resource Recovery, Hillsborough County Resource Recovery, Gulf Coast Metals, and Johnson Controls) or to the GCR fugitive sources of lead previously modeled by FDEP (roadways and blast building).

Table 2 contains a summary of the impacts all sources using the preliminary receptor grid provided by FDEP. The maximum impacts occur along the southern GCR property line, at the same locations as the May 2000 FDEP modeling analysis (see Figure 3). Table 3 contains a summary of the impacts using the FDEP refined receptor grid. The maximum impact from the refined grid is also along the southern GCR property boundary. All modeled concentrations are well below the NAAQS.

Modeling Analysis for Carbon Monoxide

The modeling analysis for carbon monoxide was based on the future permitted allowable emissions from the GCR facility. The same preliminary modeling grid used for the Pb runs was used for CO. The results of the preliminary modeling are presented in Table 4, and showed the maximum impacts occurred between approximately 500 and 1,000 meters downwind of the facility. The direction of maximum concentration varied by averaging period and year of meteorology.

The maximum predicted total CO impacts for the facility were less than the PSD significant impact levels. This indicates the effect of the entire facility on air quality is insignificant for CO, and no further modeling for CO is required. The maximum 8-hour CO impact is also below the monitoring exemption level, and no pre-construction monitoring for CO is required.

The modeling grid for CO was refined to determine the maximum concentration for each averaging period and year of meteorology by placing receptors spaced at 25-meter intervals around the receptor of highest concentration. The additional refined receptor grid was extended up to 100-meters in each direction from the highest receptor for each averaging period and year of meteorology. The refined receptor grid modeling results are presented in Table 5, and also indicate maximum impacts are below the PSD significant impact levels and pre-construction monitoring exemption levels.

Since the modeling was conducted, GCR changed the design of the kettle flue exhaust from two stacks to four. Due to the small contribution of the total CO emitted for these stacks, this modification would expect to have insignificant impact on the modeling results.

Table 1

Gulf Coast Recycling Emission Rates and Stack Parameters (English Units)

Model Source	Model Number	Raincap	Pb lb/hr	CO Lb/hr	Height ft	Diameter Ft	Temperature °F	Flow Rate acfm
Blast Furnace	GCR19	no	0.29	400	150	3	200	50,000
Refining	GCR12	no	0.048	N/A	60.5	3	98	30,000
Existing Sanitary Tapping/Charging	GCR68	no	0.11	N/A	60.5	2.5	118	20,000
New Sanitary Tapping/Charging	GCRNS	no	0.17	N/A	60.5	3	118	30,000
Kettle Flue West	GCRKFW	no	N/A	0.32	40	1.5	500	15,000
Kettle Flue East	GCRKFE	no	N/A	0.64	40	2	500	8,000
Model Source	Model Number		Pb lb/hr	CO Lb/hr	Height ft	Length (E-W) Ft	Width (N-S) ft	Angle deg.
West Road	ROAD_W		9.08E-04	N/A	3.28	23.0	147.60	-19
Central Road Section 1	ROAD_C1		1.45E-03	N/A	3.28	216.5	26.24	N/A
Central Road Section 2	ROAD_C2		1.44E-03	N/A	3.28	203.4	26.24	N/A
East Road Section 1	ROAD_E1		3.10E-05	N/A	3.28	23.0	137.80	N/A
East Road Section 2	ROAD_E2		3.09E-05	N/A	3.28	23.0	131.20	N/A
East Side Blast Building	BLAST_E		5.71E-04	N/A	6.56	13.12	62.32	-19
South Side Blast Building	BLAST_S		5.71E-04	N/A	6.56	65.6	13.12	-19
West of West Side Blast Building	BLAST_WW		5.71E-04	N/A	6.56	23.0	13.12	-19
South of West Side of Blast Building	BLAST_WS		5.70E-04	N/A	6.56	13.12	13.12	-19
Parking Lot	PARKING		1.11E-5	N/A	3.28	40.02	20.0	N/A
Model Source	Model Number		Pb lb/hr	CO Lb/hr	Release ht ft	Length (E-W) Ft	Height ft	
Casting/Refining Operations	CROPER		3.71E-04	N/A	7.0	14.0	14.0	

Table 1

Gulf Coast Recycling Emission Rates and Stack Parameters (metric units)

Model Source	Model Number	Raincap	Pb g/s	CO g/s	Height m	Diameter m	Temperature K	Flow Rate m/s
Blast Furnace	GCR19	no	0.0365	50.4	45.72	0.91	366	35.93
Refining	GCR12	no	0.00605	N/A	18.44	0.91	310	21.56
Existing Sanitary Tapping/Charging	GCR68	no	0.0139	N/A	18.44	0.76	321	20.70
New Sanitary Tapping/Charging	GCRNS	no	0.0214	N/A	18.44	0.91	321	21.56
Kettle Flue West	GCRKFW	no	N/A	0.0403	12.19	0.46	533	43.12
Kettle Flue East	GCRKFE	no	N/A	0.0806	12.19	0.61	533	12.94
Model Source	Model Number		Pb G/s/m2	CO g/s/m2	Height m	Length (E-W) m	Width (N-S) m	Angle deg.
West Road	ROAD_W		3.63E-07	N/A	1.0	7.0	45.0	-19
Central Road Section 1	ROAD_C1		3.45E-07	N/A	1.0	66.0	8.0	N/A
Central Road Section 2	ROAD_C2		3.67E-07	N/A	1.0	62.0	8.0	N/A
East Road Section 1	ROAD_E1		1.33E-08	N/A	1.0	7.0	42.0	N/A
East Road Section 2	ROAD_E2		1.39E-08	N/A	1.0	7.0	40.0	N/A
East Side Blast Building	BLAST_E		9.46E-07	N/A	2.0	4.0	19.0	-19
South Side Blast Building	BLAST_S		9.00E-07	N/A	2.0	20.0	4.0	-19
West of West Side Blast Building	BLAST_WW		2.57E-06	N/A	2.0	7.0	4.0	-19
South of West Side of Blast Building	BLAST_WS		4.49E-06	N/A	2.0	4.0	4.0	-19
Parking Lot	PARKING		1.13E-09	N/A	1.0	12.2	6.1	N/A
Model Source	Model Number		Pb g/s	CO g/s	Release Ht m	Sigma Y m	Sigma Z m	
Casting/Refining Operations	CROPER		4.67E-05	N/A	2.1	1.0	2.0	

Table 2

Estimated Maximum Impacts from all Lead Emitting Sources of Preliminary Modeling

Year	Maximum Quarterly Average (ug/m3) and Location of Occurrence			
	1st	2 nd	3 rd	4th
87	0.17 (68.8, 25.8)	0.25 (-129.10, -22.10)	0.25 (-129.10, 1.30)	0.26 (-106.20, -74.50)
88	0.20 (-129.10, 1.30)	0.24 (68.8, 25.8)	0.20 (-83.2, -80.30)	0.30 (-14.4, -97.5)
89	0.21 (8.60, -103.20)	0.22 (68.80, 25.80)	0.23 (-14.40, -97.50)	0.32 (8.60, -103.20)
90	0.18 (-129.10, -45.40)	0.24 (-129.10, -22.10)	0.27 (-129.10, -22.10)	0.29 (-129.10, -45.40)
91	0.17 (-129.10, -22.10)	0.26 (-129.10, -22.10)	0.24 (68.80, 25.80)	0.27 (-60.30, -86.00)
Maximum	0.21	0.26	0.27	0.32
Background	0.00	0.00	0.00	0.00
Total	0.21	0.26	0.27	0.32
Standard	1.5	1.5	1.5	1.5
Compliance	Yes	Yes	Yes	Yes

Table 3

Estimated Maximum Impacts from all Lead Emitting Sources of Refined Modeling

Year	Maximum Quarterly Average (ug/m3) and Location of Occurrence			
	1st	2nd	3 rd	4th
87	0.17 (68.8, 25.8)	0.25 (-129.10, -14.3)	0.25 (-129.10, 3.90)	0.26 (-111.90, -73.10)
88	0.20 (-129.10, 3.90)	0.24 (68.8, 25.80)	0.20 (-77.50, -81.70)	0.31 (-8.60, -98.90)
89	0.21 (8.60, -103.20)	0.22 (68.80, 25.80)	0.23 (-8.60, -98.90)	0.32 (8.60, -103.20)
90	0.18 (-129.10, -32.50)	0.23 (-129.10, -32.50)	0.26 (-129.10, -14.30)	0.29 (-129.10, -32.50)
91	0.17 (-129.10, -32.50)	0.26 (-129.10, -14.30)	0.24 (68.80, 25.80)	0.27 (-60.20, -86.00)
Maximum	0.21	0.26	0.26	0.32
Background	0.00	0.00	0.00	0.00
Total	0.21	0.26	0.26	0.32
Standard	1.5	1.5	1.5	1.5
Compliance	Yes	Yes	Yes	Yes

Table 4

Estimated Maximum Impacts from all CO Emitting Sources of Preliminary Modeling

Year	First and Second Maximum Average (ug/m3) And Location of Receptor		
		1 hr	8 hr
87	1st high	372.64 (0.00, -500)	154.25 (200, 500)
	2nd high	363.89 (100, 400)	142.07 (-600, 0.00)
88	1st high	431.03 (-1000, -1000)	152.78 (-400, 500)
	2nd high	358.36 (0, -600)	143.56 (-300, 400)
89	1st high	480.32 (200, 1000)	208.17 (200, 600)
	2nd high	370.40 (400, 300)	156.48 (0, 600)
90	1st high	476.79 (1200, -800)	192.08 (-500, -200)
	2nd high	366.81 (500, 0)	159.34 (-600, 300)
91	1st high	449.68 (200, 1200)	176.20 (-500, -300)
	2nd high	360.60 (-300, 200)	145.95 (-600, -400)
Maximum	1st high	480.32	208.17
	2nd high	370.40	159.34
Significant Impact Level		2000	500
Is Additional Modeling Required		No	No
Monitoring Exemption Level		N/A	575
Is Monitoring Required		N/A	No

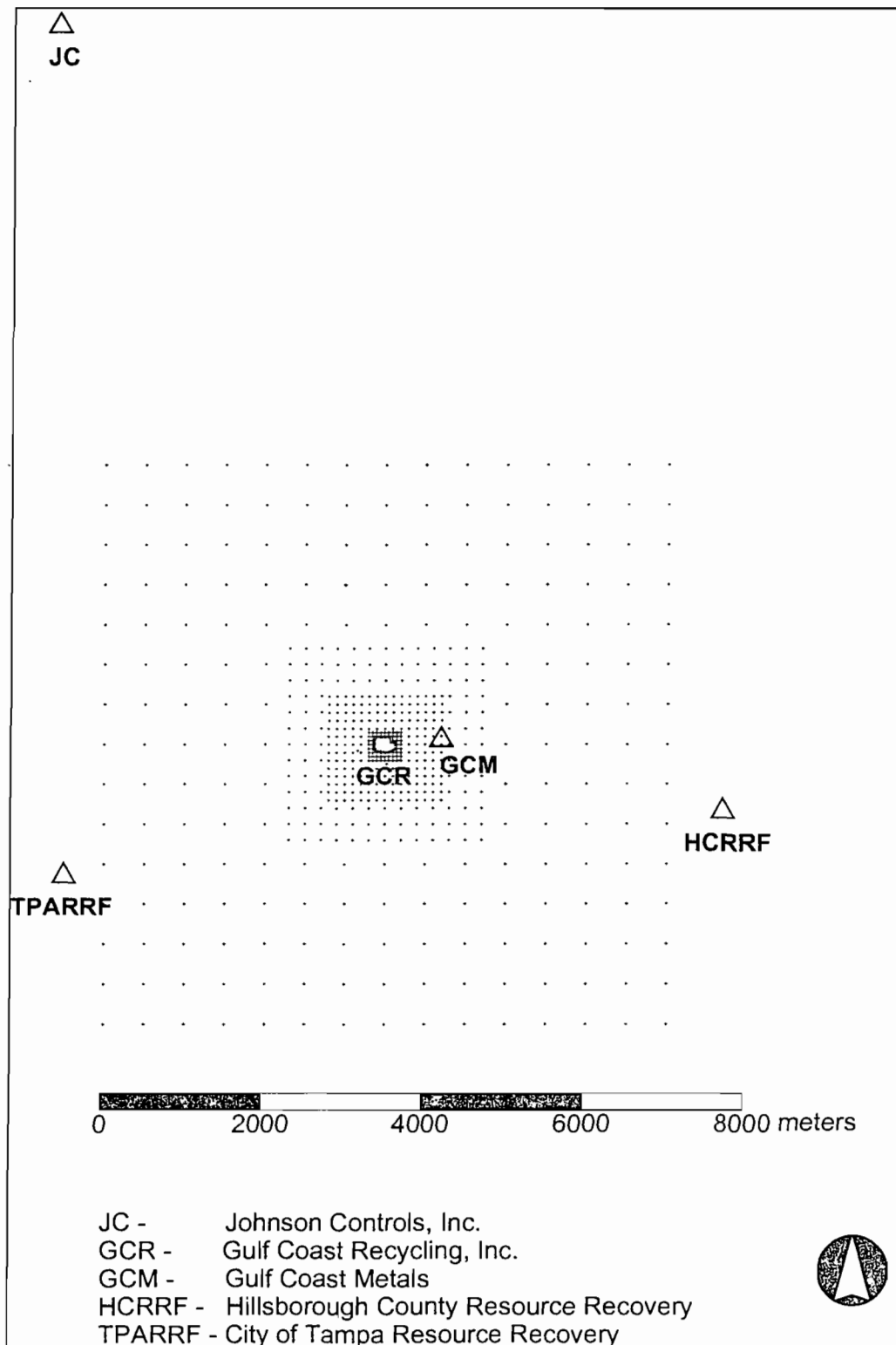
Table 5

Estimated Maximum Impacts from all CO Emitting Sources of Refined Modeling

Year	First and Second Maximum Average (ug/m3) and Location of Receptor		
		1 hr	8 hr
87	1st high	383.59 (125, 400)	157.58 (225, 525)
	2nd high	367.32 (100, 425)	145.57 (-575, -25)
88	1st high	437.85 (-975, 950)	155.35 (-350, 475)
	2nd high	369.93 (25, -550)	148.84 (-375, 525)
89	1st high	502.08 (150, 925)	211.11 (200, 550)
	2nd high	373.09 (375, 275)	175.46 (50, 700)
90	1st high	513.5 (1000, -700)	194.2 (-500, -225)
	2nd high	380.44 (-450, -150)	165.22 (-600, -250)
91	1st high	468.47 (150, 1050)	176.97 (-525, -300)
	2nd high	371.13 (-325, 200)	152.25 (-650, -425)
Maximum	1st high	513.5	211.11
	2nd high	380.44	175.46
Significant Impact Level		2000	500
Is Additional Modeling Required		No	No
Monitoring Exemption Level		N/A	575
Is Monitoring Required		N/A	No

Figure 1

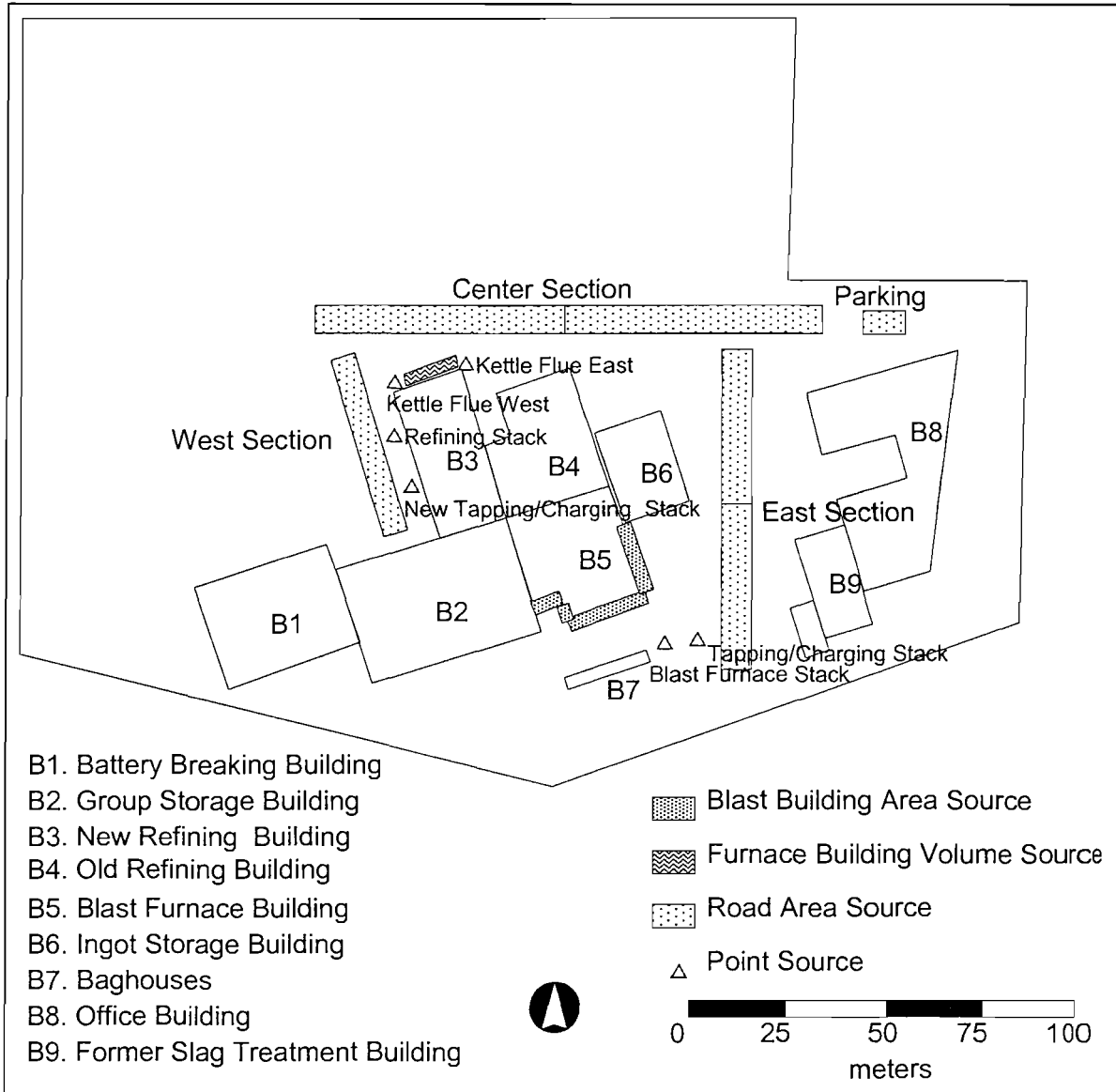
Preliminary Modeling Grid and Source Locations



Note: From FLDEP May 2000 report.

Figure 2

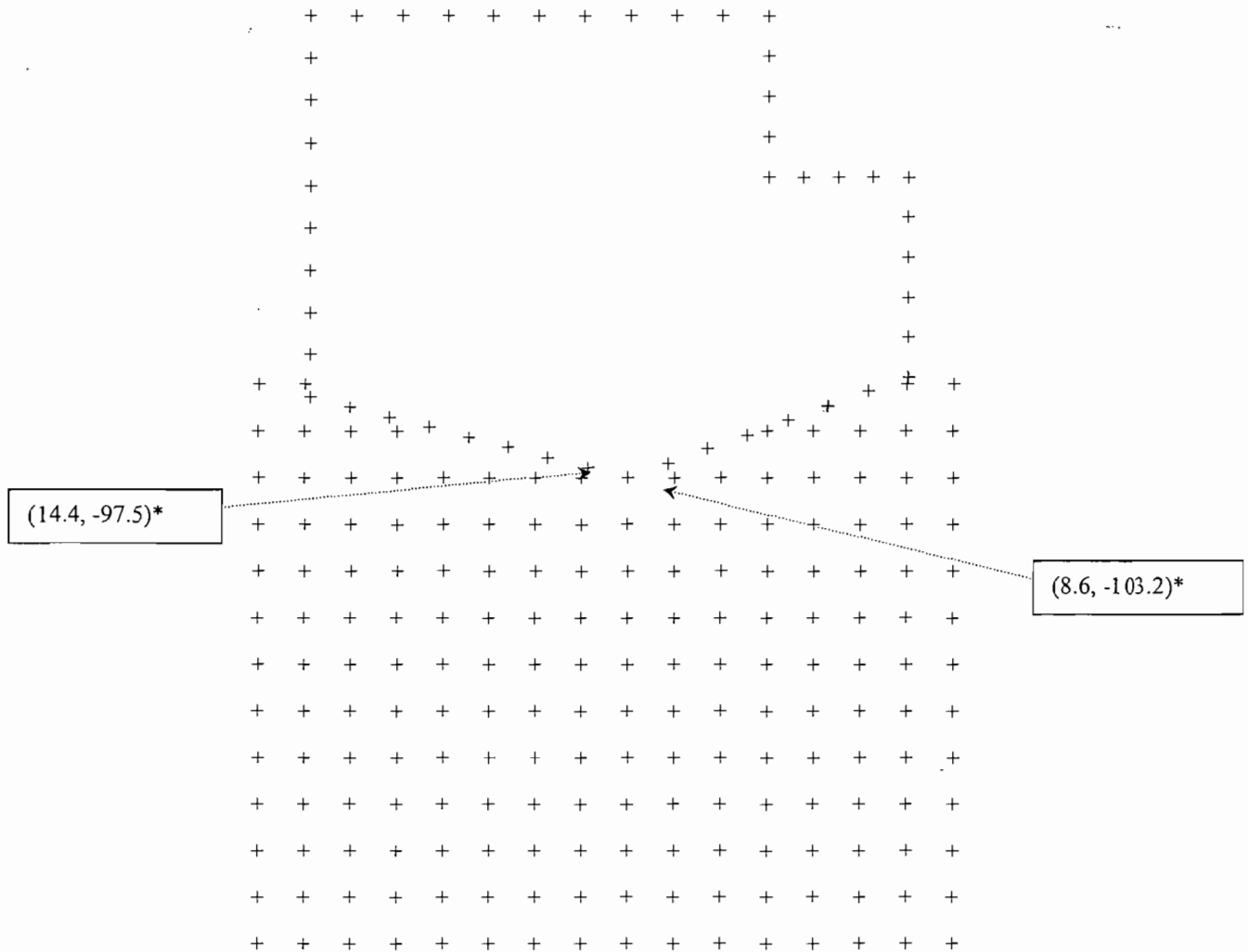
Gulf Coast Recycling Facility Plot Plan



Note: Base figure from FLDEP May 2000 report. Modifications to source locations October 2000.

Figure 3

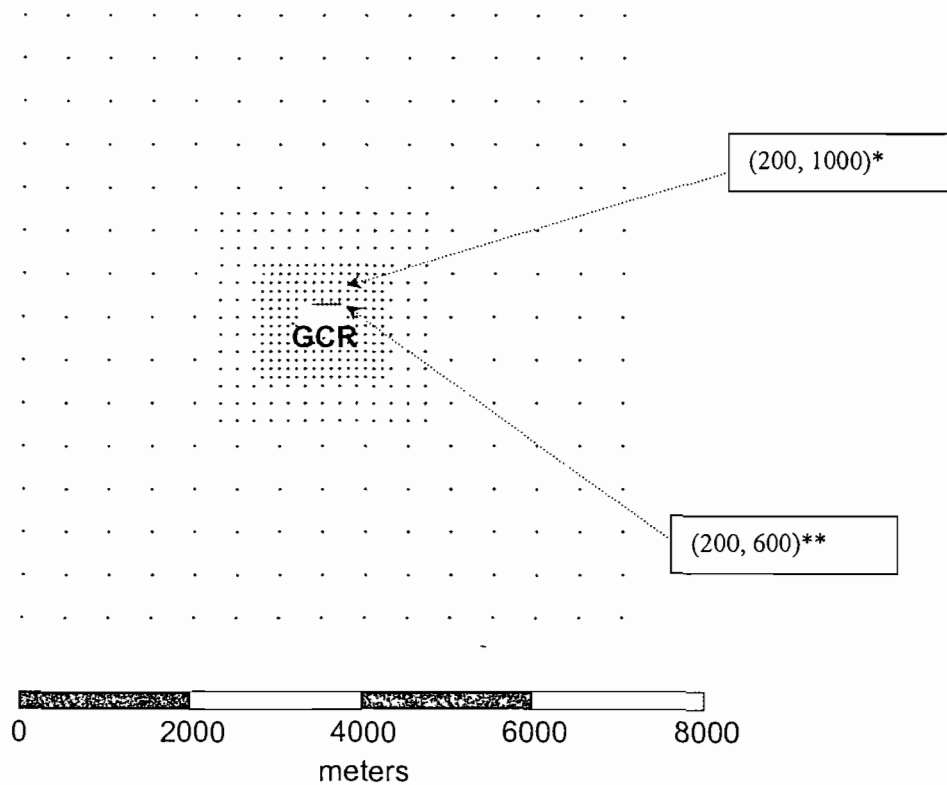
Receptor Location of Maximum Lead Impacts
Preliminary Model Run



* These are X's and Y's coordinates of the two receptors at which the largest two estimated concentrations in the preliminary modeling were recorded. See Table 2 for the summary of the preliminary modeling results.

Note: From FLDEP May 2000 report.

Figure 4
Receptor Location of Maximum CO Impacts
Preliminary Model Run



GCR - Gulf Coast Recycling, Inc.

* 1-hr Maximum Impact

** 8-hr maximum impact



Note: Base figure from FLDEP May 2000 report.

ADDITIONAL IMPACT ANALYSIS

All PSD permit applications must have additional impact analyses for each pollutant subject to regulation under the Act, which will be emitted by the proposed new source or modification. This analysis assesses the impacts of air, ground and water pollution on soils, vegetation and visibility caused by any increase in emissions of any regulated pollutant from the source or modification under review, and from associated growth.

Although an additional impact analysis must be performed for a PSD permit application, the depth of the analysis generally will depend on existing air quality, the quantity of emissions, and the sensitivity of local soils, vegetation and visibility in the source's impact area.

Growth Analysis

The planned expansion of the GCR plant will require the addition of approximately 25 new employees. GCR anticipates that it will be able to fill these positions from within the surrounding communities. No additional housing or community infrastructure is required to accommodate either the plant expansion or its new employees.

There will not be any new residential growth associated with the proposed modification. Therefore, there will not be any resultant emissions (including secondary emissions) from any new growth due to the proposed modification at GCR.

Soils and Vegetation Analysis

Area Topography

The proposed GCR expansion is in Tampa, Florida. Tampa, the county seat, is located in the northeastern part of Hillsborough County. Hillsborough County is located in the west central part of Florida.

The primary vegetation in the vicinity of the GCR facility is cabbage palm, live oak, laurel oak, red maple and long leaf pine. The area can be described as urban and light industrial.

According to the soil survey of Hillsborough County, soils in the vicinity of the GCR facility include Smyrna and Myakka. These soils are characterized as poorly drained soils found on broad flatwoods with a dark gray sand surface layer about 4-5 inches thick and sandy subsoil. They have a high water table within 10 inches of the surface for about 5 months in most years. Natural vegetation consists of South Florida slash pine and saw palmetto.

As described in the Modeling Results section, the maximum predicted CO is below the PSD significant impact level. Therefore, since these regulations were designed to protect the public welfare, including effects on soils and vegetation, no detrimental effects or vegetation should occur in the vicinity of the plant due to the increase in CO emissions. For lead, although there is an increase in maximum allowable emission rates, the actual maximum ambient air impact is negligible as compared to modeling conducted in May 2000 by FDEP. These projected impacts are only approximately 20 per cent of the ambient air standard, and since there are few other lead sources in the area and the recognized background is 0.0 ug/m^3 of lead, the projected ambient air concentrations can be compared with the NAAQS. Since the NAAQS are designed to protect the public welfare, including effects on soils and vegetation, no detrimental effects on soils or vegetation should occur in this area due to the facility. The potential impacts of CO and lead upon soils, vegetation, and visibility in the Chassahowitzka NWA are addressed in the following sections.

PSD Class I Area

This section focuses on the ecological effects of the proposed facility modification on Air Quality Related Values (AQRV), as defined under PSD regulations, in the Chassahowitzka NWA. The Chassahowitzka NWA is the closest Class I-area to the GCR facility, and is located approximately 90 km northwest of the GCR facility. The AQRVS are defined as being:

“All those values possessed by an area except those that are not affected by changes in air quality and include all those assets of an area whose vitality, significance, or integrity is

dependent in some way on the air environment. These values include visibility and those scenic, cultural, biological, and recreational resources of an area that are affected by air quality. Important attributes of an area are those values or assets that make an area significant as a monument, preserve, or primitive area. They are the assets that are to be preserved if the area is to achieve the purposes for which it was set aside" (Federal Register, 1978).

The AQRVs include dominant plant communities, soils and the wildlife dependent on these communities for habitat. These were evaluated for the Chassahowitzka NWA. A screening approach was used that compared the maximum predicted ambient concentration of air pollutants of concern in the Chassahowitzka NWA with effect threshold limits for both vegetation and wildlife as reported in the scientific literature.

Impacts To Soils

For soils, the potential and hypothesized effects of atmospheric deposition include:

- Increased soil acidification,
- Alteration in cation exchange,
- Loss of base cations, and
- Mobilization of trace metals.

The potential sensitivity of specific soils to atmospheric inputs is related to two factors. One, the physical ability of a soil to conduct water vertically through the soil profile is important in influencing the interaction with deposition. Two, the ability of the soil to resist chemical changes, as measured in terms of pH and soil cation exchange capacity (CEC), is important in determining how a soil responds to atmospheric inputs.

The soils of the Chassahowitzka NWA are generally classified as histosols or entisols. Histosols (peat soils) are organic and have extremely high buffering capacities based on their

CEC, base saturation, and bulk density. Therefore, they would be relatively insensitive to atmospheric inputs. The entisols are shallow sandy soils overlying limestone, such as the soils found in the pinelands. The direct connection of these soils with subsurface limestone tends to neutralize any acidic inputs. Moreover, the groundwater table is highly buffered due to the interaction with subsurface limestone formations, which results in high alkalinity (as CaCO_3).

The relatively low sensitivity of the soils to acid inputs coupled with the extremely low ground-level concentrations of contaminants that would be projected for the Chassahowitzka NWA from the GCR facility emissions precludes any significant impact on soils.

Impacts To Vegetation

In general, the effects of air pollutants on vegetation occur primarily from SO_2 , NO_2 , O_3 , and PM. Effects from minor air contaminants such as fluoride, chlorine, hydrogen chloride, ethylene, ammonia, hydrogen sulfide, CO, and pesticides have also been reported in the literature; however, no Class I increments have been established for CO, the pollutant of concern in this study. Thus, as outlined in the approved modeling protocol prior to the modeling analysis, no CO modeling was conducted.

Impacts To Wildlife

The major air quality risk to wildlife in the United States is from continuous exposure to pollutants above the National Ambient Air Quality Standards (NAAQS). This occurs in nonattainment areas, e.g., Los Angeles Basin. Risks to wildlife also may occur for wildlife living in the vicinity of an emission source that experiences frequent upsets or episodic conditions resulting from malfunctioning equipment, unique meteorological conditions, or startup operations (Newman and Schreiber, 1988). Under these conditions, chronic effects (e.g., particulate contamination) and acute effects (e.g., injury to health) have been observed (Newman, 1981).

For impacts on wildlife, the lowest threshold values of PM which are reported to cause physiological changes are shown in Table 6. These values are up to several orders of magnitude larger than the maximum expected concentrations for the Chassahowitzka NWA, a Class I area. No effects on wildlife AQRVs from CO and lead are expected.

Examples of Reported Effects of Air Pollutants on Animals at Concentrations Below National Secondary Ambient Air Quality Standards.

Table 6

Pollutant	Reported Effect	Concentration	
		$\mu\text{g}/\text{m}^3$	Exposure
Particulates	Respiratory stress, reduced Respiratory disease defenses	120 PbO_3	Continually for 2 months
	Decreased respiratory disease Defenses in rats, same with hamsters	100 NiCl_2	2 hours

Visibility Impairment Analysis

There is no anticipated visibility impairment from the CO and lead emissions from this source modification.

GEP STACK HEIGHT ANALYSIS

Per Rule 62-210-550(3), no stack will exceed good engineering practice (GEP) height as defined as either the greater of:

1. 65 meters; measured from the ground level elevation at the base of the stack;
2. The stack height as determined below:
 - a. The stacks in existence on January 12, 1979, and for which the owner or operator had obtained all applicable permits or approvals required under 40 CFR Parts 51 and 52,
 $H_g = 2.5H$, provided the owner or operator produces evidence that this equation was actually relied upon in establishing an emission limit;
 - b. For all stacks,
 $H_g = H + 1.5L$, where
 H_g = good engineering practice stack height, measured from the ground level-level elevation at the base of the stack,
 L = lesser dimension, height or projected width, or nearby structure(s) provided that the EPA, Department, or local air program may require the use of a field study or fluid model to verify GEP stack height for the emission unit, or
3. The height demonstrated by a fluid model or a field study approved by the EPA, Department, or local air program which ensures that the emissions from a stack do not result in excessive concentrations of any air pollutant as a result of atmospheric downwash, wakes, or eddy effects created by the emissions unit itself, nearby structures, or nearby terrain features.

Since all stacks at GCR facility are less than 65 meters, therefore, none exceed GEP and therefore they were all modeled at their actual heights.

APPENDIX A
EMISSION CALCULATIONS / NETTING ANALYSIS

APPENDIX A
GULF COAST RECYCLING STACK EMISSION CALCULATIONS

	Output T/hr out	PM lb/hr	PM gr/dscf	flow dscfm	Pb lb/hr	Pb gr/dscf	S02 lb/hr	CO lb/hr	N0x lb/hr	VOC lb/hr	VOC ppmd	VOC ppmc
Blast Furnace - Source 001												
Jun-00	3.67	0.69	0.003195	25077	0.2036		215.7	250		26.5	100	154
Jul-00	3.42			24142	0.0214	0.000103						
Jun-01	3.18	0.065	0.000304	25045	0.0146	0.000068	140.8					
AVE(lb/hr)	3.42	0.378			0.080		178.3	250	See Page 4	26.5		
AVE (gr/dscf)/FLOW			0.00175	24755		0.000086						
AVE(lb/T)-Nov1999-Oct2001							52.1	73.0	0.127	7.7		
Current Allowable(lb/hr)		1.8						320				
Current Allowable(T/yr)	26,500	7.9			0.6		1050	1400		114		
Current Allowable(lb/T)							76.6					
Current Allowable(gr/dscf)		0.011			0.00087							
Refining - Source 011												
Jun-00		0.271	0.00197	16161	0.005685	0.000042			See Page 4			
Jun-01		0.276	0.00203	15894	0.019407	0.000143						
Aug-01		0.039	0.00017	26443	0.001160	0.000050						
AVE(lb/hr)		0.20			0.00875							
AVE(gr/dscf)/FLOW			0.00139	19499		0.000078						
Current Allowables(lb/hr)		1.76										
Current Allowable(T/yr)		5.2			0.10							
Current Allowable(gr/dscf)		0.013			0.0002							
Charge/Tap - Source 004												
Jun-00		0.20881	0.00137	17619	0.0901	0.000588						
Jun-01		0.20783	0.00138	17624	0.0206	0.000135				0.34	2.7	
AVE(lb/hr)		0.21			0.0554					0.92	7.3	
AVE(gr/dscf)/FLOW			0.0014	17622		0.0003615						
AVE(lb/hr)										0.63 lb/hr		
Current Allowables(lb/hr)		1.46										
Current Allowable(T/yr)		6.4			0.48					0.184 lb/T		
Current Allowable(gr/dscf)		0.011			0.00087							

FURNACE EMISSIONS ESTIMATION CALCULATIONS

PARTICULATE/LEAD PROJECTIONS
(VIA EXHAUST FLOW ESTIMATION)

	Flow, DSCF/Min	
I. Furnace Stack		
Temperature =	200	38768
Moisture =	3.08%	
Flow, ACFM =	50000	
II. Furnace Hygiene Stack		
Temperature =	118	17959
Moisture =	1.7%	
Flow, ACFM =	20000	
III. Refining Area Stack		
Temperature =	98	27819
Moisture =	2.0%	
Flow, ACFM =	30000	
IV. New Furnace Hygiene Stack		
Temperature =	118	26939
Moisture =	1.7%	
Flow, ACFM =	30000	
	111486	Total DSCFM

Estimated VOC MACT Allowables

70 ppmc MACT limit for Furnace
 18.6 lb/hr @ 50,000acfm (Assumes 50,000 cfm = 4% CO2)
 Furnace
 81.6 T/yr based on hours
 20 ppmd MACT limit for Chargin Hood
 1.4 lb/hr @ 10,000dscfm
 Hoods
 6.0 T/yr based on hours

87.6 TOTAL MACT T/yr, as THC (Estimate)

Proposed Furnace (001) Allowables	Basis
Lead (lb/hr) = 0.23	0.0007 gr/dscf
Lead (Tons/Yr) = 1.02	
PM (lb/hr) = 1.46	0.0044 gr/dscf
PM (Tons/Yr) = 6.40	
Proposed Hygiene (004) Allowables	
Lead (lb/hr) = 0.10	0.00065 gr/dscf
Lead (Tons/Yr) = 0.44	
PM (lb/hr) = 0.68	0.0044 gr/dscf
PM (Tons/Yr) = 2.97	
Proposed Kettle (011) Allowables	
Lead (lb/hr) = 0.048	0.0002 gr/dscf
Lead (Tons/Yr) = 0.21	
PM (lb/hr) = 0.95	0.004 gr/dscf
PM (Tons/Yr) = 4.18	
Proposed New Hygiene (012) Allowables	
Lead (lb/hr) = 0.15	0.00065 gr/dscf
Lead (Tons/Yr) = 0.66	
PM (lb/hr) = 1.02	0.0044 gr/dscf
PM (Tons/Yr) = 4.45	
Proposed Totals(T/yr)	
Lead 2.32	
PM 18.00	

GASOUS EMISSION PROJECTIONS

(See Page 3 for VOC's)

EXISTING

KETTLE FLUES - 3@ 4.0 MM Btu/Hr
 Total Btu/Hr: 12000000
 Total Ft³/Hr: 12000

AP-42 Emission Factors

	SO ₂	NO _x	CO	VOC
Lb/10 ⁶ Ft ³	0.6	100	84	5.5
Lb/Hr	0.0072	1.20	1.01	0.066
Tons/Yr	0.032	5.26	4.42	0.29

PROPOSED

KETTLE FLUES - 6@ 4.2 MM Btu/Hr

Total Btu/Hr: 25200000 Capacity Factor: 0.45
 Total Ft³/Hr: 25200

AP-42 Emission Factors

	SO ₂	NO _x	CO	VOC
Lb/10 ⁶ Ft ³	0.6	100	84	5.5
Lb/Hr	0.0068	1.13	0.95	0.062
Tons/Yr	0.030	4.97	4.17	0.27

KETTLE STACK (via NaCO₃ source test factor)

Past NO_x Emissions

Nov99-Oct00 NaNO ₃ Usage	236680	Lbs	28.4
Nov00-Oct01 NaNO ₃ Usage	289890		34.8
Two year average			31.6

Kettle NO_x (via source test developed factor)

Projected NO _x NaNO ₃ Usage	500000	Lbs	NO _x (T/yr)
EF	0.24	Lb NO _x /Lb NaNO ₃ (0.16 times 1.5 safety factor)	60

Past Kettle Flue Combustion Emissions (past Two Year Average) based on AP-42

	SO ₂	NO _x	CO	VOC	
Nov99-Oct00	22.2 MMCF	0.0067	1.11	0.93	0.061
Nov00-Oct01	21.6	0.0065	1.08	0.91	0.000
average		0.0066	1.10	0.92	0.031

Future Blast and Agglomeration Furnace NO_x

	NO _x (T/YR)	
Furnace 1	50 MMCF	2.5
Furnace 2	50 MMCF	2.5
Agglom F	50 MMCF	2.5
Total		7.5

Past Blast Furnace NO_x

	NO _x	
Nov99-Oct00	34.7 MMCF	1.74
Nov00-Oct01	30.8 MMCF	1.54
average		1.64

NEW PLANT TOTAL NO_x (T/YR)
 (Flues + kettles + furnace)

72.5

Stack Information and Proposed Allowables Used in Applications

	<u>Source 001</u>		<u>Source 011</u>		<u>Source 004</u>		<u>Source 012</u>		<u>Source 013</u>		<u>Source 008</u>		TOTAL	
	<u>Furnace</u>	<u>(lb/hr)</u>	<u>(T/yr)</u>	<u>Refining</u>	<u>(lb/hr)</u>	<u>(T/yr)</u>	<u>Existing Sanitary</u>	<u>(lb/hr)</u>	<u>(T/yr)</u>	<u>New Sanitary</u>	<u>(lb/hr)</u>	<u>(T/yr)</u>		<u>2 Silos</u>
PM	1.46	6.4	0.95	4.2	0.68	3.0	1.02	4.5				0.030	0.4	18.4
Lead	0.23	1.02	0.048	0.21	0.10	0.44	0.15	0.66						2.32
SO2	N/A	709												709
NOx	N/A	7.5		60										72.5
CO	400	1752										4.2		1752.0
VOC	70ppmc	112.8			20ppmd	13.4	20ppmd	13.4				0.27		139.9 * netting
VOC (MACT Estimate)														87.6 *MACT
ACFM	ft3/m	50000		30000		20000		30000						
Degree F		200		98		118		118						
Diameter	ft	3		3		2.5		3						
Height	ft	150		60.5		60.5		60.5						
UTM East		364.109		364.027		364.109		364.081						
UTM North		3093.514		3093.546		3093.545		3093.515						

* MACT value is only estimate since standard is a concentration limit adjusted to 4% CO2 for the furnace emissions.

Fugitive Emission Calculations Gulf Coast Recycling, Inc Tampa, Florida

Smelting Operations

E =	E.F.(lb/T) X	Production(T/Yr) X	C. F. 1	C. F. 2		C. F. 1 C. F. 2	99% for hoods and baghouse 95% for wet suppression		
E =	0.4	50000	0.01	0.05					
E =	<table style="margin-left: 20px; border: none;"> <tr> <td style="text-align: center;">10 lb/yr</td> </tr> <tr> <td style="text-align: center;">4536 g/yr</td> </tr> </table>							10 lb/yr	4536 g/yr
10 lb/yr									
4536 g/yr									

Casting Operations

E =	E.F.(lb/T) X	Production(T/Yr) X	C. F. 3		C. F. 3	95% for wet suppression		
E =	0.0007	50000	0.05					
E =	<table style="margin-left: 20px; border: none;"> <tr> <td style="text-align: center;">1.75 lb/yr</td> </tr> <tr> <td style="text-align: center;">793.8 g/yr</td> </tr> </table>						1.75 lb/yr	793.8 g/yr
1.75 lb/yr								
793.8 g/yr								

Refining Operations

E =	E.F.(lb/T) X	Production(T/Yr) X	C.F. 4		C. F. 4	95% for wet suppression		
E =	0.0006	50000	0.05					
E =	<table style="margin-left: 20px; border: none;"> <tr> <td style="text-align: center;">1.5 lb/yr</td> </tr> <tr> <td style="text-align: center;">680.4 g/yr</td> </tr> </table>						1.5 lb/yr	680.4 g/yr
1.5 lb/yr								
680.4 g/yr								

West Section Traffic

		148 feet		315 M ²		C. F. 5		0.05	95% for wet suppression
E =	k(g/VMT) X	(sL /2) ^{0.65} X	(W /3) ^{1.5}	Vehicles	Battery				
E =	1.8	9.7	4.85	39.23	13.08	40 tons	100 trips/week		
E =	1.8	2.790822		47.28881		20 tons	4 trips/week		
E =	237.6 g/VMT			Weight	39.23 tons	total	<u>104 trips/week</u>		
VMT =	5.83 mi/week								
EMR =	0.000115 g/sec		or	3.63E-07 g/s/M ²					

Central Section Traffic

		420 feet		1024 M ²		C. F. 5		0.05	95% for wet suppression
E =	k(g/VMT) X	(sL /2) ^{0.65} X	(W /3) ^{1.5}	Vehicles	Battery				
E =	1.8	9.7	4.85	39.31	13.10	40 tons	112 trips/week		
E =	1.8	2.790822		47.43276		20 tons	4 trips/week		
E =	238.3 g/VMT			Weight	39.31 tons	total	<u>116 trips/week</u>		
VMT =	18.45 mi/week								
EMR =	0.000364 g/sec		or	3.55E-07 g/s/M ²					

East Section Traffic

		269 feet		574 M ²		C. F. 5		0.05	95% for wet suppression
E =	k(g/VMT) X	(sL /2) ^{0.65} X	(W /3) ^{1.5}	Vehicles	cars				
E =	1.8	9.7	4.85	2.25	0.75	2 tons	280 trips/week		
E =	1.8	2.790822		0.651044		20 tons	4 trips/week		
E =	3.27 g/VMT			Weight	2.25 tons	total	<u>284 trips/week</u>		
VMT =	28.94 mi/week								
EMR =	0.0000078 g/sec		or	1.36E-08 g/s/M ²					

Parking Lot	115 feet	1225 M ²	C. F. 5	0.05	95% for wet suppression
E =	k(g/VMT) X (sL /2) ^{0.65} X (W /3) ^{1.5}	Vehicles	cars	2 tons	140 trips/week
E =	1.8 9.7 4.85 2.00 0.67			tons	trips/week
	1.8 2.790822 0.544331			total	140 trips/week
E =	2.73 g/VMT	Weight	2.00 tons		
VMT =	6.10 mi/week				
EMR =	0.0000014 g/sec	or	1.13E-09 g/s/M ²		

Assumptions

k derived by FDEP from Chloride Metals data and used in FDEP lead analysis in March 2000
sL AP-42 factor for iron and steel

APPENDIX B
NO_x EMISSION FACTOR

**EMISSION FACTOR FOR
NITROGEN OXIDE EMISSIONS**

GULF COAST RECYCLING, INC.
TAMPA, FLORIDA

ALLOYING KETTLES

Per two stack test @ similar facility:

Test 1 - 1979
Results 0.16 lb NO_x/lb of NaNO₃

Test 2- 1999
Results 0.152 lb NO_x/lb of NaNO₃

FACTOR USE IN APPLICATION:

0.16 lb NO_x/lb of NaNO₃ x 1.5 (Safety Factor)
= 0.24 lb NO_x/lb NaNO₃

SUMMARY OF RESULTS

The results of the six NO_x grab samples taken on November 6, 1979, are as follows:

Run No.	Concentration NO ₂ , ppm	NO ₂ Mass Rate, lb/hr.
1	2995	205
2	1139	78.0
3	2134	146
4	601	41.2
5	3649	250
6	1481	101
Average	2000	137

As shown by the above results, a large variation in the NO₂ concentrations was obtained. This is probably due to the very short duration of the visible plume. That is, the bulk of the air sampled did not coincide with the maximum concentration.

Obviously, due to unsteady state of the exhaust gas concentration, continuous monitoring would be required to obtain the most accurate results. However, by careful evaluation of the six samples, worthwhile data can be obtained.

As shown above, an average of the six samples yield a emission rate of 137 pounds of NO₂ per hour, or 0.16 pounds per pound of sodium nitrate added. During the testing period, a visible plume due to the NO₂ emission was observed for only 28.5 percent of the time. Assuming zero NO₂ emissions for the time the plume was not visible yields an emission mass rate of 40 pounds per hour. This correction could bias the results low due to the possible inaccuracy of the average emission rate for the visible plume and the assumption of zero NO₂ emissions during the time of the invisible plume. Not applying the time correction factor would obviously bias the results high.

TABLE B

**Measurement of Emissions of Chemically-Produced Nitrogen Oxides (as NO₂)
From the Addition of Sodium Nitrate (NaNO₃) as Fluxing Agent
For the Alloying Operations Ventilated to Stack No. 5 Along with
The Blast Furnace Nos. 3 & 4 Afterburners Producing Thermal NO_x**

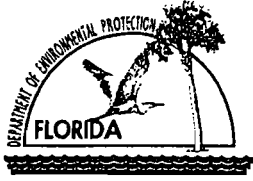
SANDERS LEAD COMPANY

Troy, Alabama

March 31, 1999

	<u>STACK NO. 5</u> <u>Run 5-X while</u> <u>1000 lb flux added</u>
Measurement Period (CST)	16:40 – 18:40
GAS STREAM CONDITIONS	
Volumetric Flow Rate	
Wet Standard Basis (wscfm)	58,068
Dry Standard Basis (dscfm)	56,035
(projecting 3.5%v water vapor)	
NITROGEN OXIDES (as NO₂)	
Emission Concentration Measured,	
Volumetric (ppmv, dry basis)	200.9
Mass/Volume (lb/dscf)	24.0 x 10 ⁻⁶
Emission Mass Rate Measured (lb/hr)	80.61
Non-Fluxing Thermal NO _x Baseline (lb/hr from Table A)	4.51
Flux-Related NO _x by Difference (lb/hr)	76.1
DERIVATION OF FLUX-RELATED NO_x EMISSION FACTOR	
Flux-Related NO _x Generated (lb as NO ₂ over 2-hr period)	152.2
Sodium Nitrate Flux Added (lb as NaNO ₃ over 2-hr period)	1000
Flux-Related NO _x Emission Factor (lb of NO ₂ /lb of NaNO ₃)	0.1522

APPENDIX C
PERMIT APPLICATIONS



Department of Environmental Protection

Division of Air Resources Management

APPLICATION FOR AIR PERMIT - TITLE V SOURCE

See Instructions for Form No. 62-210.900(1)

I. APPLICATION INFORMATION

Identification of Facility

1. Facility Owner/Company Name: Gulf Coast Recycling, Inc.	
2. Site Name: Gulf Coast Recycling, Inc.	
3. Facility Identification Number: 0570057 [] Unknown	
4. Facility Location: Street Address or Other Locator: 1901 North 66 th Street City: Tampa County: Hillsborough Zip Code: 33619	
5. Relocatable Facility? [] Yes [X] No	6. Existing Permitted Facility? [X] Yes [] No

Application Contact

1. Name and Title of Application Contact: Ms. Joyce Morales-Caramella		
2. Application Contact Mailing Address: Organization/Firm: Gulf Coast Recycling, Inc Street Address: 1901 North 66 th Street City: Tampa State: FL Zip Code: 33619		
3. Application Contact Telephone Numbers: Telephone: (813) 626 - 6151 Fax: (813) 622 - 8388		

Application Processing Information (DEP Use)

1. Date of Receipt of Application:	1-29-2002
2. Permit Number:	0570057-012-AC
3. PSD Number (if applicable):	PSD-FL-326
4. Siting Number (if applicable):	

Purpose of Application

Air Operation Permit Application

This Application for Air Permit is submitted to obtain: (Check one)

- Initial Title V air operation permit for an existing facility which is classified as a Title V source.
- Initial Title V air operation permit for a facility which, upon start up of one or more newly constructed or modified emissions units addressed in this application, would become classified as a Title V source.

Current construction permit number: _____

- Title V air operation permit revision to address one or more newly constructed or modified emissions units addressed in this application.

Current construction permit number: _____

Operation permit number to be revised: _____

- Title V air operation permit revision or administrative correction to address one or more proposed new or modified emissions units and to be processed concurrently with the air construction permit application. (Also check Air Construction Permit Application below.)

Operation permit number to be revised/corrected: _____

- Title V air operation permit revision for reasons other than construction or modification of an emissions unit. Give reason for the revision; e.g., to comply with a new applicable requirement or to request approval of an "Early Reductions" proposal.

Operation permit number to be revised: _____

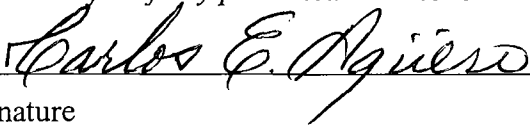
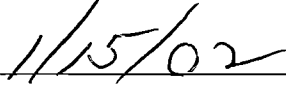
Reason for revision: _____

Air Construction Permit Application

This Application for Air Permit is submitted to obtain: (Check one)

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

Owner/Authorized Representative or Responsible Official

1. Name and Title of Owner/Authorized Representative or Responsible Official: Mr. Carlos E. Agüero President
2. Owner/Authorized Representative or Responsible Official Mailing Address: Organization/Firm: Gulf Coast Recycling, Inc. Street Address: 1901 North 66 th Street City: Tampa State: FL Zip Code: 33619
3. Owner/Authorized Representative or Responsible Official Telephone Numbers: Telephone: (813) 626-6151 Fax: (813) 622 - 8388
4. Owner/Authorized Representative or Responsible Official Statement: <i>I, the undersigned, am the owner or authorized representative*(check here [], if so) or the responsible official (check here [✓], if so) of the Title V source addressed in this application, whichever is applicable. I hereby certify, based on information and belief formed after reasonable inquiry, that the statements made in this application are true, accurate and complete and that, to the best of my knowledge, any estimates of emissions reported in this application are based upon reasonable techniques for calculating emissions. The air pollutant emissions units and air pollution control equipment described in this application will be operated and maintained so as to comply with all applicable standards for control of air pollutant emissions found in the statutes of the State of Florida and rules of the Department of Environmental Protection and revisions thereof. I understand that a permit, if granted by the Department, cannot be transferred without authorization from the Department, and I will promptly notify the Department upon sale or legal transfer of any permitted emissions unit.</i>  Signature  Date

* Attach letter of authorization if not currently on file.

Professional Engineer Certification

1. Professional Engineer Name: Billy R. Nichols Registration Number: 55745
2. Professional Engineer Mailing Address: Organization/Firm: URS Corporation Street Address: 263 Seaboard Lane, Suite 200 City: Franklin State: TN Zip Code: 37067
3. Professional Engineer Telephone Numbers: Telephone: (615) 771 - 2480 Fax: (615) 771 - 2459

4. Professional Engineer Statement:

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

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

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

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

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

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

[Signature]

1/11/02

Signature

Date

(seal)

* Attach any exception to certification statement.

Scope of Application

Emissions Unit ID	Description of Emissions Unit	Permit Type	Processing Fee
001	Two Blast Furnaces	AC1A	\$7500
011	Six (6) Refining Kettles	AC1A	
004	Furnace Charging, Furnace Tapping	AC1A	
008	Soda Ash Silos	AC1A	
009	Facility Grounds and Miscellaneous Operations	AC1A	
012	CRT & Pallet Crusher, Furnace Charging, Tapping	AC1A	
013	Exhaust Stacks from Indirect Firing of Kettles	AC1A	

Application Processing Fee

Check one: Attached - Amount: \$ 7500 Not Applicable

Construction/Modification Information

1. Description of Proposed Project or Alterations:

- Addition of a second Blast Furnace
- Construction of two (2) additional Refining Kettles (Total of Six)
- Increase in exhaust flow rate from baghouse controlling the emissions from the two Blast Furnaces
- Increase in process weight rate and output production.
- Addition of second soda ash silo. (Application Pending)

With the completion of this project, production capacity of the facility will approximately double; however, there will not be a doubling of emissions due to the installation of additional control equipment and upgrades to existing control equipment.

2. Projected or Actual Date of Commencement of Construction: ASAP after permit issuance

3. Projected Date of Completion of Construction: 12 months after commencement

Application Comment

Gulf Coast Recycling has recently completed the construction of four new refining kettles to replace the three former kettles. The company has also been issued a permit to construct a pallet and CRT crusher system. Emission increases associated with these projects have been included in the netting and BACT analysis associated with this application in that these two projects are considered contemporaneous to the blast furnace and kettle addition project. Both the refining source (by adding two additional kettles) and the pallet and CRT crusher source (by the addition of furnace and tapping hood exhaust) will be modified as part of this application.

II. FACILITY INFORMATION

A. GENERAL FACILITY INFORMATION

Facility Location and Type

1. Facility UTM Coordinates: Zone: 17 East (km): 364.0 North (km): 3093.5			
2. Facility Latitude/Longitude: Latitude (DD/MM/SS): Longitude (DD/MM/SS):			
3. Governmental Facility Code: 0	4. Facility Status Code: A	5. Facility Major Group SIC Code: 33	6. Facility SIC(s): 3341
7. Facility Comment (limit to 500 characters): 			

Facility Contact

1. Name and Title of Facility Contact: Ms. Joyce Morales-Caramella
2. Facility Contact Mailing Address: Organization/Firm: Gulf Coast Recycling, Inc. Street Address: 1901 North 66 th Street City: Tampa State: FL Zip Code: 33619
3. Facility Contact Telephone Numbers: Telephone: (813) 626 - 6151 Fax: (813) 622 - 8388

Facility Regulatory Classifications

Check all that apply:

1. <input type="checkbox"/> Small Business Stationary Source? <input type="checkbox"/> Unknown
2. <input checked="" type="checkbox"/> Major Source of Pollutants Other than Hazardous Air Pollutants (HAPs)?
3. <input type="checkbox"/> Synthetic Minor Source of Pollutants Other than HAPs?
4. <input type="checkbox"/> Major Source of Hazardous Air Pollutants (HAPs)?
5. <input checked="" type="checkbox"/> Synthetic Minor Source of HAPs?
6. <input checked="" type="checkbox"/> One or More Emissions Units Subject to NSPS?
7. <input checked="" type="checkbox"/> One or More Emission Units Subject to NESHAP?
8. <input checked="" type="checkbox"/> Title V Source by EPA Designation?
9. Facility Regulatory Classifications Comment (limit to 200 characters): Item 5: The facility could emit greater than ten tons per year of lead compounds if not for required baghouse controls and MACT requirements which restrict the pollutant to well below ten tons per year.

List of Applicable Regulations

40 CFR 63 Subparts A & X	62-213 Major Source Op Permits
62-212.300 F.A.C.	62-297 Emissions Monitoring
62-296.603 F.A.C.	40 CFR 60.122(a)
62-296.700 F.A.C.	Core List
40 CFR 60.122(a)	
62-296.800 F.A.C.	
62-4.070(3) F.A.C.	
62-204 F.A.C. General Provisions	
62-210 F.A.C. Stationary Sources – General Requirements	
62-212 Stationary Sources – Pre-construction Review	

B. FACILITY POLLUTANTS

List of Pollutants Emitted

1. Pollutant Emitted	2. Pollutant Classif.	3. Requested Emissions Cap		4. Basis for Emissions Cap	5. Pollutant Comment
		lb/hour	tons/year		
PM	SM		18.4	ESCPSD	
SO ₂	A		709	ESCPSD	
NO _x	B		72.5	ESCPSD	
CO	A		1752	RULE	
VOC(THC)	A		139.9	ESCPSD	THC, as propane
Lead	SM		2.32	RULE	

C. FACILITY SUPPLEMENTAL INFORMATION

Supplemental Requirements

1. Area Map Showing Facility Location: [X] Attached, Document ID: <u> A </u> [] Not Applicable [] Waiver Requested
2. Facility Plot Plan: [X] Attached, Document ID: <u> B </u> [] Not Applicable [] Waiver Requested
3. Process Flow Diagram(s): [X] Attached, Document ID: <u> C </u> [] Not Applicable [] Waiver Requested
4. Precautions to Prevent Emissions of Unconfined Particulate Matter: [] Attached, Document ID: <u> </u> [] Not Applicable [X] Waiver Requested
5. Fugitive Emissions Identification: [X] Attached, Document ID: <u> D* </u> [] Not Applicable [] Waiver Requested
6. Supplemental Information for Construction Permit Application: [] Attached, Document ID: <u> </u> [X] Not Applicable
7. Supplemental Requirements Comment: * Existing document attached. Document to be revised upon issuance of construction permit and prior to modification start-up as required by 40 CFR 63.

Additional Supplemental Requirements for Title V Air Operation Permit Applications

8. List of Proposed Insignificant Activities: <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
9. List of Equipment/Activities Regulated under Title VI: <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Equipment/Activities On site but Not Required to be Individually Listed <input checked="" type="checkbox"/> Not Applicable
10. Alternative Methods of Operation: <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
11. Alternative Modes of Operation (Emissions Trading): <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
12. Identification of Additional Applicable Requirements: <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
13. Risk Management Plan Verification: <input type="checkbox"/> Plan previously submitted to Chemical Emergency Preparedness and Prevention Office (CEPPO). Verification of submittal attached (Document ID: _____) or previously submitted to DEP (Date and DEP Office: _____) <input type="checkbox"/> Plan to be submitted to CEPPO (Date required: _____) <input checked="" type="checkbox"/> Not Applicable
14. Compliance Report and Plan: <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
15. Compliance Certification (Hard-copy Required): <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable

III. EMISSIONS UNIT INFORMATION

A separate Emissions Unit Information Section (including subsections A through J as required) must be completed for each emissions unit addressed in this Application for Air Permit. If submitting the application form in hard copy, indicate, in the space provided at the top of each page, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application.

**A. GENERAL EMISSIONS UNIT INFORMATION
(All Emissions Units)**

Emissions Unit Description and Status

<p>1. Type of Emissions Unit Addressed in This Section: (Check one)</p> <p><input type="checkbox"/> This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).</p> <p><input checked="" type="checkbox"/> This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.</p> <p><input type="checkbox"/> This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.</p>			
<p>2. Regulated or Unregulated Emissions Unit? (Check one)</p> <p><input checked="" type="checkbox"/> The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.</p> <p><input type="checkbox"/> The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.</p>			
<p>3. Description of Emissions Unit Addressed in This Section (limit to 60 characters):</p> <p>Type 2 – Two (2) Blast Furnaces</p>			
<p>4. Emissions Unit Identification Number: ID: 001</p>		<p><input type="checkbox"/> No ID <input checked="" type="checkbox"/> ID Unknown</p>	
<p>5. Emissions Unit Status Code: A</p>	<p>6. Initial Startup Date: January 2003</p>	<p>7. Emissions Unit Major Group SIC Code: 33</p>	<p>8. Acid Rain Unit? <input type="checkbox"/></p>
<p>9. Emissions Unit Comment: (Limit to 500 Characters)</p> <p>Addition of new blast furnace (identical in size to existing blast furnace) to existing permit unit.</p>			

Emissions Unit Control Equipment

1. Control Equipment/Method Description (Limit to 200 characters per device or method):

Both the new and existing blast furnaces will be ducted to a new, common afterburner system. The afterburner will be a multi-chambered, refractory lined vessel with a gross heat input of 15 MM Btu/hr with a variable air/gas ratio. Process gas residence time will be greater than 2 seconds. Minimum operating temperature of approximately 1450 degrees Fahrenheit will be established at time of compliance demonstration.

2. Control Device or Method Code(s): 021

Emissions Unit Details

1. Package Unit:		
Manufacturer:	Gulf Coast Recycling	Model Number:
2. Generator Nameplate Rating:	N/A	MW
3. Incinerator Information:		
	Dwell Temperature:	Unknown °F
	Dwell Time:	2 seconds
	Incinerator Afterburner Temperature:	~1450 °F

Emission Unit Control Equipment

1. Control Equipment/Method Description (Limit to 200 characters per device or method):

A 10 module shaker-type baghouse with Gore Technology or equivalent membrane on acrylic bags. Baghouse will be used to control PM and lead emissions from the two blast furnaces.

Each module contains 204 bags with 13.0 sq. ft. of cloth each for a total of 2,650 sq. ft./module and a baghouse total of 26,650 sq. ft. With one module off line the total will be 23,850 sq. ft. The gross air/cloth ratio will be 1.89:1; and the net will be 2.1:1.

The existing baghouse will be upgraded with new ductwork and new induced draft fans.

2. Control Device or Method Code(s): 018

Emissions Unit Details

1. Package Unit:		
Manufacturer:	N/A	Model Number:
2. Generator Nameplate Rating:		
		MW
3. Incinerator Information:		
	Dwell Temperature:	°F
	Dwell Time:	seconds
	Incinerator Afterburner Temperature:	°F

Emission Unit Control Equipment

1. Control Equipment/Method Description (Limit to 200 characters per device or method):

A nine (9) foot diameter, forty-two (42) foot tall tower will be constructed at the outlet of the afterburner, prior to inlet of baghouse. A soda ash slurry will be injected to control SO2 emissions. The amount of soda injection will be controlled by the existing SO2 CEM system being installed and will be operated at a level necessary to maintain compliance with the proposed limits.

2. Control Device or Method Code(s): 052

Emissions Unit Details

1. Package Unit:		
Manufacturer:	Gulf Coast Recycling, Inc	Model Number: N/A
2. Generator Nameplate Rating: N/A MW		
3. Incinerator Information:		
	Dwell Temperature:	°F
	Dwell Time:	seconds
	Incinerator Afterburner Temperature:	°F

**B. EMISSIONS UNIT CAPACITY INFORMATION
(Regulated Emissions Units Only)**

Emissions Unit Operating Capacity and Schedule

1. Maximum Heat Input Rate: N/A	mmBtu/hr
2. Maximum Incineration Rate: N/A	lb/hr tons/day
3. Maximum Process or Throughput Rate: 14 Tons/Hr (daily average input)	
4. Maximum Production Rate: 50,000 T/Yr metal out of blast furnaces	
5. Requested Maximum Operating Schedule:	
24 hours/day	7 days/week
52 weeks/year	8760 hours/year
6. Operating Capacity/Schedule Comment (limit to 200 characters):	
<p>The operating capacity is based on a maximum input feed rate of 14 T/hr averaged over a 24-hr period. (Worst-case scenario when both blast furnaces are in operation.)</p>	

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

List of Applicable Regulations

62-204.800 F.A.C.	
40 CFR 63 Subpart A, X	
62-296.603 F.A.C.	
40 CFR 60.122(a)	
62-296.800 F.A.C.	
62-296.700 F.A.C.	
62-4.070(3) F.A.C.	
62-212.300 F.A.C.	

**D. EMISSION POINT (STACK/VENT) INFORMATION
(Regulated Emissions Units Only)**

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram? Blast Furnace Stack	2. Emission Point Type Code: 2	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point): Exhaust stack from baghouse controlling emissions from two blast furnaces.		
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: Two (2) Blast Furnaces		
5. Discharge Type Code: V	6. Stack Height: 150 feet	7. Exit Diameter: 3.0 feet
8. Exit Temperature: 200 °F	9. Actual Volumetric Flow Rate: 50,000 acfm	10. Water Vapor: 3.08 (est) %
11. Maximum Dry Standard Flow Rate: 38,770 dscfm		12. Nonstack Emission Point Height: feet
13. Emission Point UTM Coordinates: Zone: 17 East (km): 364.109 North (km): 3093.514		
14. Emission Point Comment (limit to 200 characters):		

E. SEGMENT (PROCESS/FUEL) INFORMATION
(All Emissions Units)

Segment Description and Rate: Segment 1 of 1

1. Segment Description (Process/Fuel Type) (limit to 500 characters): In process coke burning		
2. Source Classification Code (SCC): 3-90-008-99	3. SCC Units: Tons	
4. Maximum Hourly Rate:	5. Maximum Annual Rate: 11,700	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: 0.58	8. Maximum % Ash: 5.4	9. Million Btu per SCC Unit: 26
10. Segment Comment (limit to 200 characters):		

Segment Description and Rate: Segment _____ of _____

1. Segment Description (Process/Fuel Type) (limit to 500 characters):		
2. Source Classification Code (SCC):	3. SCC Units:	
4. Maximum Hourly Rate:	5. Maximum Annual Rate:	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment (limit to 200 characters):		

**F. EMISSIONS UNIT POLLUTANTS
(All Emissions Units)**

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
PM	018	000	EL
SO ₂	046*	000	EL
NO _x			EL
CO	021	000	EL
VOC	0231	000	EL
Lead	018	000	EL

* Process feed desulfurization and soda ash injection at afterburner outlet.

**G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units -
Emissions-Limited and Preconstruction Review Pollutants Only)**

Potential/Fugitive Emissions

1. Pollutant Emitted: PM		2. Total Percent Efficiency of Control: +99%	
3. Potential Emissions: 1.46 lb/hour		4. Synthetically Limited? [X] 6.4 tons/year	
5. Range of Estimated Fugitive Emissions: [] 1 [] 2 [] 3 _____ to _____ tons/year			
6. Emission Factor: 0.0044 gr/dscf Reference:		7. Emissions Method Code: 0	
8. Calculation of Emissions (limit to 600 characters): 0.0044 gr/dscf x 38,800 dscfm x 60 min/hr divided by 7000 gr/lb = 1.46 lb/hr and (1.46 lb/hr) (8760 hrs/yr) / 2000 lb/T = 6.4 T/yr			
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):			

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code: ESCPSD		2. Future Effective Date of Allowable Emissions:	
3. Requested Allowable Emissions and Units: 1.46 lb/hr		4. Equivalent Allowable Emissions: 1.46 lb/hour 6.4 tons/year	
5. Method of Compliance (limit to 60 characters): Annual source testing using EPA Method 5			
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): 62-212.300			

**G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units -
Emissions-Limited and Preconstruction Review Pollutants Only)**

Potential/Fugitive Emissions

1. Pollutant Emitted: SO ₂		2. Total Percent Efficiency of Control:	
3. Potential Emissions: _____ lb/hour		709 tons/year	4. Synthetically Limited? [X]
5. Range of Estimated Fugitive Emissions: [] 1 [] 2 [] 3 _____ to _____ tons/year			
6. Emission Factor: 28.36 lb/T Reference:		7. Emissions Method Code: 0	
8. Calculation of Emissions (limit to 600 characters): Blast – NTE 50,000 T/yr output ∴ 50,000 T/yr x 28.36 #/T ÷ 2000 = 709 T/yr			
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): Negligible			

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code: ESCPD		2. Future Effective Date of Allowable Emissions:	
3. Requested Allowable Emissions and Units: 709 T/yr		4. Equivalent Allowable Emissions: lb/hour 709 tons/year	
5. Method of Compliance (limit to 60 characters): All feed desulfurized and Soda Ash injection to afterburner exhaust gases.			
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): GCR operates a SO ₂ CEMS system and will operate furnace and controls in a manner not to exceed 709 tons per year SO ₂ emissions.			

**G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units -
Emissions-Limited and Preconstruction Review Pollutants Only)**

Potential/Fugitive Emissions

1. Pollutant Emitted: CO		2. Total Percent Efficiency of Control:	
3. Potential Emissions: 400 lb/hour 1752 tons/year		4. Synthetically Limited? [X]	
5. Range of Estimated Fugitive Emissions: [] 1 [] 2 [] 3 _____ to _____ tons/year			
6. Emission Factor: 200 lb/hr per furnace or 52.8 pound per Ton out Reference:		7. Emissions Method Code: 0	
8. Calculation of Emissions (limit to 600 characters): Blast – NTE 50,000 T/yr output ∴ Average 50,000 T/yr x 52.8 lb/T ÷ 2000 = 1320 T/yr Maximum 400 lb/hr x 8760 hr/yr divided by 2000 = 1752 T/yr			
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): Negligible			

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code: F.A.C. 62-212-300		2. Future Effective Date of Allowable Emissions:	
3. Requested Allowable Emissions and Units: 400 lb/hr		4. Equivalent Allowable Emissions: 400 lb/hour 1752 tons/year	
5. Method of Compliance (limit to 60 characters): Operate afterburner at [INSERT MINIMUM TEMP AND RESIDENCE TIME ESTABLISHED DURING INITIAL COMPLIANCE DEMONSTRATION] Annual source testing using EPA Method 10 to establish operating conditions			
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): GCR will install and operate a continuous recording thermocouple on incinerator outlet to establish minimum operating temperature required for compliance.			

**G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units -
Emissions-Limited and Preconstruction Review Pollutants Only)**

Potential/Fugitive Emissions

1. Pollutant Emitted: VOC (as THC)	2. Total Percent Efficiency of Control:
3. Potential Emissions: N/A lb/hour	4. Synthetically Limited? [X] 139.9 tons/year
5. Range of Estimated Fugitive Emissions: [] 1 [] 2 [] 3 _____ to _____ tons/year	
6. Emission Factor: Reference:	7. Emissions Method Code: 0
8. Calculation of Emissions (limit to 600 characters): Annual limit of 139.9 tons/year based on less than 40 tons per year increase over the previous two-year average. See Appendix A of Applications	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): Negligible	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code: ESCPD, 40CFR63	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: 70 ppm @ 4% CO ₂ NTE 139.9 T/yr	4. Equivalent Allowable Emissions: N/A lb/hour 139.9 tons/year
5. Method of Compliance (limit to 60 characters): Operate the afterburner at [INSERT MINIMUM TEMP AND RESIDENCE TIME ESTABLISHED DURING INITIAL COMPLIANCE DEMONSTRATION] Annual source testing using EPA Method 25A	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): 62-204.800 40 CFR 63 Subpart X The MACT allowable will most likely will be more stringent than the tons per year cap. VOC's are measured and reported as THC's measured by EPA Method 25A.	

**G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units -
Emissions-Limited and Preconstruction Review Pollutants Only)**

Potential/Fugitive Emissions

1. Pollutant Emitted: Lead		2. Total Percent Efficiency of Control:	
3. Potential Emissions: 0.23 lb/hour 1.02 tons/year		4. Synthetically Limited? [X]	
5. Range of Estimated Fugitive Emissions: [] 1 [] 2 [] 3 _____ to _____ tons/year			
6. Emission Factor: 0.00070 gr/dscf Reference:		7. Emissions Method Code: 0	
8. Calculation of Emissions (limit to 600 characters): 0.00070 gr/dscf x 38,800 dscfm x 60 min/hr divided by 7000 gr/lb = 0.23 lb/hr (0.23 lb/hr) (8760 hrs/yr) / (2000 lb/T) = 1.02 T/yr			
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): See Appendix A for estimates included in modeling analysis.			

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code: F.A.C. 62-212-300		2. Future Effective Date of Allowable Emissions:	
3. Requested Allowable Emissions and Units: 0.23 lb/hr NTE 0.00087 gr/dscf		4. Equivalent Allowable Emissions: 0.23 lb/hour 1.02 tons/year	
5. Method of Compliance (limit to 60 characters): Compliance will be demonstrated as outlined in the Baghouse Standard Operating Annual source testing using EPA Method 12 Procedures Manual			
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): 62-212.300			

H. VISIBLE EMISSIONS INFORMATION
(Only Regulated Emissions Units Subject to a VE Limitation)

Visible Emissions Limitation: Visible Emissions Limitation 1 of 1

1. Visible Emissions Subtype: VE03	2. Basis for Allowable Opacity: [X] Rule [] Other
3. Requested Allowable Opacity: 3% Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance: Annual VE readings using EPA Method 9	
5. Visible Emissions Comment (limit to 200 characters):	

I. CONTINUOUS MONITOR INFORMATION
(Only Regulated Emissions Units Subject to Continuous Monitoring)

Continuous Monitoring System: Continuous Monitor 1 of 1

1. Parameter Code:	2. Pollutant(s): SO2
3. CMS Requirement:	[] Rule [X] Other
4. Monitor Information: Manufacturer: Spectrum Systems Model Number: 300 Serial Number: GCR Tampa #1	
5. Installation Date: 4/15/01	6. Performance Specification Test Date: 6/27/01
7. Continuous Monitor Comment (limit to 200 characters):	

**J. EMISSIONS UNIT SUPPLEMENTAL INFORMATION
(Regulated Emissions Units Only)**

Supplemental Requirements

1. Process Flow Diagram <input checked="" type="checkbox"/> Attached, Document ID: <u> C </u> [] Not Applicable [] Waiver Requested
2. Fuel Analysis or Specification [] Attached, Document ID: _____ [X] Not Applicable [] Waiver Requested
3. Detailed Description of Control Equipment [] Attached, Document ID: _____ [] Not Applicable [X] Waiver Requested (Existing equipment)
4. Description of Stack Sampling Facilities [] Attached, Document ID: _____ [] Not Applicable [X] Waiver Requested
5. Compliance Test Report [] Attached, Document ID: _____ [] Previously submitted, Date: _____ [X] Not Applicable <p align="right">(All data previously submitted)</p>
6. Procedures for Startup and Shutdown [] Attached, Document ID: <u> * </u> [] Not Applicable [] Waiver Requested
7. Operation and Maintenance Plan [] Attached, Document ID: <u> * </u> [] Not Applicable [] Waiver Requested
8. Supplemental Information for Construction Permit Application [] Attached, Document ID: _____ [X] Not Applicable
9. Other Information Required by Rule or Statute [] Attached, Document ID: _____ [X] Not Applicable
10. Supplemental Requirements Comment: * These plans are being updated and will be submitted for approval prior to modification start-up.

Additional Supplemental Requirements for Title V Air Operation Permit Applications

11. Alternative Methods of Operation <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
12. Alternative Modes of Operation (Emissions Trading) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
13. Identification of Additional Applicable Requirements <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
14. Compliance Assurance Monitoring Plan <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
15. Acid Rain Part Application (Hard-copy Required) <input type="checkbox"/> Acid Rain Part - Phase II (Form No. 62-210.900(1)(a)) Attached, Document ID: _____ <input type="checkbox"/> Repowering Extension Plan (Form No. 62-210.900(1)(a)1.) Attached, Document ID: _____ <input type="checkbox"/> New Unit Exemption (Form No. 62-210.900(1)(a)2.) Attached, Document ID: _____ <input type="checkbox"/> Retired Unit Exemption (Form No. 62-210.900(1)(a)3.) Attached, Document ID: _____ <input type="checkbox"/> Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.) Attached, Document ID: _____ <input type="checkbox"/> Phase NOx Averaging Plan (Form No. 62-210.900(1)(a)5.) Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable

III. EMISSIONS UNIT INFORMATION

A separate Emissions Unit Information Section (including subsections A through J as required) must be completed for each emissions unit addressed in this Application for Air Permit. If submitting the application form in hard copy, indicate, in the space provided at the top of each page, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application.

**A. GENERAL EMISSIONS UNIT INFORMATION.
(All Emissions Units)**

Emissions Unit Description and Status

<p>1. Type of Emissions Unit Addressed in This Section: (Check one)</p> <p><input type="checkbox"/> This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).</p> <p><input checked="" type="checkbox"/> This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.</p> <p><input type="checkbox"/> This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.</p>			
<p>2. Regulated or Unregulated Emissions Unit? (Check one)</p> <p><input checked="" type="checkbox"/> The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.</p> <p><input type="checkbox"/> The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.</p>			
<p>3. Description of Emissions Unit Addressed in This Section (limit to 60 characters):</p> <p>Six (6) gas fired lead refining kettles and two (2) pouring ladles on casting machines</p>			
<p>4. Emissions Unit Identification Number: <input type="checkbox"/> No ID</p> <p>ID: 011 [011] ID Unknown</p>			
<p>5. Emissions Unit Status Code:</p> <p>A</p>	<p>6. Initial Startup Date:</p> <p>January 2003</p>	<p>7. Emissions Unit Major Group SIC Code:</p> <p>33</p>	<p>8. Acid Rain Unit?</p> <p><input type="checkbox"/></p>
<p>9. Emissions Unit Comment: (Limit to 500 Characters)</p> <p>Addition of two new alloying kettles (Total of Six)</p>			

Emissions Unit Control Equipment

1. Control Equipment/Method Description (Limit to 200 characters per device or method):

A four (4) module shaker-type Baghouse with Gore Technology or equivalent bags controlling particulate and lead emissions off the kettle hoods and pouring ladles on casting machines.

•288 bags/module (3744 sq. ft./module); total of 14,976 sq. ft.

Gross air/cloth ratio with all modules on line: 2.00:1

Net air/cloth ratio with one module off line: 2.67:1

(Indirect gas combustion exhausted through separate stacks)

2. Control Device or Method Code(s): 018

Emissions Unit Details

1. Package Unit:		
Manufacturer:	Gulf Coast Recycling, Inc.	
Model Number:	N/A	
2. Generator Nameplate Rating:	N/A	MW
3. Incinerator Information:		
	Dwell Temperature:	°F
	Dwell Time:	seconds
	Incinerator Afterburner Temperature:	°F

**B. EMISSIONS UNIT CAPACITY INFORMATION
(Regulated Emissions Units Only)**

Emissions Unit Operating Capacity and Schedule

1. Maximum Heat Input Rate:	25.2 ¹	mmBtu/hr
2. Maximum Incineration Rate:	N/A	lb/hr tons/day
3. Maximum Process or Throughput Rate:		
4. Maximum Production Rate: ²		
5. Requested Maximum Operating Schedule:		
	24	hours/day
	7	days/week
	52	weeks/year
	8760	hours/year
6. Operating Capacity/Schedule Comment (limit to 200 characters):		
<p>¹ The maximum heat input rate shown is the total for all six kettles. Each kettle is 4.2 mm Btu/hr. The products of combustion for the indirect fired kettles are exhausted through separate flues than the kettle hoods.</p> <p>² Nominal charge size is 86 tons per charge per kettle (varies with type of lead being produced)</p>		

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

List of Applicable Regulations

62-296.603(1)(d) F.A.C.	
40 CFR 63 Subpart A & X	
62-204.800 F.A.C.	
62-296.603 F.A.C.	
62-212.300 F.A.C.	
62-4.07(3) F.A.C.	
62-4.210 F.A.C.	

**D. EMISSION POINT (STACK/VENT) INFORMATION
(Regulated Emissions Units Only)**

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram? Refining Stack		2. Emission Point Type Code: 2	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point): <ul style="list-style-type: none"> • Baghouse exhaust stack controlling kettle hoods • Six separate stack exhausting indirect gas combustion emissions (Exempt) 			
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: 002 Hood Exhaust for six (6) gas fired alloying kettles			
5. Discharge Type Code: V	6. Stack Height: 60.5 feet	7. Exit Diameter: 3.0 feet	
8. Exit Temperature: 98 °F	9. Actual Volumetric Flow Rate 30,000 acfm	10. Water Vapor: 2.0 % EST.	
11. Maximum Dry Standard Flow Rate: 27,820 dscfm		12. Nonstack Emission Point Height: feet	
13. Emission Point UTM Coordinates: Zone: 17 East (km): 364.027 North (km): 3093.546			
14. Emission Point Comment (limit to 200 characters): NOTE: The burner products of combustion are not exhausted through this stack.			

**E. SEGMENT (PROCESS/FUEL) INFORMATION
(All Emissions Units)**

Segment Description and Rate: Segment 1 of 2

1. Segment Description (Process/ Fuel Type) (limit to 500 characters): Natural gas used in refining kettle heaters.		
2. Source Classification Code (SCC):		3. SCC Units:
4. Maximum Hourly Rate: 25,200 ft ³ (Gas)	5. Maximum Annual Rate: 210.24 MM ft ³ (Gas)	6. Estimated Annual Activity Factor: 0.45 (for natural gas input only)
7. Maximum % Sulfur: N/A	8. Maximum % Ash: N/A	9. Million Btu per SCC Unit: 1,000 btu/CF
10. Segment Comment (limit to 200 characters): Maximum hourly rate based on all burners operating at full fire; however, plant does not ever operate in that mode. Restriction to be taken to limit annual fuel consumption such that the uncontrolled kettle flues are insignificant activity (less than 5 tons per year of any pollutant)		

Segment Description and Rate: Segment 2 of 2

1. Segment Description (Process /Fuel Type) (limit to 500 characters): Sodium Nitrate (NaNO ₃) refining material		
2. Source Classification Code (SCC):		3. SCC Units:
4. Maximum Hourly Rate:	5. Maximum Annual Rate: 500,000 lb/yr NaNO ₃	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: N/A	8. Maximum % Ash: N/A	9. Million Btu per SCC Unit:
10. Segment Comment (limit to 200 characters):		

F. EMISSIONS UNIT POLLUTANTS
(All Emissions Units)

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
PM	018	000	EL
Lead	018	000	EL
NO _x		000	EL

**G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units -
Emissions-Limited and Preconstruction Review Pollutants Only)**

Potential/Fugitive Emissions

1. Pollutant Emitted: PM	2. Total Percent Efficiency of Control: +99%
3. Potential Emissions: 0.95 lb/hour	4. Synthetically Limited? [X] 4.2 tons/year
5. Range of Estimated Fugitive Emissions: [] 1 [] 2 [] 3 _____ to _____ tons/year	
6. Emission Factor: 0.004 gr/dscf Reference:	7. Emissions Method Code:
8. Calculation of Emissions (limit to 600 characters): 0.004 gr/dscf x 27,800 dscfm x 60 min/hr divided by 7000 gr/lb = 0.95 lb.hr and (0.95 lb/hr) (8760 hrs/yr) / (2000 lb/T) = 4.2 T/yr	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code: ESCPSD	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: 0.95 lb/hr	4. Equivalent Allowable Emissions: 0.95 lb/hour 4.2 tons/year
5. Method of Compliance (limit to 60 characters): Annual compliance testing using EPA Method 5	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):	

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units - Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: Lead	2. Total Percent Efficiency of Control: +99%
3. Potential Emissions: 0.048 lb/hour 0.21 tons/year	4. Synthetically Limited? <input checked="" type="checkbox"/> X
5. Range of Estimated Fugitive Emissions: [] 1 [] 2 [] 3 _____ to _____ tons/year	
6. Emission Factor: 0.0002 gr/dscf Reference:	7. Emissions Method Code:
8. Calculation of Emissions (limit to 600 characters): <p style="text-align: center;">$0.0002 \text{ gr/dscf} \times 27,800 \text{ dscfm} \times 60 \text{ min/hr} \text{ divided by } 7000 \text{ gr/lb} = 0.048 \text{ lb/hr}$</p> <p>and $(0.048 \text{ lb/hr}) (8760 \text{ hr/yr}) / (2000 \text{ lb/T}) = 0.21 \text{ T/yr}$</p>	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): See Appendix A for estimates included in modeling analysis.	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code: F.A.C. 62-296.603	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: 0.048 lb/hr NTE 0.0002 gr/dscf	4. Equivalent Allowable Emissions: 0.048 lb/hour 0.21 tons/year
5. Method of Compliance (limit to 60 characters): Compliance will be demonstrated as outlined in the Baghouse Standard Operating Procedures Manual. Annual source testing using EPA Method 12	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):	

**G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units -
Emissions-Limited and Preconstruction Review Pollutants Only)**

Potential/Fugitive Emissions

1. Pollutant Emitted: <p align="center">NO_x</p>	2. Total Percent Efficiency of Control:
3. Potential Emissions: <p align="center">lb/hour 60.0 tons/year</p>	4. Synthetically Limited? []
5. Range of Estimated Fugitive Emissions: [] 1 [] 2 [] 3 _____ to _____ tons/year	
6. Emission Factor: 0.24 lb/lb NaNO ₃ for NaNO ₃ Reference:	7. Emissions Method Code: <p align="center">3, 5</p>
8. Calculation of Emissions (limit to 600 characters): 500,000 lb NaNO ₃ /yr x 0.24 lb/lb NaNO ₃ x 1 Ton/2000 lb = 60 ton/yr 500,000 lb NaNO ₃ /yr x 0.24 lb/lb NaNO ₃ x 1 yr/8760 hr = 13.7 lb/hr (annual average)	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: <p align="center">60 T/yr, if required</p>	4. Equivalent Allowable Emissions: <p align="center">N/A lb/hr 60 tons/year</p>
5. Method of Compliance (limit to 60 characters): Monthly NaNO ₃ usage and source specific emission factor	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): Actual emissions less than PSD significance level, therefore, requested limit on amount of NaNO ₃ only.	

H. VISIBLE EMISSIONS INFORMATION
(Only Regulated Emissions Units Subject to a VE Limitation)

Visible Emissions Limitation: Visible Emissions Limitation 1 of 1

1. Visible Emissions Subtype: VE03	2. Basis for Allowable Opacity: <input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other
3. Requested Allowable Opacity: 3% Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance: Annual Visible emissions reading using EPA Method 9	
5. Visible Emissions Comment (limit to 200 characters): 	

I. CONTINUOUS MONITOR INFORMATION
(Only Regulated Emissions Units Subject to Continuous Monitoring)

Continuous Monitoring System: Continuous Monitor _____ of _____

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	<input type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information: Manufacturer: Model Number:	Serial Number:
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment (limit to 200 characters): 	

**J. EMISSIONS UNIT SUPPLEMENTAL INFORMATION
(Regulated Emissions Units Only)**

Supplemental Requirements

1. Process Flow Diagram <input checked="" type="checkbox"/> Attached, Document ID: <u> C </u> [] Not Applicable [] Waiver Requested
2. Fuel Analysis or Specification <input type="checkbox"/> Attached, Document ID: _____ [X] Not Applicable [] Waiver Requested
3. Detailed Description of Control Equipment <input checked="" type="checkbox"/> Attached, Document ID: <u> See Item 10 Below </u> [X] Not Applicable [] Waiver Requested
4. Description of Stack Sampling Facilities <input type="checkbox"/> Attached, Document ID: _____ [] Not Applicable [X] Waiver Requested
5. Compliance Test Report <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously submitted, Date: _____ <input checked="" type="checkbox"/> Not Applicable
6. Procedures for Startup and Shutdown <input type="checkbox"/> Attached, Document ID: <u> * </u> [] Not Applicable [] Waiver Requested
7. Operation and Maintenance Plan <input type="checkbox"/> Attached, Document ID: <u> * </u> [] Not Applicable [] Waiver Requested
8. Supplemental Information for Construction Permit Application <input type="checkbox"/> Attached, Document ID: _____ [X] Not Applicable
9. Other Information Required by Rule or Statute <input type="checkbox"/> Attached, Document ID: _____ [X] Not Applicable
10. Supplemental Requirements Comment: <p>* These plans are being updated and will be submitted for approval prior to modification start-up.</p>

Additional Supplemental Requirements for Title V Air Operation Permit Applications

11. Alternative Methods of Operation <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
12. Alternative Modes of Operation (Emissions Trading) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
13. Identification of Additional Applicable Requirements <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
14. Compliance Assurance Monitoring Plan <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
15. Acid Rain Part Application (Hard-copy Required) <input type="checkbox"/> Acid Rain Part - Phase II (Form No. 62-210.900(1)(a)) Attached, Document ID: _____ <input type="checkbox"/> Repowering Extension Plan (Form No. 62-210.900(1)(a)1.) Attached, Document ID: _____ <input type="checkbox"/> New Unit Exemption (Form No. 62-210.900(1)(a)2.) Attached, Document ID: _____ <input type="checkbox"/> Retired Unit Exemption (Form No. 62-210.900(1)(a)3.) Attached, Document ID: _____ <input type="checkbox"/> Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.) Attached, Document ID: _____ <input type="checkbox"/> Phase NOx Averaging Plan (Form No. 62-210.900(1)(a)5.) Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable

III. EMISSIONS UNIT INFORMATION

A separate Emissions Unit Information Section (including subsections A through J as required) must be completed for each emissions unit addressed in this Application for Air Permit. If submitting the application form in hard copy, indicate, in the space provided at the top of each page, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application.

**A. GENERAL EMISSIONS UNIT INFORMATION
(All Emissions Units)**

Emissions Unit Description and Status

<p>1. Type of Emissions Unit Addressed in This Section: (Check one)</p> <p><input type="checkbox"/> This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).</p> <p><input checked="" type="checkbox"/> This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.</p> <p><input type="checkbox"/> This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.</p>			
<p>2. Regulated or Unregulated Emissions Unit? (Check one)</p> <p><input checked="" type="checkbox"/> The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.</p> <p><input type="checkbox"/> The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.</p>			
<p>3. Description of Emissions Unit Addressed in This Section (limit to 60 characters):</p> <p>Existing Blast Furnace Charging and Tapping</p>			
<p>4. Emissions Unit Identification Number: ID: 004</p>		<p><input type="checkbox"/> No ID <input checked="" type="checkbox"/> [004] ID Unknown</p>	
<p>5. Emissions Unit Status Code: A</p>	<p>6. Initial Startup Date: January 2003</p>	<p>7. Emissions Unit Major Group SIC Code: 33</p>	<p>8. Acid Rain Unit? <input type="checkbox"/></p>
<p>9. Emissions Unit Comment: (Limit to 500 Characters)</p> <p>Previous Sources 004 and 006 have been combined into one control device.</p>			

Emissions Unit Control Equipment

1. Control Equipment/Method Description (Limit to 200 characters per device or method):

A three (3) module shaker-type baghouse with Gore Technology or equivalent bags.
Baghouse controlling emissions from Blast Furnace Charging and Tapping

204 bags/module (2,650 sq. ft./module); total of 7,950 sq. ft.

Gross air/cloth ratio with all modules on line: 2.52:1
Net air/cloth ratio with one module off line: 3.77:1

2. Control Device or Method Code(s): 018

Emissions Unit Details

1. Package Unit:	
Manufacturer:	Gulf Coast Recycling, Inc
Model Number:	N/A
2. Generator Nameplate Rating:	N/A MW
3. Incinerator Information:	
Dwell Temperature:	°F
Dwell Time:	seconds
Incinerator Afterburner Temperature:	°F

**B. EMISSIONS UNIT CAPACITY INFORMATION
(Regulated Emissions Units Only)**

Emissions Unit Operating Capacity and Schedule

1. Maximum Heat Input Rate:	mmBtu/hr
2. Maximum Incineration Rate:	lb/hr tons/day
3. Maximum Process or Throughput Rate:	N/A See 001
4. Maximum Production Rate:	N/A
5. Requested Maximum Operating Schedule:	
	24 hours/day 7 days/week
	52 weeks/year 8760 hours/year
6. Operating Capacity/Schedule Comment (limit to 200 characters):	
<p>Process and Production rates based on 24-hour average</p>	

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

List of Applicable Regulations

40 CFR 63 Subpart A & X	
62-204.800 F.A.C.	
62-296.700 F.A.C.	
62-296.800 F.A.C.	
62-296.603 F.A.C.	
62-212.300 F.A.C.	
40 CFR 60.122(a)	

**D. EMISSION POINT (STACK/VENT) INFORMATION
(Regulated Emissions Units Only)**

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram? Tapping/Charging Stack		2. Emission Point Type Code: 1	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point): Exhaust stack from baghouse controlling emissions from blast furnace charging and tapping.			
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: Blast furnace charging hood and tapping hoods			
5. Discharge Type Code: V	6. Stack Height: 60.5 feet	7. Exit Diameter: 2.5 feet	
8. Exit Temperature: 118	9. Actual Volumetric Flow Rate: 20,000 acfm	10. Water Vapor: 2 %	
11. Maximum Dry Standard Flow Rate: 18,000 dscfm		12. Nonstack Emission Point Height: feet	
13. Emission Point UTM Coordinates: Zone: 17 East (km): 364.109 North (km): 3093.545			
14. Emission Point Comment (limit to 200 characters):			

**E. SEGMENT (PROCESS/FUEL) INFORMATION
(All Emissions Units)**

Segment Description and Rate: Segment 1 of 1

1. Segment Description (Process/Fuel Type) (limit to 500 characters): Blast Furnace Charging and Tapping		
2. Source Classification Code (SCC):		3. SCC Units: Tons
4. Maximum Hourly Rate:	5. Maximum Annual Rate:	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment (limit to 200 characters):		

Segment Description and Rate: Segment _____ of _____

1. Segment Description (Process/Fuel Type) (limit to 500 characters):		
2. Source Classification Code (SCC):		3. SCC Units:
4. Maximum Hourly Rate:	5. Maximum Annual Rate:	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment (limit to 200 characters):		

F. EMISSIONS UNIT POLLUTANTS
(All Emissions Units)

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
PM	018	000	EL
VOC			EL
Lead	018	000	EL

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units -
Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: PM	2. Total Percent Efficiency of Control: +99%
3. Potential Emissions: 0.68 lb/hour	4. Synthetically Limited? [X] 3.0 tons/year
5. Range of Estimated Fugitive Emissions: [] 1 [] 2 [] 3 _____ to _____ tons/year	
6. Emission Factor: 0.005 gr/dscf Reference:	7. Emissions Method Code: 0
8. Calculation of Emissions (limit to 600 characters): 0.0044 gr/dscf x 18,000dscfm x 60 min/hr divided by 7000 gr/lb = 0.68 lb/hr and (0.68 lb/hr) (8760 hr/yr) / (2000 lb/T) = 3.0 T/yr	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code: ESCPD	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: 0.68 lb/hr	4. Equivalent Allowable Emissions: 0.68 lb/hour 3.0 tons/year
5. Method of Compliance (limit to 60 characters): Compliance will be demonstrated as outlined in the Baghouse Standard Operating Procedures Manual Annual Source Testing using Method 5.	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): Rule 62-212.300	

**G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units -
Emissions-Limited and Preconstruction Review Pollutants Only)**

Potential/Fugitive Emissions

1. Pollutant Emitted: VOC		2. Total Percent Efficiency of Control:	
3. Potential Emissions: N/A lb/hour		13.4 tons/year	4. Synthetically Limited? [X]
5. Range of Estimated Fugitive Emissions: [] 1 [] 2 [] 3 _____ to _____ tons/year			
6. Emission Factor: 20 ppmd Reference:		7. Emissions Method Code:	
8. Calculation of Emissions (limit to 600 characters): At 10,000 CFM hood volume, $(20 \text{ ppm}) (44.1 \text{ M.W.}) (10,000 \text{ ft}^3/\text{min}) (60 \text{ min/hr}) / (385.6 \times 10^6) = 1.4 \text{ lb/hr}$ $(1.4 \text{ lb/hr}) (8760 \text{ hr/yr}) / (2000 \text{ lb/T}) = 6.0 \text{ T/yr}$			
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): Calculations above based on estimated charge door hood exhaust volume of 10,000; however actual volume to be established at time of compliance test.			

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:		2. Future Effective Date of Allowable Emissions:	
3. Requested Allowable Emissions and Units: 20 ppmd (charge hood) NTE 13.4 T/yr		lb/hour	13.4 tons/year
5. Method of Compliance (limit to 60 characters): Annual source testing using EPA Method 25A Annual face velocity testing using EPA Method 2 or Anemometer			
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): Part per million limit established by MACT; however ton/year limit requested based on netting analysis. See calculations in Appendix A.			

**G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units -
Emissions-Limited and Preconstruction Review Pollutants Only)**

Potential/Fugitive Emissions

1. Pollutant Emitted: Lead	2. Total Percent Efficiency of Control: +99%
3. Potential Emissions: 0.10 lb/hour	4. Synthetically Limited? [X] 0.44 tons/year
5. Range of Estimated Fugitive Emissions: [] 1 [] 2 [] 3 _____ to _____ tons/year	
6. Emission Factor: 0.00065 gr/dscf Reference:	7. Emissions Method Code:
8. Calculation of Emissions (limit to 600 characters): 0.00065 gr/dscfm x 18,000 dscfm x 60 min/hr divided by 7000 gr/lb = 0.10 lb/hr and (0.10 lb/hr) (8760 hr/yr) / (2000 lb/T) = 0.44 T/yr	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): See Appendix A for lead fugitive dust estimates used in modeling analysis.	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code: 40CFR63, Subpart X	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: 0.00087 gr/dscf NTE 0.10 lb/hr	4. Equivalent Allowable Emissions: 0.10 lb/hour 0.44 tons/year
5. Method of Compliance (limit to 60 characters): Annual source testing using EPA Method 12	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): 62-212.300	

H. VISIBLE EMISSIONS INFORMATION
(Only Regulated Emissions Units Subject to a VE Limitation)

Visible Emissions Limitation: Visible Emissions Limitation 1 of 1

1. Visible Emissions Subtype: VE03 VE06	2. Basis for Allowable Opacity: [X] Rule [] Other
3. Requested Allowable Opacity: VE03 Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance: Annual VE readings using EPA Method 9	
5. Visible Emissions Comment (limit to 200 characters): VE03 – At the exit of the control equipment From the closed charge door on the blast furnace VE06 – From the blast furnace during charging.	

I. CONTINUOUS MONITOR INFORMATION
(Only Regulated Emissions Units Subject to Continuous Monitoring)

Continuous Monitoring System: Continuous Monitor _____ of _____

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	[] Rule [] Other
4. Monitor Information: Manufacturer: Model Number: Serial Number:	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment (limit to 200 characters):	

**J. EMISSIONS UNIT SUPPLEMENTAL INFORMATION
(Regulated Emissions Units Only)**

Supplemental Requirements

1. Process Flow Diagram <input checked="" type="checkbox"/> Attached, Document ID: <u> C </u> [] Not Applicable [] Waiver Requested
2. Fuel Analysis or Specification [] Attached, Document ID: _____ [X] Not Applicable [] Waiver Requested
3. Detailed Description of Control Equipment [] Attached, Document ID: _____ [] Not Applicable [X] Waiver Requested (Existing equipment)
4. Description of Stack Sampling Facilities [] Attached, Document ID: _____ [X] Not Applicable [] Waiver Requested
5. Compliance Test Report [] Attached, Document ID: _____ [] Previously submitted, Date: _____ [X] Not Applicable
6. Procedures for Startup and Shutdown [] Attached, Document ID: <u> * </u> [] Not Applicable [] Waiver Requested
7. Operation and Maintenance Plan [] Attached, Document ID: <u> * </u> [] Not Applicable [] Waiver Requested
8. Supplemental Information for Construction Permit Application [] Attached, Document ID: _____ [X] Not Applicable
9. Other Information Required by Rule or Statute [] Attached, Document ID: _____ [X] Not Applicable
10. Supplemental Requirements Comment: * These plans are being updated and will be submitted for approval prior to modification start-up.

Additional Supplemental Requirements for Title V Air Operation Permit Applications

11. Alternative Methods of Operation <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
12. Alternative Modes of Operation (Emissions Trading) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
13. Identification of Additional Applicable Requirements <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
14. Compliance Assurance Monitoring Plan <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
15. Acid Rain Part Application (Hard-copy Required) <input type="checkbox"/> Acid Rain Part - Phase II (Form No. 62-210.900(1)(a)) Attached, Document ID: _____ <input type="checkbox"/> Repowering Extension Plan (Form No. 62-210.900(1)(a)1.) Attached, Document ID: _____ <input type="checkbox"/> New Unit Exemption (Form No. 62-210.900(1)(a)2.) Attached, Document ID: _____ <input type="checkbox"/> Retired Unit Exemption (Form No. 62-210.900(1)(a)3.) Attached, Document ID: _____ <input type="checkbox"/> Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.) Attached, Document ID: _____ <input type="checkbox"/> Phase NOx Averaging Plan (Form No. 62-210.900(1)(a)5.) Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable

III. EMISSIONS UNIT INFORMATION

A separate Emissions Unit Information Section (including subsections A through J as required) must be completed for each emissions unit addressed in this Application for Air Permit. If submitting the application form in hard copy, indicate, in the space provided at the top of each page, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application.

**A. GENERAL EMISSIONS UNIT INFORMATION
(All Emissions Units)**

Emissions Unit Description and Status

<p>1. Type of Emissions Unit Addressed in This Section: (Check one)</p> <p><input type="checkbox"/> This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).</p> <p><input checked="" type="checkbox"/> This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.</p> <p><input type="checkbox"/> This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.</p>			
<p>2. Regulated or Unregulated Emissions Unit? (Check one)</p> <p><input checked="" type="checkbox"/> The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.</p> <p><input type="checkbox"/> The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.</p>			
<p>3. Description of Emissions Unit Addressed in This Section (limit to 60 characters): CRT and Pallet Crushing Operations and Sanitary Controls (Furnace Charging and Tapping) for new blast furnace</p>			
<p>4. Emissions Unit Identification Number: <input type="checkbox"/> No ID</p> <p>ID: 012 [012] ID Unknown</p>			
<p>5. Emissions Unit Status Code: C</p>	<p>6. Initial Startup Date: January 2003</p>	<p>7. Emissions Unit Major Group SIC Code: 33</p>	<p>8. Acid Rain Unit? <input type="checkbox"/></p>
<p>9. Emissions Unit Comment: (Limit to 500 Characters)</p> <p>The baghouse to be installed for the permitted CRT and pallet crusher will be upgraded to handle the sanitary hoods for new blast furnace.</p>			

Emissions Unit Control Equipment

1. Control Equipment/Method Description (Limit to 200 characters per device or method):

Baghouse controlling emissions from crusher and associated conveyor system and emissions from new furnace charging and tapping hoods.

Baghouse will be a five (5) module 30,000 cfm shaker-type baghouse with Gore Technology or equivalent coated acrylic fabric. Each module has 204 bags and a total of 2,650 square feet of cloth for a total of 13,250 sq. ft.

Gross air/cloth ratio with all modules on line: 2.26:1
 Net air/cloth ratio with one module off line: 2.83:1

2. Control Device or Method Code(s): 018

Emissions Unit Details

1. Package Unit:	
Manufacturer:	Model Number:
2. Generator Nameplate Rating: MW	
3. Incinerator Information:	
Dwell Temperature:	°F
Dwell Time:	seconds
Incinerator Afterburner Temperature:	°F

**B. EMISSIONS UNIT CAPACITY INFORMATION
(Regulated Emissions Units Only)**

Emissions Unit Operating Capacity and Schedule

1. Maximum Heat Input Rate:	mmBtu/hr
2. Maximum Incineration Rate: N/A lb/hr	tons/day
3. Maximum Process or Throughput Rate: 5,000 lb/hr for crusher	
4. Maximum Production Rate: N/A	
5. Requested Maximum Operating Schedule:	
24 hours/day	7 days/week
52 weeks/year	8760 hours/year
6. Operating Capacity/Schedule Comment (limit to 200 characters):	
<p>The crusher will be utilized alternately between pallet and CRT's. Annual throughput is projected to be approximately 1,250,000 lb/yr pallets and approximately 2,520,000 lb/yr CRT's. Maximum operating time for the crusher is 2080 hours per year.</p> <p>The production through the new furnace is addressed in Emission Unit 1. The sanitary controls will be operating 100% of the time the furnace is operating. It is requested that this unit be permitted for 8760 hours per year.</p>	

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

List of Applicable Regulations

62-204 F.A.C.	
62-296.603 F.A.C.	
40 CFR 63 Subparts A and X	
62-212.300 F.A.C.	
62-4.070(3) F.A.C.	
62-296.320 F.A.C.	
62-4.210 F.A.C.	

**D. EMISSION POINT (STACK/VENT) INFORMATION
(Regulated Emissions Units Only)**

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram? New Tapping/Charging Stack		2. Emission Point Type Code: 1	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point): Exhaust Stack from baghouse controlling emissions from a crusher and associated Conveyor system and emissions from new blast furnace charging and tapping hoods.			
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: 0011			
5. Discharge Type Code: V	6. Stack Height: 60.5 feet	7. Exit Diameter: 3.0 feet	
8. Exit Temperature: 118 °F	9. Actual Volumetric Flow Rate: 30,000 acfm	10. Water Vapor: ~ 1.7 %	
11. Maximum Dry Standard Flow Rate: 26,900 dscfm		12. Nonstack Emission Point Height: feet	
13. Emission Point UTM Coordinates: Zone: 17 East (km): 364.081 North (km): 3093.515			
14. Emission Point Comment (limit to 200 characters):			

**E. SEGMENT (PROCESS/FUEL) INFORMATION
(All Emissions Units)**

Segment Description and Rate: Segment _____ of _____

1. Segment Description (Process/Fuel Type) (limit to 500 characters): None		
2. Source Classification Code (SCC):		3. SCC Units:
4. Maximum Hourly Rate:	5. Maximum Annual Rate:	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment (limit to 200 characters):		

Segment Description and Rate: Segment _____ of _____

1. Segment Description (Process/Fuel Type) (limit to 500 characters):		
2. Source Classification Code (SCC):		3. SCC Units:
4. Maximum Hourly Rate:	5. Maximum Annual Rate:	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment (limit to 200 characters):		

**F. EMISSIONS UNIT POLLUTANTS
(All Emissions Units)**

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
PM	018		EL
Lead	018		EL
VOC			EL

**G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units -
Emissions-Limited and Preconstruction Review Pollutants Only)**

Potential/Fugitive Emissions

1. Pollutant Emitted: PM	2. Total Percent Efficiency of Control: 99+%
3. Potential Emissions: 1.02 lb/hour 4.5 tons/year	4. Synthetically Limited? [X]
5. Range of Estimated Fugitive Emissions: [] 1 [] 2 [] 3 to tons/year	
6. Emission Factor: 0.0044 gr/dscf Reference:	7. Emissions Method Code:
8. Calculation of Emissions (limit to 600 characters): 0.0044 gr/dscf x 26,900 dscfm x 60 min/hr divided by 7000 gr/lb = 1.02 lb/hr and (1.02 lb/hr) (8760 hr/yr) (2000 lb/T) = 4.5 T/yr	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code: ESCPD	2. Future Effective Date of Allowable Emissions:
2. Requested Allowable Emissions and Units: 1.02 lb/hr	4. Equivalent Allowable Emissions: 1.02 lb/hour 4.5 tons/year
5. Method of Compliance (limit to 60 characters): Compliance will be demonstrated as outlined in the Baghouse Standard Operating Procedures. Additionally Annual source testing per EPA Method 5	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): 62-212.300	

**G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units -
Emissions-Limited and Preconstruction Review Pollutants Only)**

Potential/Fugitive Emissions

1. Pollutant Emitted: Lead	2. Total Percent Efficiency of Control: 99+%
3. Potential Emissions: 0.15 lb/hour 0.66	4. Synthetically Limited? [X]
5. Range of Estimated Fugitive Emissions: [] 1 [] 2 [] 3 _____ to _____ tons/year	
6. Emission Factor: 0.00065 gr/dscf Reference:	7. Emissions Method Code: 0
8. Calculation of Emissions (limit to 600 characters): 0.00065 gr/dscf x 26,900 dscfm x 60 min/hr divided by 7000 gr/lb = 0.15 lb/hr and (0.15 lb/hr) (8760 hr/yr) (2000 lb/T) = 0.66 T/yr	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code: F.A.C. 62.212.300, 40CFR63	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: 0.00065 gr/dscf or 0.15 lb/hr	4. Equivalent Allowable Emissions: 0.15 lb/hour 6.6 tons/year
5. Method of Compliance (limit to 60 characters): Compliance will be demonstrated as outlined in the Baghouse Standard Operating Procedures. Additionally Annual source testing per EPA Method 5	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): 62-212.300	

**G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units -
Emissions-Limited and Preconstruction Review Pollutants Only)**

Potential/Fugitive Emissions

1. Pollutant Emitted: VOC		2. Total Percent Efficiency of Control:	
3. Potential Emissions: N/A lb/hour		13.4 tons/year	4. Synthetically Limited? [X]
5. Range of Estimated Fugitive Emissions: [] 1 [] 2 [] 3 _____ to _____ tons/year			
6. Emission Factor: Reference:		7. Emissions Method Code:	
8. Calculation of Emissions (limit to 600 characters):			
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):			

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code: 40CFR63, Subpart X		2. Future Effective Date of Allowable Emissions:	
3. Requested Allowable Emissions and Units: 20 ppm (charge hood) NTE 13.4 T/yr		lb/hour	13.4 tons/year
5. Method of Compliance (limit to 60 characters): Annual source testing using EPA Method 25A Annual face velocity testing using EPA Method 2 or Anemometer			
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):			

H. VISIBLE EMISSIONS INFORMATION
(Only Regulated Emissions Units Subject to a VE Limitation)

Visible Emissions Limitation: Visible Emissions Limitation 1 of 1

1. Visible Emissions Subtype:	2. Basis for Allowable Opacity: [X] Rule [] Other
3. Requested Allowable Opacity: Normal Conditions: 3 % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance:	
5. Visible Emissions Comment (limit to 200 characters):	

I. CONTINUOUS MONITOR INFORMATION
(Only Regulated Emissions Units Subject to Continuous Monitoring)

Continuous Monitoring System: Continuous Monitor _____ of _____

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	[] Rule [] Other
4. Monitor Information: Manufacturer: _____ Model Number: _____ Serial Number: _____	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment (limit to 200 characters):	

**J. EMISSIONS UNIT SUPPLEMENTAL INFORMATION
(Regulated Emissions Units Only)**

Supplemental Requirements

1. Process Flow Diagram <input checked="" type="checkbox"/> Attached, Document ID: <u>C</u> <input type="checkbox"/> Not Applicable <input type="checkbox"/> Waiver Requested
2. Fuel Analysis or Specification <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable <input type="checkbox"/> Waiver Requested
3. Detailed Description of Control Equipment <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable <input checked="" type="checkbox"/> Waiver Requested
4. Description of Stack Sampling Facilities <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable <input type="checkbox"/> Waiver Requested
5. Compliance Test Report <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously submitted, Date: _____ <input checked="" type="checkbox"/> Not Applicable
6. Procedures for Startup and Shutdown <input type="checkbox"/> Attached, Document ID: <u>*</u> <input type="checkbox"/> Not Applicable <input type="checkbox"/> Waiver Requested
7. Operation and Maintenance Plan <input type="checkbox"/> Attached, Document ID: <u>*</u> <input type="checkbox"/> Not Applicable <input type="checkbox"/> Waiver Requested
8. Supplemental Information for Construction Permit Application <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
9. Other Information Required by Rule or Statute <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
10. Supplemental Requirements Comment:

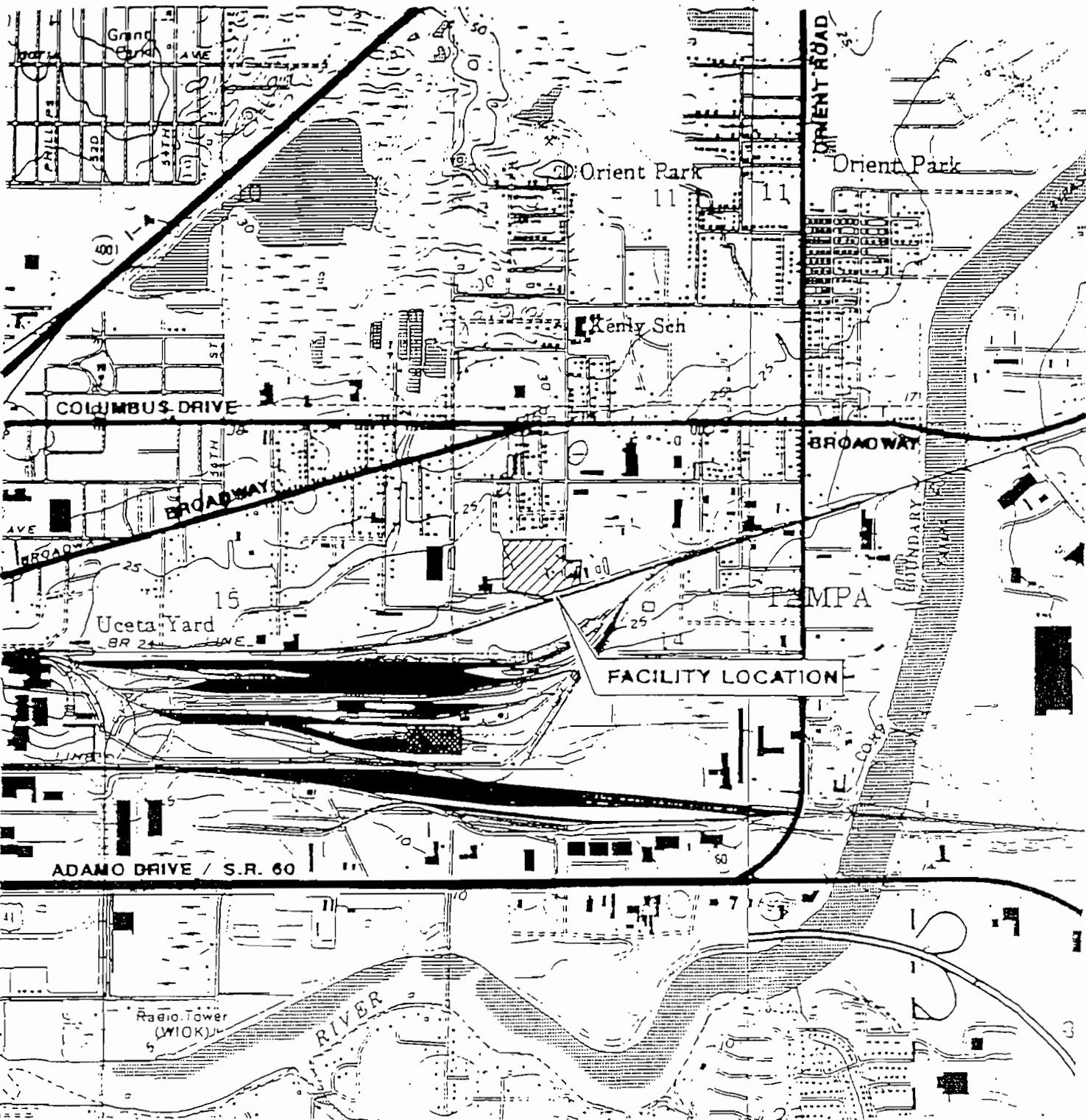
Additional Supplemental Requirements for Title V Air Operation Permit Applications

11. Alternative Methods of Operation <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
12. Alternative Modes of Operation (Emissions Trading) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
13. Identification of Additional Applicable Requirements <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
14. Compliance Assurance Monitoring Plan <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
15. Acid Rain Part Application (Hard-copy Required) <input type="checkbox"/> Acid Rain Part - Phase II (Form No. 62-210.900(1)(a)) Attached, Document ID: _____ <input type="checkbox"/> Repowering Extension Plan (Form No. 62-210.900(1)(a)1.) Attached, Document ID: _____ <input type="checkbox"/> New Unit Exemption (Form No. 62-210.900(1)(a)2.) Attached, Document ID: _____ <input type="checkbox"/> Retired Unit Exemption (Form No. 62-210.900(1)(a)3.) Attached, Document ID: _____ <input type="checkbox"/> Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.) Attached, Document ID: _____ <input type="checkbox"/> Phase NOx Averaging Plan (Form No. 62-210.900(1)(a)5.) Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable

ATTACHMENT A
FACILITY SITE MAP

TAMPA
QUADRANGLE

BRANDON
QUADRANGLE



SOURCE: USGS 7.5 MINUTE QUADRANGLES
TAMPA 1981
BRANDON 1987

R. 19E.

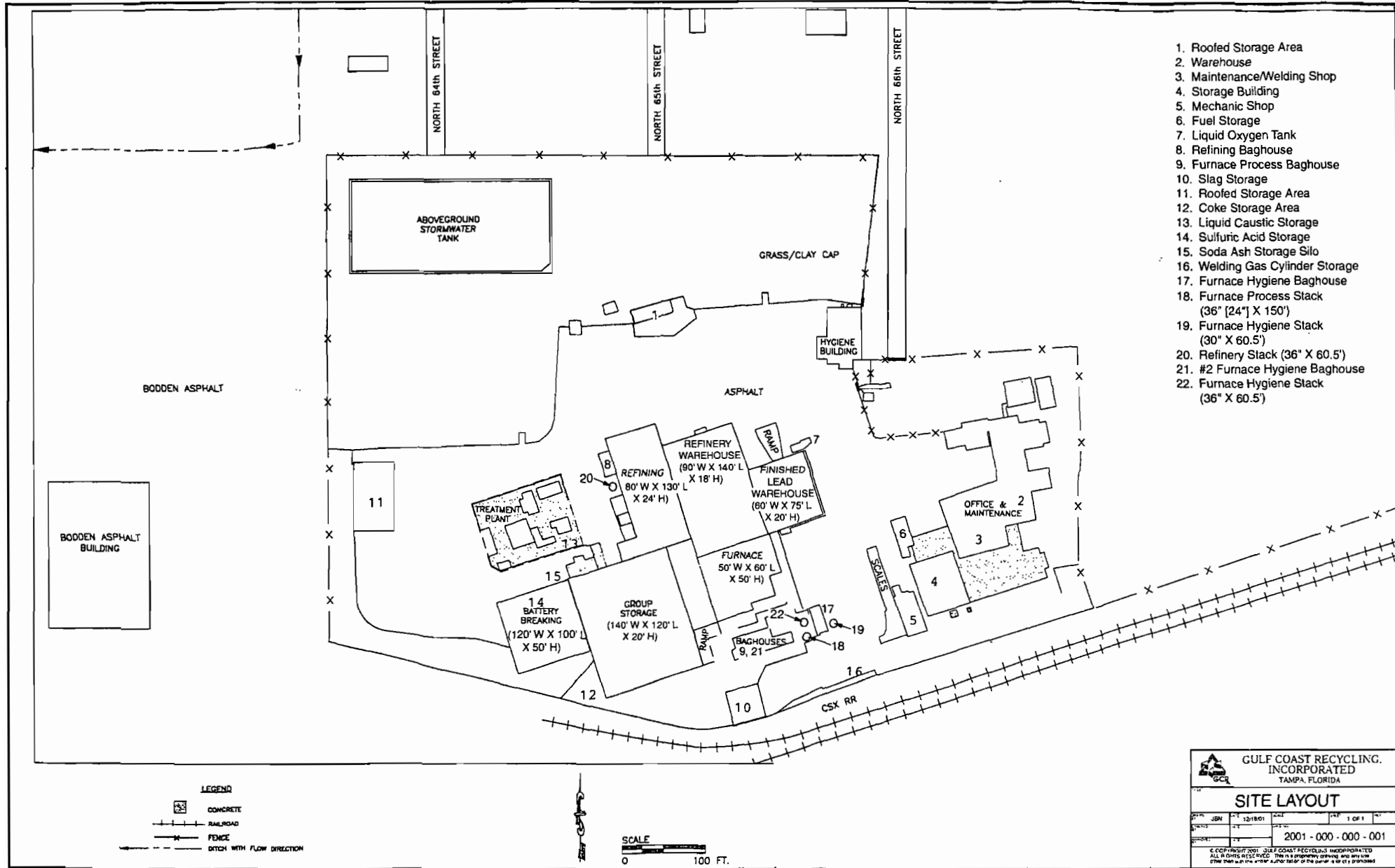
CONTOUR INTERVAL 5 FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1929



GULF COAST RECYCLING, INC.

Facility Location

ATTACHMENT B
FACILITY PLOT PLAN



1. Roofed Storage Area
2. Warehouse
3. Maintenance/Welding Shop
4. Storage Building
5. Mechanic Shop
6. Fuel Storage
7. Liquid Oxygen Tank
8. Refining Baghouse
9. Furnace Process Baghouse
10. Slag Storage
11. Roofed Storage Area
12. Coke Storage Area
13. Liquid Caustic Storage
14. Sulfuric Acid Storage
15. Soda Ash Storage Silo
16. Welding Gas Cylinder Storage
17. Furnace Hygiene Baghouse
18. Furnace Process Stack (36" [24"] X 150')
19. Furnace Hygiene Stack (30" X 60.5')
20. Refinery Stack (36" X 60.5')
21. #2 Furnace Hygiene Baghouse
22. Furnace Hygiene Stack (36" X 60.5')

GULF COAST RECYCLING, INCORPORATED
TAMPA, FLORIDA

SITE LAYOUT

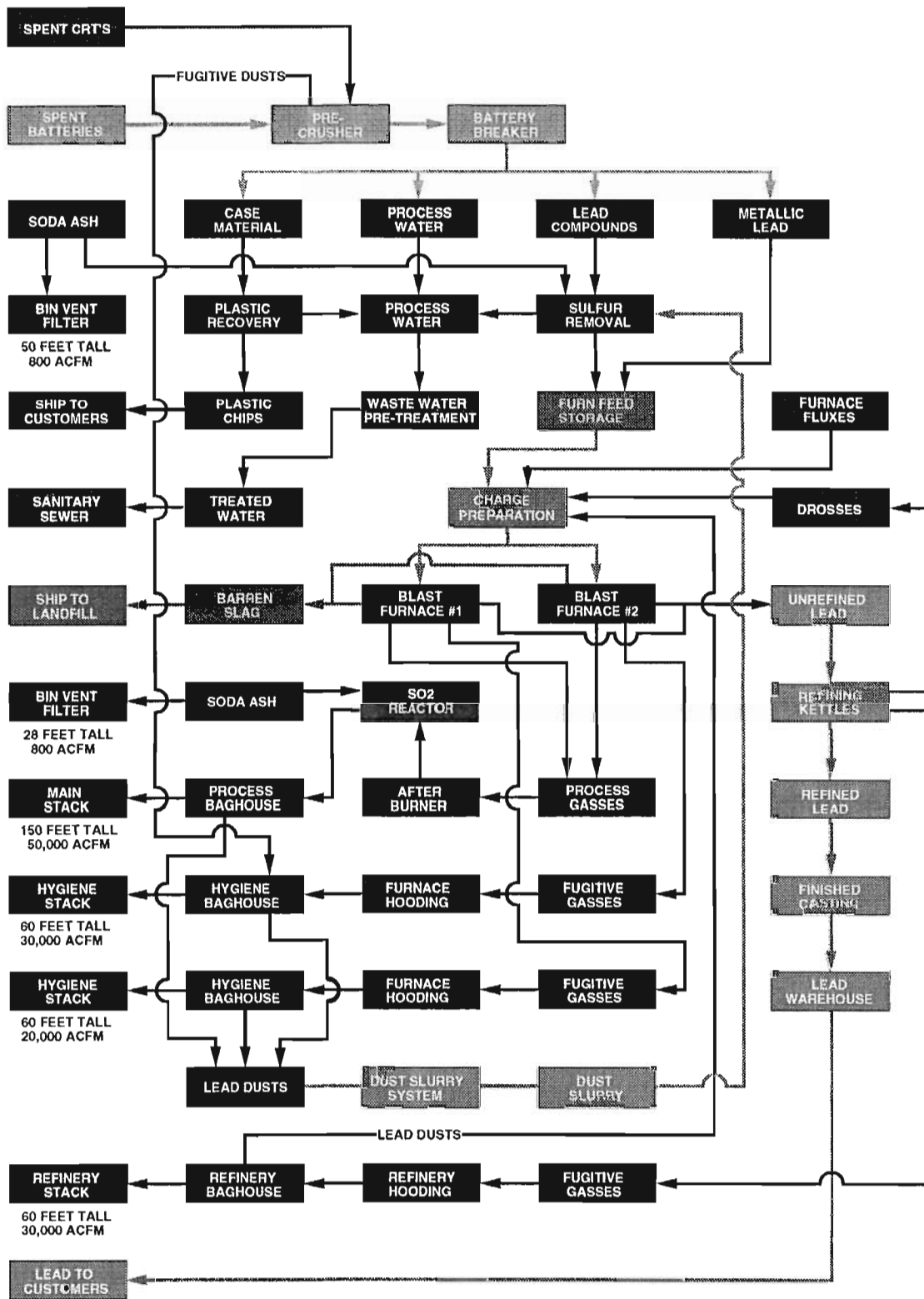
DATE	12/18/01	SCALE	1" = 100'
PROJECT NO.	2001-000-000-001		

© COPYRIGHT 2001 GULF COAST RECYCLING, INCORPORATED
ALL RIGHTS RESERVED. This is a preliminary drawing and any use other than as the author's master copy of the plan is prohibited.

ATTACHMENT C
PROCESS FLOW DIAGRAM

GULF COAST RECYCLING, INC.

PROCESS FLOWCHART



ATTACHMENT D
FUGITIVE DUST PLAN

**STANDARD OPERATING PROCEDURES
FOR THE CONTROL OF FUGITIVE EMISSIONS**

GULF COAST RECYCLING, INC.
1901 NORTH 66th STREET
TAMPA, FL 33619

REVISED SEPTEMBER 13, 2000

Introduction

Gulf Coast Recycling, Inc. (GCR) is a secondary lead smelter. The facility processes spent lead acid batteries. Battery components are separated and the lead bearing materials are smelted in a blast furnace rendering a product known as blast lead. The blast lead is further refined to produce specific grades of lead for the manufacture of new batteries.

The facility has a Blast Furnace Operation, Refining Operation, CRT and Pallet Crushing Operation, Battery Breaking/Recycling Operation, and a Materials Storage and Handling Area for lead-bearing materials.

GCR is committed to the operation of its facility in a manner which will comply with applicable federal, state, and county environmental regulations and in harmony with the surrounding community. GCR has operated at its present location for more than thirty five (35) years and expects to continue operation well into the next century. Regulatory compliance is a corporate commitment. This commitment is vigorously reinforced throughout the company, from the top down.

Purpose

The purpose of this plan is to maintain effective fugitive controls to meet the requirements of the U.S. Environmental Protection Agency (EPA), the Florida Department of Environmental Protection (FDEP), and the Environmental Protection Commission of Hillsborough County (EPC).

The EPA's National Emission Standards for Hazardous Air Pollutants (NESHAP) for Secondary Lead Smelting (40 CFR 63 Subpart X) apply to this facility. This rule requires the owner to prepare and operate in accordance with a standard operating procedures (SOP) manual that describes the measures used to control fugitive emissions at the facility. The NESHAP requirements are also referred to as EPA Maximum Achievable Control Technology (MACT) standards for secondary lead smelters.

FDEP rule 62-296.601 requires lead processing operations located within lead non-attainment or maintenance areas to employ reasonably available control technology (RACT) to control potential fugitive emissions at the facility. The RACT rule addresses measures that apply to areas and activities that are not addressed by the MACT rule or are more stringent than the MACT requirements. These measures are also covered in this SOP. Additionally, GCR entered into a Consent Order (CO), case No. 95-0728SKWO57, with the EPC which has specific requirements which are also incorporated into this SOP manual.

The EPC is the administrator of the aforementioned EPA and FDEP regulations and is authorized to issue facility construction and operation permits. All of the NESHAP, MACT, RACT and CO requirements will be incorporated as specific conditions into an air construction permit to be issued by the County to GCR. This SOP manual will also be incorporated, by reference, as a specific condition.

Potential sources of fugitive emissions at the facility include:

- (1) Plant Roadways and Parking Areas
- (2) Battery Recycling (Battery Breaking)
- (3) Blast Furnace Area

- (4) Refining and Casting Area
- (5) Materials Storage and Handling Area (Group Pile)
- (6) CRT & Pallet Crushing Area
- (7) Unpaved Outside Areas

Operating Procedures

The following procedures will be used at GCR, at a minimum, for the control of fugitive emissions:

Plant Roadways

Vehicular traffic areas are all paved and are periodically wetted down by a ten zone (see attached plot plan) automatic sprinkler system. Each zone is setup with a timer and control valve that cycles the zone on several times a day. The timers are electronic programmable timers in lockable plastic cases. Sprinkler operation will be noted on the Sprinkler Operation Log sheet (see Attachment 1). The sprinkler zones and cycles are as follows:

<u>Zone</u>	<u>Location</u>	<u>On/Off Time</u>
1	Office Parking Lot Fence	10 Min./80 Min.
2	Maintenance Shop/Roofed Parking Area, Front Gate, and Hygiene Building	10 Min./80 Min.
3	Refining, Pig Warehouse and N.E. Comer of Furnace	10 Min./80 Min.
4	Furnace Baghouses	10 Min./80 Min.
5	S.E. Wall Section	10 Min./80 Min.
6	S.W. Wall Section	10 Min./80 Min.
7	Waste Water Treatment Plant	10 Min./80 Min.
8	West Pavement Perimeter	10 Min./80 Min.
9	Northwest Pavement Perimeter	10 Min./80 Min.
10	Old Battery Saw Area	10 Min./80 Min.

As indicated above, zone 1 and zone 7 will cycle on for ten (10) minutes and off for eighty (80) minutes, independently, on a daily basis. The remaining zones will operate as follows:

Zones 2 & 3 on simultaneously - 10 minutes
 (Note: Zones 2 & 3 are on the same timer)

10 Minute Delay

Zones 4 & 9 on simultaneously - 10 minutes

10 Minute Delay

Zones 5 & 10 on simultaneously - 10 minutes

10 Minute Delay

Zones 6 & 8 on simultaneously - 10 minutes

10 Minute Delay

Zone 7 on 10 - minutes

10 Minute Delay

There is approximately ten (10) minutes between the cycling of each zone(s).

The single impulse sprinkler at the plant entrance gate and the two impulse sprinklers on the hygiene building will operate automatically with zone 2 and zone 3 sprinklers.

Number and type of sprinklers in use:

<u>Zone</u>	<u>Location</u>	<u>Quantity & Type</u>
1	Office Parking Lot Fence	13 Spray Heads
2	Maintenance Shop/Roofed Parking Area	5 Impulse Heads
3	Refining, Pig Warehouse and N.E. Comer of Furnace	7 Impulse Heads
4	Furnace Baghouses	5 Impulse Heads
5	S.E. Wall Section	11 Spray Heads
6	S.W. Wall Section	16 Spray Heads
7	Waste Water Treatment Plant	5 Impulse Heads
8	West Pavement Perimeter	7 Impulse Heads
9	Northwest Pavement Perimeter	6 Impulse Heads
10	Old Battery Saw Area	2 Impulse Heads

Traffic paths shall be vacuumed three (3) times each day with a Tennant, or equivalent, vacuum sweeper except when rain occurs or when areas are sufficiently wetted by the pavement sprinkler system. The employee parking lots will be vacuumed three (3) times a week, unless prohibited by prolonged periods of rainfall. Sweeper operation will be noted on the Sweeper Operation Log sheet (see Attachment 2). Several sprinkler zones cycle on and off automatically throughout the day which keep the plant traffic paths wet.

Battery Breaking Area

This area is partially enclosed with walls on all four sides. The walls extend down from the roof line to approximately ten (10) feet from the top of the curbing that is around the entire floor area. Approximately three quarters of the east wall is directly adjacent to the west wall of the materials storage and handling area which provides a wall from the roof to the floor. Any wash down water or process water from the operation gravity flows to a collection sump on the north side of the building. Water collected in the sump is pumped to the on-site waste water treatment plant for treatment. The battery breaking area will be washed/hosed down at least two times per day. Each wash down will be noted on the daily operation log sheet and signed by the operator (see Attachment 3).

Blast Furnace Area

The blast furnace area is partially enclosed with walls on the south, east and west side that extend down from the roof to approximately fourteen (14') feet from the floor. The wall on the north side is shared with the refining area and extends down to the floor. The furnace is bordered on the south by the baghouses which are walled in and is bordered on the west (approximately 30 feet away) by the materials storage and handling area building. The furnace work area will be washed/hosed down at least two times per day; a minimum of once during two of the three shifts. Each wash down will be noted on the shift operation log sheet and signed by the operator (see Attachment 4). The wash down water in the furnace area gravity flows to one of two floor sumps. The sumps are located on the east and west sides of the blast furnace area. Water collected in these sumps will be pumped to the waste water treatment plant for treatment.

Potential process fugitive emissions in the blast furnace operation are controlled by enclosures and hoods that are vented to baghouses. The blast furnace slag tapping enclosure, lead tapping hood and the blast furnace charging enclosure are vented to the furnace hygiene baghouse. The dust agglomeration furnace slag tapping enclosure is vented to the main process baghouse. The openings or faces of these hoods and enclosures will meet the 300 feet per minute face velocity requirements while access doors are in the normal operating position.

Refining Area

The refining area is partially enclosed. The south wall extends from the roof to the floor (this is the north wall of the material storage area). The west and north and a portion of the east walls extend to within 6 feet of the concrete waist wall around the building. The pig warehouse directly east and adjacent to the refining area essentially provides a wall for two thirds of the east side of the refining area. The work area will be washed/hosed down at least two times per day. Each wash down will be noted on the daily operation log sheet and signed by the operator (see Attachment 5). Wash down water in the refining area is collected in a floor sump near the south wall of the area. Wash down water collected in the sump is pumped to the waste water treatment plant for treatment.

Potential process fugitive emissions in the refining operation are controlled by hoods over each of the four refining kettles. The hoods are vented to a baghouse. The kettle hoods will meet the 250 feet per minute face velocity requirement while the doors are in their normal operating position.

Molten lead is pumped from the kettles to one of two casting machines. A pre-set amount of lead is delivered to the pig molds through a star ladle at the front end of the casting machines. The star ladle is kept hot with a gas flame. A hood is provided over the star ladle to capture potential emissions. The face of the hood will meet the 250 feet per minute face velocity requirement.

CRT and Pallet Crushing

This operation is partially enclosed with walls on two sides to the roof and is open on the west side (forklift ramp side) and is connected into the battery wrecker building on the north side.

This area will be washed with a directed water wash three times per day, whether or not the system is operating. Each floor cleaning will be indicated on the daily wash down log (see attachment #6).

The floor will be sloped to drain to the battery breaker building where wash down water will be collected in the battery breaker floor sump for pumping to the waste water pre-treatment facility.

Potential fugitive emissions will be controlled by hooding and ventilation for the crusher with a face velocity of at least 250 feet per minute.

Materials Storage and Handling Area

The materials storage and handling area has walls from the roof to the floor on a four sides. There is an approximately 24' X 14' equipment access opening on the west side of the area. There is an approximately 12' X 13' loading/unloading ramp access opening on the north side of the area. Accumulated water in this area gravity flows to one of two floor sumps. There is a collection sump on the east wall near the southeast corner of the area and one sump on the north side of the area. Water collected in the east sump is pumped to the waste water treatment plant for treatment. Water collected in the north sump will be pumped to the desulfurization reactor(s) or to the waste water treatment plant for treatment. The pathways within this area will be wetted down as needed to prevent the generation of dust. The materials stored in this area are washed/wetted prior to storage and will remain moist even after long term storage. Additional wetting of the stored material will be provided, as needed, to prevent the generation of dust (see Attachment 7).

The main entrance/exit to the materials storage and handling area is under a contiguous roof that provides covered access for equipment moving between the materials storage and handling, blast furnace and refining areas. An employee is stationed at this location for the sole purpose of pressure washing any equipment (forklift, front-end loader) that will be leaving the roofed area. The washing of the equipment will be documented on a log (see Attachment 8).

The activities described above will be documented on a separate log sheet or the daily operating log kept for each process operation (see attached forms).

Unpaved Outside Areas

The unpaved areas of the facility are grassed and will be maintained as such. There will be no routine traffic in these areas. Equipment traffic in the grassed areas will be limited to access for maintenance and up keep or to effect repairs to equipment (i.e. pumps, motors) that are located off or at the edge of the paved areas.

Attachment 1
Sprinkler Operation Log

Month: _____

Year: _____

Day	By	Sprinkler Zones In Operation									
		No. 1	No. 2	No. 3	No. 4	No. 5	No. 6	No. 7	No. 8	No. 9	No. 10
1											
2											
3											
4											
5											
6											
7											
8											
9											
10											
11											
12											
13											
14											
15											

If a sprinkler or a zone is inoperable, please note the inoperable zone and the measures taken to effect the repairs and/or replacements needed. Document the date of the repairs.

Sprinkler Operation Log

Month: _____

Year: _____

Day	By	Sprinkler Zones In Operation									
		No. 1	No. 2	No. 3	No. 4	No. 5	No. 6	No. 7	No. 8	No. 9	No. 10
16											
17											
18											
19											
20											
21											
22											
23											
24											
25											
26											
27											
28											
29											
30											
31											

If a sprinkler or a zone is inoperable, please note the inoperable zone and the measures taken to effect the repairs and/or replacements needed. Document the date of the repairs.

Attachment 2

Sweeper Operation Log

Date: _____

Operator	Start Time	Hour Meter Reading		Operation Time	Area(s) Swept
		Start	End		

Area(s) Swept: (1) Plant Roadways, (2) Office Parking Lot, (3) Safety Office Parking Lot

Under areas swept, list by number the areas swept each time the sweeper is operated. The plant roadways must be swept a minimum of three times each day. The parking lots must be swept a minimum of three time per week.

Engine Air Filter: Check Indicator _____ Empty Dust Cap _____

Engine Crankcase: Check Oil Level _____

Brush Compartment Skirt: Check For Damage & Wear _____
Adjustments Made: _____ (Yes or NO)

Hopper Lip Skirts: Check For Damage & Wear _____
Adjustments Made: _____ (Yes or NO)

Main Brush: Check For Damage & Wear _____
Adjustments Made: _____ (Yes or NO)

Hopper Dust Filters: Condition of Filters _____
Filters Changed _____ (Yes or No)
Filter Screens Changed _____ (Yes or No)

- 1.) Operators must sign the log sheet each time the sweeper is used.
- 2.) Shake the hopper filters approximately every fifteen minutes.

Notes: _____

Attachment 3

Battery Breaking Operation

Date: _____

Operator: _____

<u>Start Time</u>	<u>End Time</u>	<u>Run Time</u>
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

Remote Conveyor Panel Hour Meter: (Read Daily)

Start: _____ Hours End: _____ Hours

Processing Time: _____ Hours Pallets Processed: _____

Dehumidifier Magnehelic Readings: Inlet _____ "H2O Outlet: _____ "H2O

Soda Ash Silo Panel Hour Meter: (Read Daily)

Start: _____ Hours End: _____ Hours

Soda Ash Delivery: _____ (Yes or No)

Soda Ash Silo Level: Start _____ Ft. End _____ Ft.

Floor Wash Downs:

1. _____ Time: _____ Signature: _____
2. _____ Time: _____ Signature: _____
3. _____ Time: _____ Signature: _____

Floor Must be washed down at least twice each day.

Notes: _____

Daily Blast Furnace Operation Process Sheet

Date: _____ Shift: _____ Operator: _____ Start Time: _____

No.	Time	Tag No.		1	2	3	4	5	6	7	8
1			1 1/2 Coke								
2			Return Slag								
3			Iron 135, Lime 135								
4											
5			2 Groups								
6											
7			3 Groups								
8											
9			4 1/2 Coke								
10											
11			5 Groups								
12			Iron 135, Lime 135								
13											
14			6 1/2 Coke								
15											
16			7 Groups								
			8 Groups								

Furnace Area Wash Downs

1. Time: _____ Signed: _____
 2. Time: _____ Signed: _____
 3. Time: _____ Signed: _____

Area must be washed down at least once each shift

Slag Pull Times:

Dust Slag Pots:

Equipment & Furnace Checks:

Furnace
Bucket
Tweers Open
Pipes Cleaned
Scale
Torch
Pressure Washer

Baghouse Differential Pressure Readings						
3)	4)	5)	6)	7)	8)	
9)	10)	11)	12)	H1)	H2)	H3)

Baghouse Inlet Temp. Degrees F: _____

Attachment 5

Daily Refining Operation Process Sheet

Date: _____ Operator: _____

	Pot No. 1	Pot No. 2	Pot No. 3
Type Lead			
Preparation Time	Start	Start	Start
	Finish	Finish	Finish
Pumping Time	Start	Start	Start
	Finish	Finish	Finish
Total Hours			

Blast Lead Buttons Used: _____ Average Weight Each : _____ Lbs.

Finished Pigs Produced: _____ Average Weight Each : _____ Lbs.

Finished 1/2 Pigs Produced: _____ Average Weight Each : _____ Lbs.

Refining Materials Used: _____ Recycled Pigs or Scrap Lead: _____ Lbs.

Arsenic [] _____ Lbs. Sodium Hydroxide [] _____ Lbs.

Antimony [] _____ Lbs. Red Phosphorous [] _____ Lbs.

Aluminum [] _____ Lbs. Sodium Nitrate [] _____ Lbs.

Sulfur [] _____ Lbs. Calcium [] _____ Lbs.

Tin [] _____ Lbs. Selenium [] _____ Lbs.

Drosses Removed: Tin _____ Lbs. Antimony _____ Lbs. Misc. _____ Lbs.

Final Saw Dust Wash: _____ Shovels Used

Baghouse Differential Pressure Readings R1: _____ "H2O R2: _____ "H2O

Emission Control System Inspection (Baghouses, Fan, Duct Work & Hoods): OK []

Stack Observed: _____

Floor Wash Downs: Floor area must be washed down at least twice day

1 _____ Time: _____ Signed: _____

2 _____ Time: _____ Signed: _____

3 _____ Time: _____ Signed: _____

**CRT & PALLET CRUSHER SYSTEM
DAILY WASHDOWN LOG**

DAY	DATE	1 ST CLEANING		2 ND CLEANING		3 RD CLEANING	
		TIME	DONE BY:	TIME	DONE BY:	TIME	DONE BY:
MONDAY							
TUESDAY							
WEDNESDAY							
THURSDAY							
FRIDAY							
SATURDAY							
SUNDAY							

NOTES:

MONDAY: _____

TUESDAY: _____

WEDSDAY: _____

THURSDAY: _____

FRIDAY: _____

SATURDAY: _____

SUNDAY: _____

Attachment 7

Materials Storage and Handling Area

Sprinkler System Operation

Month: _____

Year: _____

Day	Signed By	(1) Sprinklers Operated	(2) Pile(s) Surface	(3) Visible Dust Noticed	(5) Sump Pumps Operational
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
31					

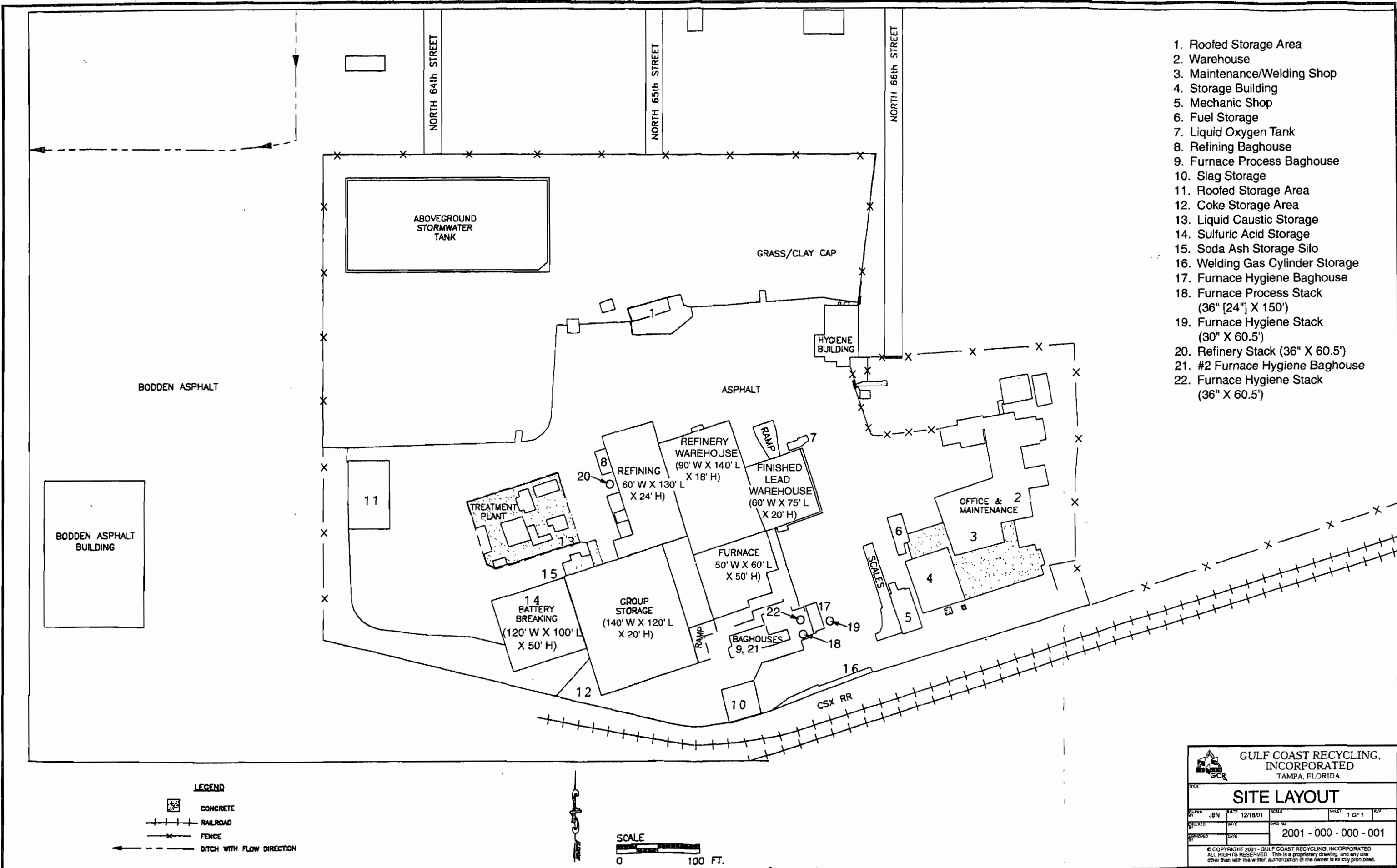
Attachment 8

Daily Vehicle Wash Log

Date: _____

	Blast Furnace Front-end Loader	Washed By	Blast Furnace Fork Lift	Washed By
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
19				
20				

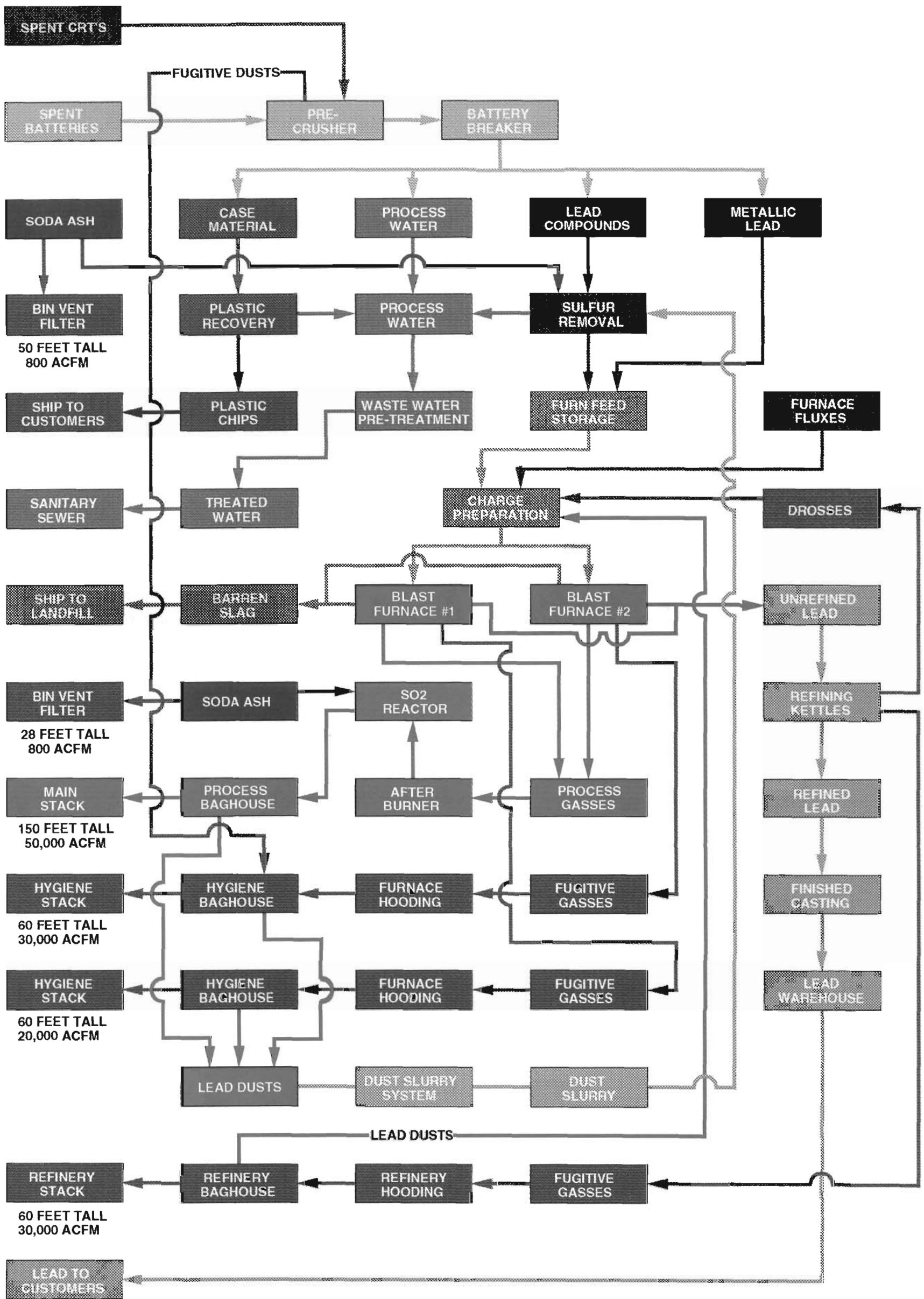
The equipment must be washed each time before it exits the roofed area of the blast furnace.
The individual washing the equipment must check off and sign the log sheet each time it is washed.



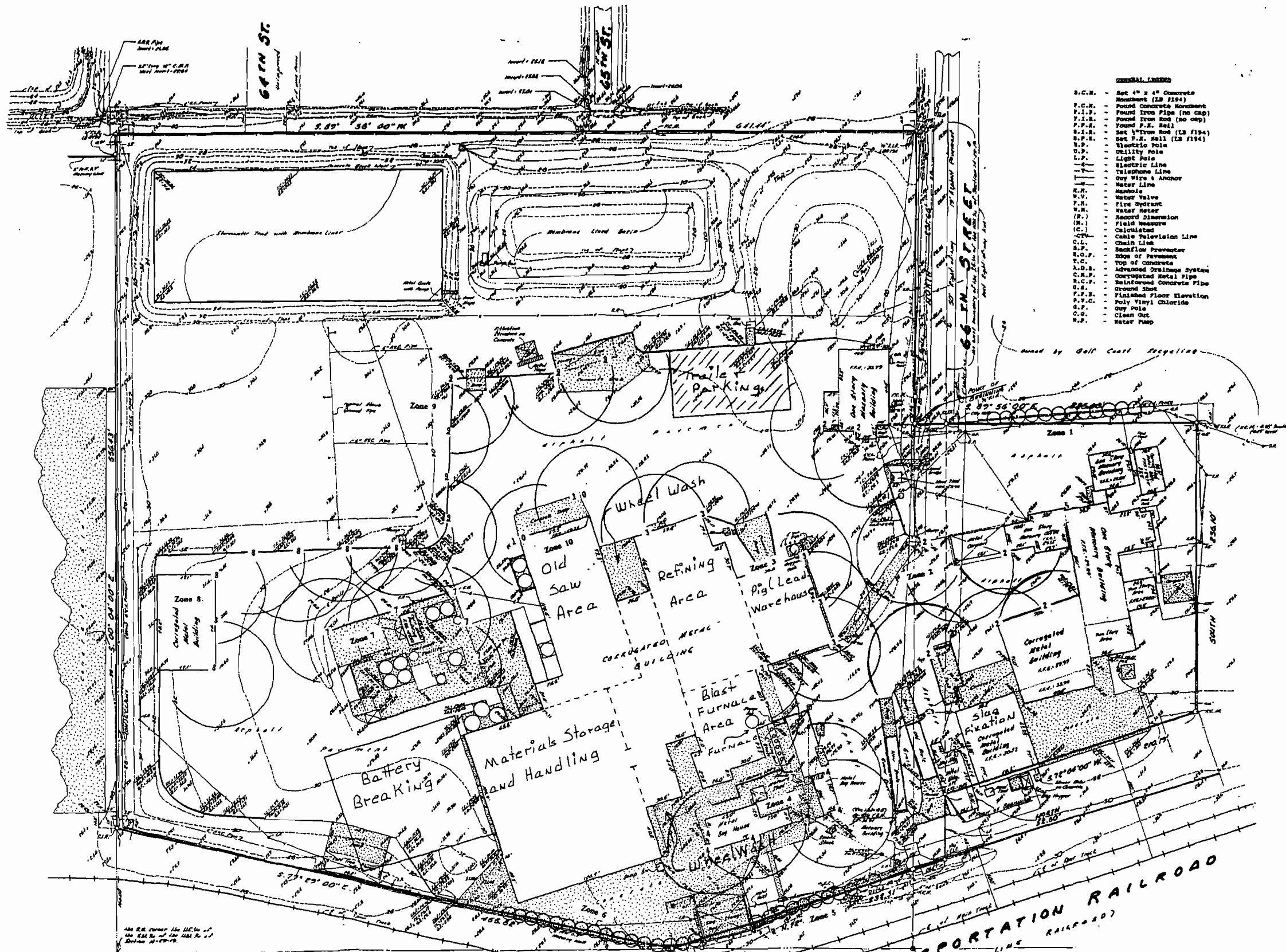
1. Roofed Storage Area
2. Warehouse
3. Maintenance/Welding Shop
4. Storage Building
5. Mechanic Shop
6. Fuel Storage
7. Liquid Oxygen Tank
8. Refining Baghouse
9. Furnace Process Baghouse
10. Slag Storage
11. Roofed Storage Area
12. Coke Storage Area
13. Liquid Caustic Storage
14. Sulfuric Acid Storage
15. Soda Ash Storage Silo
16. Welding Gas Cylinder Storage
17. Furnace Hygiene Baghouse
18. Furnace Process Stack (36" [24"] X 150')
19. Furnace Hygiene Stack (30" X 60.5')
20. Refinery Stack (36" X 60.5')
21. #2 Furnace Hygiene Baghouse
22. Furnace Hygiene Stack (36" X 60.5')

GULF COAST RECYCLING, INC.

PROCESS FLOWCHART



SECTION 14, TOWNSHIP 27 SOUTH, RANGE 19 EAST, CITY OF TAMPA, FLORIDA



- SYMBOLS:**
- S.C.M. - Set 4" x 4" Concrete Monument (L.S. 1194)
 - F.C.M. - Found Concrete Monument
 - F.I.P. - Found Iron Pipe (no cap)
 - F.I.R. - Found Iron Rod (no cap)
 - F.P.S. - Found P.S. Nail
 - S.I.S. - Set 1" Iron Rod (L.S. 1194)
 - S.P.S. - Set P.S. Nail (L.S. 1194)
 - U.P. - Utility Pole
 - L.P. - Light Pole
 - E.L. - Electric Line
 - F.L. - Fire Line
 - W.V. - Water Valve
 - F.H. - Fire Hydrant
 - W.M. - Water Meter
 - (R.) - Record Dimension
 - (M.) - Field Measure
 - (C.) - Calculated
 - C- - Cable Television Line
 - C.L. - Chain Line
 - S.P. - Scaffolding Pile
 - S.O.P. - Slope of Pavement
 - T.C. - Top of Concrete
 - A.O.S. - Advanced Drainage System
 - C.M.P. - Corrugated Metal Pipe
 - R.C.P. - Reinforced Concrete Pipe
 - G.S. - Ground Spot
 - F.P.L. - Floor Level
 - P.V.C. - Poly Vinyl Chloride
 - O.P. - Guy Pole
 - C.P. - Clean Out
 - W.P. - Water Pump

LEGAL DESCRIPTION:
 Part of the Northwest 1/4 of the Southwest 1/4 of the Northwest 1/4 of Section 14, Township 27 South, Range 19 East, Hillsborough County, Florida, described as follows: From the Northwest corner of the Southwest 1/4 of the Northwest 1/4 Section 14, run South 89° 58' west along the North boundary of said Southwest 1/4 of the Northwest 1/4 of Section 14, a distance of 25.0 feet to a point-of-beginning on the West right-of-way line of 66th Street; from said point-of-beginning, continue South 89° 58' west along the North boundary of said Southwest 1/4 of the Northwest 1/4 of Section 14, a distance of 311.44 feet to the Northwest corner of the Northeast 1/4 of the Southwest 1/4 of the Northwest 1/4 of Section 14; run thence South 0° 04' East along the West boundary of said Northeast 1/4 of the Southwest 1/4 of the Northwest 1/4 of Section 14, a distance of 488.33 feet to a point on the South boundary of said Northeast 1/4 of the Southwest 1/4 of the Northwest 1/4 of Section 14, which point is 144.7 feet East of the Southwest corner of said Northeast 1/4 of the Southwest 1/4 of the Northwest 1/4 of Section 14; run thence North 77° 22' East a distance of 488.33 feet to a point on the South boundary of said Northeast 1/4 of the Southwest 1/4 of the Northwest 1/4 of Section 14, which point is 144.7 feet East of the Southwest corner of said Northeast 1/4 of the Southwest 1/4 of the Northwest 1/4 of Section 14; run thence North 77° 22' East along the North boundary of said Northeast 1/4 of the Southwest 1/4 of the Northwest 1/4 of Section 14, a distance of 23.0 feet to a point on the West right-of-way line of 66th Street a distance of 211.46 feet to the point-of-beginning.

AND:
 Part of the Southeast 1/4 of the Southwest 1/4 of Section 14, Township 27 South, Range 19 East, Hillsborough County, Florida, described as follows: From a point-of-beginning in the intersection of the West boundary of the Northwest 1/4 of the Northwest 1/4 of Section 14 and the North right-of-way line of Atlantic Coast Line Railroad, which point is 100.0 feet Westward (measured at right angles) from the centerline of said railroad, run North along said West boundary of the Southwest 1/4 of the Northwest 1/4 of Section 14 a distance of 300.0 feet; run thence South 89° 58' East (measured) (measured East by previous description) a distance of 100.0 feet; run thence South, parallel to the West boundary of said Southwest 1/4 of the Northwest 1/4 of Section 14, a distance of 233.1 feet to a point on the North right-of-way line of Atlantic Coast Line Railroad; run thence South 77° 04' East along said North right-of-way line of Atlantic Coast Line Railroad a distance of 70.19 feet to the point-of-beginning.

- EXPLANATORY NOTES:**
1. No underground foundations, structures, installations or improvements have been located unless otherwise shown hereon.
 2. See legend for symbols and/or abbreviations used hereon.
 3. This survey is NOT VALID UNLESS INCORPORATED WITH SURVEYORS SEAL and was prepared for the exclusive use of the owner named and does not constitute a warranty or guarantee the title thereto and/or others whose names appear on the face of this survey.
 4. This person located in Flood Zone 100-A as per the Flood Insurance Rate Map for the City of Tampa, Florida, Community Panel Number 10012A, effective date 12/22/77. Base Flood Elevation, if applicable, is 10.0 feet. Elevation date is 10-23-78, unless otherwise shown.
 5. This survey prepared without the benefit of a title search. No instruments of record reflecting ownership, assessments or rights of way were furnished to the undersigned, unless otherwise shown hereon.
 6. Elevations shown hereon are in feet and refer to N.G.V.D. - 29 Datum.
 7. Reference Benchmark is City of Tampa Circuit No. 22 Benchmark No. 1418. Elevation = 29.721.
 8. One-site temporary benchmark is "O" cut set on the S.W. corner of New Truck Scale located 110' N. and 14' W. of the S.E. corner of the S.W. 1/4 of the S.W. 1/4 of Section 14-19-19. Elevation = 10.31 (See Sheet)

CERTIFICATE:
 This certifies that the property described herein was surveyed under my direction and supervision, that the above hereon is a true and accurate representation of the same, and that this survey meets the minimum technical standards of Chapter 210-8, Florida Administrative Code, to the best of my knowledge and belief. I filed no encumbrances except as shown hereon.

PAUL WOODS ENGINEERING COMPANY
 J. J. WOODS
 Florida Registration No. 5271

10-11-78
 Date of Survey

PAUL WOODS ENGINEERING CO. CIVIL ENGINEERS-LAND SURVEYORS 1808 NORTH FLORIDA AVENUE-TAMPA, FLORIDA 33602-1180 813-287-1147			
Scale 1"=40'	NOT VALID UNLESS EMBOSSED WITH SURVEYORS SEAL	PL 1071, LR 23 PL 37-53	
DATE 10-11-78	BY J. J. WOODS	CHECKED [Signature]	
BOUNDARY SURVEY With Elevation and Occupation			
FOR Gulf Coast Requilting, Inc.			
NO. 1001	DATE 11-15-78	ADDED [Signature]	
NO. 1002	DATE 12-6-78	ADDED [Signature]	
NO. 1003	DATE 2-1-79	ADDED [Signature]	

Surveyed and shown as shown on this plan. The above survey was made by Paul Woods, Registered Professional Engineer, No. 5271, State of Florida.