Carol Kemker

Florida Department of Environmental Protection

Marjory Stoneman Douglas Building
3900 Commonwealth Boulevard
Tallahassee, Florida 32399-3000

October 15, 2009

Mr. A. Stanley Meiburg
Acting Regional Administrator
U. S. Environmental Protection Agency - Region 4
Atlanta Federal Center
61 Forsyth Street
Atlanta, Georgia 30303-8960

Dear Mr. Meiburg:

I am responding to your September 15, 2009, letter to Florida Governor Charlie Crist requesting recommendations for the designation of "attainment," "nonattainment," and "unclassifiable" areas in Florida with respect to the 2008 revised national ambient air quality standard (NAAQS) for lead.

Currently, the area encompassed within a radius of five kilometers centered at UTM coordinates: 364.0 East, 3093.5 North, zone 17 in the City of Tampa, Hillsborough County, is designated unclassifiable for lead by the U.S. Environmental Protection Agency (EPA) at 40 CFR 81.310. The rest of the state is not designated. On behalf of Governor Crist, I recommend that the current five-kilometer area in Tampa remain designated as unclassifiable and that the rest of the state be designated as attainment for the lead NAAQS. The enclosed summary of Florida's ambient lead data shows that, outside of Tampa, all current and historical lead monitors in the state comply with the revised air quality standard. I believe it is appropriate to retain the current unclassifiable designation for the Tampa area until the extensive modifications to the secondary lead smelter, described further below, have been completed, and sufficient monitoring data have been collected to verify that the changes produce attainment with the NAAQS for lead.

With respect to Tampa, my recommendation is consistent with the approach, long favored by the Hillsborough County Environmental Protection Commission (HCEPC), the Florida Department of Environmental Protection (DEP) and EPA, that the area's lead problem can best be addressed through a source-specific state implementation plan (SIP) revision, rather than by designating the area nonattainment. This approach is based on the recognition that the high lead concentrations in the area are highly localized and due primarily to fugitive emissions from a single facility, a secondary lead smelter, located at the center of the five-kilometer circle.

The HCEPC has, for many years, monitored lead concentrations in the vicinity of the secondary lead smelter (formerly Gulf Coast Recycling Co.; now EnviroFocus Technologies). Since 1990, a monitor located about 100 meters south of the fence line of the property has occasionally violated the former ambient air quality standard for lead (4th quarter 1991, 4th quarter 2000, and 4th quarter 2007). All evidence strongly points to fugitive lead emissions from the facility as the cause of these violations.

Based on this assessment of the problem, EPA approved a revision to Florida's SIP on September 18, 1996, that included stack emission standards for various lead sources in the Tampa area but also required the state to submit an additional SIP revision providing a source-specific fugitive emissions control plan for the Gulf Coast Recycling facility. A fugitive emissions control plan was developed for Gulf Coast Recycling and submitted to EPA as a proposed SIP revision on December 9, 1999. That plan, along with other measures taken by the company, has generally been effective; however, as noted above, violations of the lead standard were recorded in the fourth quarters of 2000 and 2007. Following the violation in 2000, DEP committed to EPA that it would require the facility to implement a more stringent fugitive emissions control plan and submit the revised plan to EPA as a replacement for the 1999 SIP submittal.

In early 2002, Gulf Coast Recycling submitted a permit application to modernize the facility and partially enclose its operations. The reduction of fugitive emissions was identified as a critical issue in the review of this application by HCEPC and DEP. Before the permit was issued, however, the project was abandoned as the company began negotiations to sell the plant. In 2007, EnviroFocus Technologies purchased the facility and submitted a new permit application to expand production capacity and completely enclose the facility's operations. In September 2009, DEP issued a permit to EnviroFocus (enclosed) to undertake the plant expansion and enclosure. The project will significantly reduce lead emissions from the facility and, as discussed in the DEP's Preliminary Determination and Technical Evaluation (enclosed), will not cause or contribute to violations of the revised ambient air quality standard for lead. Furthermore, the permit includes a fugitive emissions control plan and a requirement that the company conduct post-construction monitoring at two additional sites near the facility.

Now that the EnviroFocus project is underway, DEP will submit a proposed SIP revision to EPA incorporating the emission reductions obtained through the project. This SIP revision will fulfill DEP's commitment to EPA to replace the 1999 submittal with a more effective plan. With total enclosure of the facility, the source-specific SIP control strategy approach that the agencies have been following will have achieved its goal of substantially reducing fugitive emissions from the site.

Thank you for your continued support of our efforts to fully implement the Clean Air Act in Florida. If you have any questions regarding this letter, please contact Joe Kahn, Director of DEP's Division of Air Resource Management, at (850) 488-0114.

Sincerely,

Michael W. Sole
Secretary

Enclosures

cc: Mimi Drew, Deputy Secretary, Regulatory Programs, DEP
Joseph Kahn, Director, Division of Air Resource Management, DEP

Florida Ambient Lead Data

The following tables contain monitoring data from lead monitoring sites in the State of Florida over the last fifteen years. Included are data from the last lead monitoring site(s) to be shut down in each county where lead monitoring occurred. We believe this dataset to be representative of the lead concentrations in each region. The latest three years of quarterly data for each monitoring site are shown, with the three-month rolling average calculated for each year. The maximum three-month rolling average for each year is displayed in the last column of each table. Disregarding the two monitoring sites near the secondary lead smelter in Hillsborough County, all maximum three-month rolling averages are well below the revised air quality standard for lead.

Lead (12128) Units: µg/m^3 (25C)

Site:L0115005 - Winston Pk Blvd, Coconut Creek County:Broward AQS Monitor ID:12-011-5005-12128-1

Year	1st Max		2nd Max		Quarterly Averages (#Valid Observations)								Max 3 Month Rolling Average
					1st Quarter		2nd Quarter		3rd Quarter		4th Quarter		
1998	0.05	(06/22)	0.04	(04/17)	0.0118*	(11.00)	0.03	(13.00)	0.02	(13.00)	0.01	(15.00)	0.02(06/1998)
1999	0.06	(10/03)	0.05	(01/30)	0.02	(15.00)	0.02	(15.00)	0.02	(13.00)	0.02	(15.00)	0.02(07/1999)
2000	0.35	(01/01)	0.05	(02/06)	0.04	(16.00)	0.0000*	0.00	0.0000*	0.00	0.0000*	0.00	0.04(03/2000)

* There was insufficient data to produce a valid average.

National primary and secondary ambient air quality standards for lead and its compounds are: 0.15 micrograms per cubic meter maximum 3 month rolling average.

Lead (12128) Units: µg/m^3 (25C)

Site:L0310032 - Kooker Park, Jacksonville County:Duval AQS Monitor ID:12-031-0032-12128-1

Year	1st Max		2nd Max		Quarterly Averages (#Valid Observations)								Max 3 Month Rolling Average
					1st Quarter		2nd Quarter		3rd Quarter		4th Quarter		
2000	0.22	(02/08)	0.05	(01/01)	0.0277	(16.00)	0.01	(15.00)	0.01	(14.00)	0.01	(15.00)	0.04(02/2000)
2001	0.05	(02/06)	0.03	(05/19)	0.0172*	(9.00)	0.01	(14.00)	0.01	(15.00)	0.01	(15.00)	0.01(02/2001)
2002	0.02	(01/08)	0.02	(02/01)	0.0088	(15.00)	0.00	(15.00)	0.0000*	(10.00)	0.0000*	0.00	0.00(02/2002)

* There was insufficient data to produce a valid average.

Site:L0310084 - Rossell/Copeland County:Duval AQS Monitor ID:12-031-0084-12128-1

Year	1st Max		2nd Max		Quarterly Averages (#Valid Observations)								Max 3 Month Rolling Average
					1st Quarter		2nd Quarter		3rd Quarter		4th Quarter		
2000	0.06	(01/01)	0.03	(10/15)	0.0152	(16.00)	0.01	(15.00)	0.01	(14.00)	0.02	(15.00)	0.01(12/2000)
2001	0.1	(12/21)	0.03	(04/19)	0.0122	(12.00)	0.01	(15.00)	0.01	(15.00)	0.02	(15.00)	0.01(12/2001)
2002	0.03	(02/13)	0.02	(02/19)	0.0102	(15.00)	0.00	(15.00)	0.0000*	(11.00)	0.0000*	0.00	0.01(02/2002)

* There was insufficient data to produce a valid average.

National primary and secondary ambient air quality standards for lead and its compounds are: 0.15 micrograms per cubic meter maximum 3 month rolling average.

Lead (12128) Units: µg/m^3 (25C)

Site:L0571066 - North 66th Street County:Hillsborough AQS Monitor ID:12-057-1066-12128-1

Year	1st Max		2nd Max		Quarterly Averages (#Valid Observations) 1st Quarter		2nd Quarter		3rd Quarter		4th Quarter		Max 3 Month Rolling Average
2006	3.7	(10/08)	3.5	(05/17)	0.4	(14.00)	0.67	(15.00)	0.16	(15.00)	0.83	(16.00)	0.84†(12/2006)
2007	10.7	(11/02)	4.8	(07/05)	0.7	(15.00)	0.52	(14.00)	0.74	(15.00)	1.6466†	(15.00)	1.64†(12/2007)
2008	1.8	(01/19)	1.7	(03/25)	0.6	(16.00)	0.40	(15.00)	0.16	(14.00)	0.25	(15.00)	1.77†(01/2008)

† Indicates the standard was exceeded.

Site:L0571073 - Patent Scaffolding County:Hillsborough AQS Monitor ID:12-057-1073-12128-1

Year	1st Max		2nd Max		Quarterly Averages (#Valid Observations) 1st Quarter		2nd Quarter		3rd Quarter		4th Quarter		Max 3 Month Rolling Average
2006	1.1	(05/11)	1	(10/20)	0.2733	(15.00)	0.24	(14.00)	0.10	(13.00)	0.17	(16.00)	0.28†(02/2006)
2007	2.3	(06/05)	1.1	(04/18)	0.1533	(15.00)	0.39	(15.00)	0.19	(15.00)	0.08	(15.00)	0.40†(07/2007)
2008	1.2	(02/06)	1.2	(05/18)	0.3875	(16.00)	0.21	(15.00)	0.06	(14.00)	0.04	(15.00)	0.40†(03/2008)

† Indicates the standard was exceeded.

National primary and secondary ambient air quality standards for lead and its compounds are: 0.15 micrograms per cubic meter maximum 3 month rolling average.

Lead (12128) Units: µg/m^3 (25C)

Site:L0860024 - Palmetto X-Way County:Miami-Dade AQS Monitor ID:12-086-0024-12128-1

Year	1st Max		2nd Max		Quarterly Averages (#Valid Observations) 1st Quarter		2nd Quarter		3rd Quarter		4th Quarter		Max 3 Month Rolling Average
1994	0	(01/02)	0	(01/08)	0	(15)	0	(15)	0	(16)	0	(13)	0.00(01/1994)
1995	0	(01/03)	0	(01/09)	0	(15)	0	(13)	0	(13)	0	(14)	0.00(01/1995)
1996	0	(01/04)	0	(01/10)	0	(15)	0	(15)	0	(16)	0.0000*	(5)	0.00(01/1996)

* There was insufficient data to produce a valid average.

National primary and secondary ambient air quality standards for lead and its compounds are: 0.15 micrograms per cubic meter maximum 3 month rolling average.

Lead (12128) Units: µg/m^3 (25C)

Site:L0950007 - 33rd St Sheriffs Dept, Orlando County:Orange AQS Monitor ID:12-095-0007-12128-1

Year	1st Max		2nd Max		Quarterly Averages (#Valid Observations) 1st Quarter		2nd Quarter		3rd Quarter		4th Quarter		Max 3 Month Rolling Average
1994	0	(01/02)	0	(01/08)	0	(15.00)	0.00	(15.00)	0.00	(16.00)	0.00	(15.00)	0.00(01/1994)
1995	0	(01/03)	0	(01/09)	0	(14.00)	0.00	(15.00)	0.00	(16.00)	0.00	(15.00)	0.00(01/1995)
1996	0	(01/04)	0	(01/10)	0	(15.00)	0.00	(15.00)	0.00	(16.00)	0.00	(15.00)	0.00(01/1996)

Site:L0952002 - Lake Isle Estates - Winter Park County:Orange AQS Monitor ID:12-095-2002-12128-1

Year	1st Max		2nd Max		Quarterly Averages (#Valid Observations) 1st Quarter		2nd Quarter		3rd Quarter		4th Quarter		Max 3 Month Rolling Average
1994	0	(01/02)	0	(01/08)	0	(15.00)	0.00	(15.00)	0.00	(16.00)	0.00	(15.00)	0.00(01/1994)
1995	0	(01/03)	0	(01/09)	0	(15.00)	0.00	(15.00)	0.00	(16.00)	0.00	(15.00)	0.00(01/1995)
1996	0	(01/04)	0	(01/10)	0	(15.00)	0.00	(15.00)	0.00	(16.00)	0.00	(14.00)	0.00(01/1996)

National primary and secondary ambient air quality standards for lead and its compounds are: 0.15 micrograms per cubic meter maximum 3 month rolling average.

Lead (12128) Units: µg/m^3 (25C)

Site:L0990018 - Jog Road & Beeling Highway County:Palm Beach AQS Monitor ID:12-099-0018-12128-1

Year	1st Max		2nd Max		Quarterly Averages (#Valid Observations) 1st Quarter		2nd Quarter		3rd Quarter		4th Quarter		Max 3 Month Rolling Average
1997					0.0000*	0.00	0.0000*	0.00	0.0000*	0.00	0.0000*	0.00	0.00(01/1997)
1998	0	(01/01)	0	(02/01)	0.0000*	(3.00)	0.0000*	(3.00)	0.0000*	(3.00)	0.0000*	(3.00)	0.00(01/1998)
1999	0	(01/01)	0	(02/01)	0.0000*	(3.00)	0.0000*	(3.00)	0.0000*	(3.00)	0.0000*	(3.00)	0.00(01/1999)

* There was insufficient data to produce a valid average.

National primary and secondary ambient air quality standards for lead and its compounds are: 0.15 micrograms per cubic meter maximum 3 month rolling average.

Lead (12128) Units: µg/m^3 (25C)

Site:L1033005 - 11401 47TH ST N PINELLAS PARK County:Pinellas AQS Monitor ID:12-103-3005-12128-1

Year	1st Max		2nd Max		Quarterly Averages (#Valid Observations) 1st Quarter		2nd Quarter		3rd Quarter		4th Quarter		Max 3 Month Rolling Average
2005	0	(01/04)	0	(01/10)	0	(15.00)	0.00	(15.00)	0.00	(15.00)	0.00	(16.00)	0.00(01/2005)
2006	0	(01/05)	0	(01/11)	0	(15.00)	0.00	(15.00)	0.00	(15.00)	0.00	(16.00)	0.00(01/2006)
2007	0	(01/06)	0	(01/12)	0	(15.00)	0.00	(15.00)	0.00	(15.00)	0.00	(13.00)	0.00(01/2007)

National primary and secondary ambient air quality standards for lead and its compounds are: 0.15 micrograms per cubic meter maximum 3 month rolling average.

Florida Department of Environmental Protection
Bob Martinez Center
2600 Blairstone Road
Tallahassee, Florida 32399-2400

Charlie Crist
Governor
Jeff Kottkamp
Lt. Governor
Michael W. Sole
Secretary

PERMITTEE

EnviroFocus Technologies, LLC (EFT)
1901 North 66th Street
Tampa, Florida 33619

Authorized Representative: Mr. John Tapper
Chief Operating Officer

Air Permit No. PSD-FL-404
DEP File No. 0570057-020-AC
EFT Lead-Acid Battery Recycling Facility
Facility Upgrade and Production Increase
Permit Expires: June 30, 2012
Hillsborough County

PROJECT AND LOCATION

This permit authorizes facility improvements and expansion of production to 150,000 tons per year (TPY) of lead alloy products at the EFT lead-acid battery recycling facility located in Hillsborough County on 1901 North 66th Street in Tampa, Florida. The UTM coordinates for the site are Zone 17, 364.0 kilometers (km) East and 3093.5 km North.

STATEMENT OF BASIS

This air pollution construction permit is issued under the provisions of Chapter 403 of the Florida Statutes (F.S.), and Chapters 62-4, 62-204, 62-210, 62-212, 62-296 and 62-297 of the Florida Administrative Code (F.A.C.). The permittee is authorized to conduct the proposed work in accordance with the conditions of this permit and as described in the application, approved drawings, plans and other documents on file with the Department. This project is subject to the general preconstruction review requirements in Rule 62-212.300, F.A.C. and the preconstruction review requirements for major stationary sources in Rule 62-212.400, F.A.C. for the Prevention of Significant Deterioration (PSD) of Air Quality.

Upon issuance of this final permit, any party to this order has the right to seek judicial review of it under Section 120.68 of the Florida Statutes by filing a notice of appeal under Rule 9.110 of the Florida Rules of Appellate Procedure with the clerk of the Department of Environmental Protection in the Office of General Counsel (Mail Station #35, 3900 Commonwealth Boulevard, Tallahassee, Florida, 32399-3000) and by filing a copy of the notice of appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The notice must be filed within 30 days after this order is filed with the clerk of the Department.

Executed in Tallahassee, Florida

Joseph Kahn, Director
Division of Air Resource Management

9/22/09
(Date)

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this Final Air Permit package (including the Final Determination and Final Permit with Appendices) was sent by electronic mail, or a link to these documents made available electronically on a publicly accessible server, with received receipt requested before the close of business on 9/22/09 to the persons listed below.

John Tapper, EnviroFocus Technologies, LLC: jtapper@gopherresource.com
Heather Abrams, EPA Region 4: abrams.heather@epa.gov
Jerry Campbell, Hillsborough County EPC: campbell@epchc.com
Russell S. Kemp, P.E., Environ: rkemp@environcorp.com
Victoria Gibson, DEP BAR: victoria.gibson@dep.state.fl.us (for read file)

Clerk Stamp

FILING AND ACKNOWLEDGMENT FILED, on this date, pursuant to Section 120.52(7), Florida Statutes, with the designated agency clerk, receipt of which is hereby acknowledged.

(Clerk) 9/22/09 (Date)

FACILITY AND PROJECT DESCRIPTION

The EFT facility recycles automotive and industrial lead-acid batteries, as well as other lead-acid bearing scrap materials to produce lead alloys. The process involves several key operations (or steps) including: receiving of batteries and recyclable materials; battery breaking and separation into lead, lead salts, plastic and acid electrolyte; storage and containment of recovered lead and lead waste; acid neutralization and wastewater treatment; lead smelting and refining; casting; and shipping.

The present operation includes a battery breaker, one blast furnace and four refining kettles. The key changes include the replacement of the battery breaker with a larger hammer mill, the addition of a reverberatory furnace, the enlargement of the four existing refining kettles and the addition of six new kettles to support a production increase from 32,000 to 150,000 TPY of lead. The entire recycling process will be totally enclosed, placed under negative pressure and exhausted via an expanded building ventilation system through a cartridge collector and stack. The entire facility upgrade and production increase project includes:

- Installation of a feed dryer;
- Replacement of the battery breaker with a larger hammer mill with a wet impingement scrubber to control particulate matter ($PM/PM_{10}/PM_{2.5}$, hence forth referred to as PM) and lead (Pb) emissions;
- Replacement of the existing soda ash silo with a soda ash receiving silo and two soda ash process silos;
- Installation of a reverberatory (reverb) furnace;
- The addition of four 100-ton refining kettles and two 150-ton refining kettles while the four existing kettles will be converted from 75-ton to 100-ton capacities;
- Construction of a plastics plant, including four plastic pellet silos, to convert plastic from the battery casings into pellets;
- New baghouses with additional air flow capacity for the dryer, furnaces and refining kettles to control PM and Pb emissions;
- Replacement of the afterburner with a larger unit to control carbon monoxide (CO) and volatile organic compounds (VOC) from the blast and reverb furnaces;
- Installation of a wet scrubber to control sulfur dioxide (SO_2) emissions from the furnaces;
- Complete enclosure of the process areas and its placement under negative pressure;
- Increasing the capacity of the existing high-efficiency cartridge collector to control PM and Pb emissions from the enclosed building (including those from process upsets and fugitive sources); and
- Control of emissions of nitrogen oxides (NO_X) emissions from the dryer, furnaces and kettles at the upgraded facility through good combustion practices.

This project creates the following emissions units.

ID No.	New Emission Unit Description
021	Battery breaking area including plastics plant
022	Feed dryer
023	Collocated reverb furnace
024	(4) plastic pellet silos
025	Propane vaporizer (1) and soda ash slurry heaters (2)
026	500 kilowatt (kW) emergency generator

This project modifies or deletes the following emissions units.

ID No.	Existing Emission Unit Description
001	Collocated blast furnace
004	Tapping and charging (DELETED)
008	(1) Soda ash silo receiving silo and (2) soda ash processing silos (MODIFIED)
009	Facility grounds and roadways (MODIFIED)
011	Furnace tapping, charging and lead refining (process fugitive emissions).
013	Combustion exhaust consisting of 10 oxy/fuel burners and associated stacks fueled by natural gas and propane as a backup to heat the refining kettles.
015	Building ventilation (MODIFIED)

FACILITY REGULATORY CLASSIFICATION

- The EFT facility is subject to 40 Code of Federal Regulations (CFR), Part 60 – Standards of Performance for New Stationary Sources (NSPS). The facility and project are subject to 40 CFR 60, Subpart L - NSPS for Secondary Lead Smelters. A proposed emergency diesel engine is subject to 40 CFR 60, Subpart IIII - NSPS for Compression Ignition Internal Combustion Engines.
- The EFT facility is a "Major Stationary Source" as defined in Rule 62-210.200, Florida Administrative Code (F.A.C.). The project triggers the rules for the Prevention of Significant Deterioration (PSD) pursuant to Rule 62-212.400, F.A.C. and requires a best available control technology (BACT) determination.
- The EFT facility is a Title V or "Major Source" of air pollution as defined in Rule 62-210.200, F.A.C. because the potential emissions of at least one regulated pollutant exceed 100 tons per year (TPY). Regulated pollutants include pollutants such CO, NO_X, PM, SO_2, VOC and sulfuric acid mist (SAM).
- The EFT facility is also a "Major Source of Hazardous Air Pollutants (HAP)" because it has the potential to emit, in the aggregate, 10 TPY of any one HAP, 25 TPY of any combination of HAPs, or any lesser quantity of a HAP as established through EPA rulemaking.
- The EFT facility is subject to 40 Code of Federal Regulations (CFR), Part 63 – National Emission Standards for Hazardous Air Pollutants (NESHAP) for Source Categories. The facility is subject to 40 CFR 63, Subpart X - NESHAP for Secondary Lead Smelting. A proposed emergency diesel engine is subject to 40 CFR 63, Subpart ZZZZ – NESHAP for Stationary Reciprocating Internal Combustion Engines (RICE).

SECTION 2. ADMINISTRATIVE REQUIREMENTS

1. Permitting Authority: The permitting authority for this project is the Bureau of Air Regulation, Division of Air Resource Management, Florida Department of Environmental Protection (Department). The Bureau of Air Regulation's mailing address is 2600 Blair Stone Road (MS #5505), Tallahassee, Florida 32399-2400. All documents related to applications for permits to operate an emissions unit shall be submitted to the Title V Section of the same office.
2. Compliance Authority: All documents related to compliance activities such as reports, tests, and notifications shall be submitted to the Environmental Protective Commission of Hillsborough County (EPCHC), Air Management Division, 3629 Queen Palm Drive, Tampa, Florida 33619. The telephone number of the EPCHC is 813/627-2600.
3. Appendices: In addition to the permit conditions, the permittee shall comply with the applicable requirements listed in the following Appendices that are attached as part of this permit:
   a. Appendix CC. Common Conditions;
   b. Appendix CEMS. Continuous Emission Monitoring System (CEMS) Requirements;
   c. Appendix CF. Citation Formats and Glossary of Common Terms;
   d. Appendix CTR. Common Testing Requirements;
   e. Appendix FDCC. Standard Operation Procedures for Fugitive Dust Control During Construction Activities;
   f. Appendix FDCO. Standard Operation Procedures for Fugitive Dust Control During Operational Activities;
   g. Appendix GC. General Conditions;
   h. Appendix GP. NSPS, Subpart A and NESHAP Subpart A - Identification of General Provisions;
   i. Appendix IIII. NSPS, Subpart IIII - Stationary Compression Ignition Internal Combustion Engines;
   j. Appendix L. NSPS, Subpart L - Secondary Lead Smelters;
   k. Appendix ZZZZ. NESHAP, Subpart ZZZZ - Stationary Reciprocating Internal Combustion Engines (RICE); and,
   l. Appendix X. NESHAP, Subpart X - Secondary Lead Smelting.
4. Applicable Regulations, Forms and Application Procedures: Unless otherwise specified in this permit, the construction and operation of the subject emissions units shall be in accordance with the capacities and specifications stated in the application unless superseded by submittals by the applicant to requests for additional information (RAI) from the Department. The facility is subject to all applicable provisions of: Chapter 403, F.S.; and Chapters 62-4, 62-204, 62-210, 62-212, 62-213, 62-296 and 62-297, F.A.C. Issuance of this permit does not relieve the permittee from compliance with any applicable federal, state, or local permitting or regulations.
5. New or Additional Conditions: For good cause shown and after notice and an administrative hearing, if requested, the Department may require the permittee to conform to new or additional conditions. The Department finds, independently of this permit, good cause requiring the permittee to conform to new or additional conditions. Therefore, the permittee is required to upgrade the facility such that all battery breaking, material storage and handling, smelting, refining, and casting operations are conducted within totally enclosed building(s) by December 2011 whether or not the permittee installs any of the process equipment (such as a reverberatory furnace, a larger hammer mill or kettles) needed to increase lead production. The enclosed building(s) shall be maintained under negative pressure and vented through control devices designed to limit lead (Pb) emissions to less than:
   (a) Battery breaking area stack - 0.8 mg/dry standard cubic meter (dscm);
   (b) Smelting process stack - 0.3 mg/dscm;
   (c) Tapping, charging and lead refining (hygiene) stack - 0.2 mg/dscm; and
   (d) Building ventilation stack - 0.05 mg/dscm.

   [Rules 62-4.070(3) and 62-4.080(1)(a), (b) and (c), F.A.C.; 40 CFR Part 50, Section 50.16]

6. Modifications: The permittee shall notify the Compliance Authority upon commencement of construction. No new emissions unit shall be constructed and no existing emissions unit shall be modified without obtaining an air construction permit from the Department. Such permit shall be obtained prior to beginning construction or modification.
[Rules 62-210.300(1) and 62-212.300(1)(a), F.A.C.]

7. Construction and Expiration: The permit expiration date includes sufficient time to complete construction, perform required testing, submit test reports, and submit an application for a Title V operation permit to the Department. For good cause, the permittee may request that this air construction permit be extended. Such a request shall be submitted to the Department's Bureau of Air Regulation at least sixty (60) days prior to the expiration of this permit.
[Rules 62-4.070(4), 62-4.080, and 62-210.300(1), F.A.C.]

8. Authorization to Construct: Authorization to construct shall expire if construction is not commenced within 18 months after receipt of the permit, if construction is discontinued for a period of 18 months or more, or if construction is not completed within a reasonable time. This provision does not apply to the time period between construction of the approved phases of a phased construction project except that each phase must commence construction within 18 months of the commencement date established by the Department in the permit. [Rule 62-212.400(12)(a), F.A.C.]

9. Source Obligation: At such time that a particular source or modification becomes a major stationary source or major modification (as these terms were defined at the time the source obtained the enforceable limitation) solely by virtue of a relaxation in any enforceable limitation which was established after August 7, 1980, on the capacity of the source or modification otherwise to emit a pollutant, such as a restriction on hours of operation, then the requirements of subsections 62-212.400(4) through (12), F.A.C., shall apply to the source or modification as though construction had not yet commenced on the source or modification. [Rule 62-212.400(12)(b), F.A.C.]

10. Application for Title V Permit: This permit authorizes construction and/or modification of the permitted emissions units and the initial operation of the upgrades for the EFT facility to determine compliance with Department rules. A Title V air operation permit is required for regular operation of the permitted emissions units. The permittee shall apply for a Title V air operation permit at least 90 days prior to expiration of this permit, but no later than 180 days after commencing operation. To apply for a Title V operation permit, the applicant shall submit the appropriate application form, compliance test results, and such additional information as the Department may by law require. The application shall be submitted to the appropriate Permitting Authority with copies to the Compliance Authority. [Rules 62-4.030, 62-4.050, 62-4.220 and Chapter 62-213, F.A.C.]

11. Objectionable Odors Prohibited: No person shall cause, suffer, allow or permit the discharge of air pollutants which cause or contribute to an objectionable odor. [Rule 62-296.320(2), F.A.C.]
{Note: An objectionable odor is defined in Rule 62-210.200(Definitions), F.A.C., as any odor present in the outdoor atmosphere which by itself or in combination with other odors, is or may be harmful or injurious to human health or welfare, which unreasonably interferes with the comfortable use and enjoyment of life or property, or which creates a nuisance.}

12. Annual Operating Report (AOR): The owner or operator shall submit an AOR for the Air Pollutant Emitting Facility (DEP Form No. 62-210.900(5)) to the Department annually pursuant to subsection 62-210.370(3), F.A.C.

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS

A. Battery Breaking Area

This section of the permit addresses the following emissions unit.

ID No.	Emission Unit Description
021	Battery breaking area including a maximum 60 tons per hour (TPH) hammer mill, separation equipment, plastics plant and wet impingement scrubber.

In the battery breaker area, spent batteries are conveyed to a hammer mill where they are crushed into primarily metallic lead, lead salts and plastics. After desulfurization, the lead salts are transferred to the material charging storage area along with the metallic lead. The majority of the plastic is shipped off-site for recycling or sent to the on-site plastic plant where it is reduced in size by a small wet hammer mill then melted and extruded into water to form plastic pellets. The plastic pellets are dried by a spin dryer and transferred pneumatically to one of the four plastic pellet silos (EU ID 024).

Emissions from the hammer mill (primarily of PM (including SAM) and Pb) and the plastic plant (PM and VOC) are routed to a wet impingement scrubber and exhausted via a 130 foot stack.

CONSTRUCTION

1. Equipment: The permittee is authorized to construct a lead-acid battery breaking area including a plastics plant consisting of the following equipment.

   a. Enclosure: The applicant shall fully enclose and ventilate the battery breaking area and plastics plant before using the new hammer mill (battery breaker) described below. PM, SO_2 and Pb emissions from the battery breaker and PM and VOC emissions from the plastics plant shall be controlled by the wet impingement scrubber. Fugitive emissions from the battery breaker and plastics plant will also vent to the wet impingement scrubber.
   [Application No. 0570057-020-AC and Rules 62-4.070(3) and 62-210.200(PTE), F.A.C.]

   b. Battery Breaking Area Stack: The permittee is authorized to construct a battery breaker stack that is at least 130 feet.
   [Application No. 0570057-020-AC and Rules 62-4.070(3) and 62-210.200(PTE), F.A.C.]

   c. Hammer mill (Battery Breaker): The applicant is authorized to replace the hammer mill with a larger unit. [Application No. 0570057-020-AC]

   d. Wet Hammer Mill (Plastics Plant): The permittee is authorized to construct a wet hammer mill to reduce the size of the feedstock plastic chips from the battery breaker.
   [Application No. 0570057-020-AC]

   e. Extruder (Plastics Plant): The permittee is authorized to construct one extruder to melt and extrude the processed plastic chips to form plastic pellets. [Application No. 0570057-020-AC]

   f. Spin Dryer (Plastics Plant): The permittee is authorized to construct a spin dryer to dry the plastic pellets. [Application No. 0570057-020-AC]

   g. Wet impingement scrubber: The applicant is required to install a wet impingement scrubber to control emissions from the new battery breaking area and the plastics plant and must be operational before use of the new hammer mills.
   [Application No. 0570057-020-AC; and Rules 62-4.070(3) and 62-210.200(PTE), F.A.C.]

2. Circumvention: The permittee shall not circumvent the air pollution control equipment or allow the emission of air pollutants without this equipment operating properly. [Rule 62-210.650, F.A.C.]

A. Battery Breaking Area

PERFORMANCE RESTRICTIONS

3. Battery Breaker Capacity: The battery beaker shall be limited to 60 TPH of spent lead-acid batteries with a maximum rate in any consecutive twelve month period of 438,000 tons (average of 50 TPH). [Application No. 0570057-020-AC and Rule 62-210.200(PTE), F.A.C.]

4. Plastic Plant Capacity: The maximum capacity of the plastic plant is 3,500 pounds per hour (lbs/hr) of plastic chips with a maximum rate in any consecutive twelve month period of 24,000,000 pounds (lbs). [Application No. 0570057-020-AC]

5. Hours of Operation: The hours of operation of the battery breaker and plastics plant are not limited (8,760 hours per year). [Application No. 0570057-020-AC; and Rules 62-4.070(3) and 62-210.200(PTE), F.A.C.]

EMISSIONS STANDARDS

6. PM Emissions Standard (including SAM): PM emissions including SAM from the battery breaking area and plastics plant as measured at the battery breaking area stack shall not exceed 0.005 grains per dry standard cubic foot (gr/dscf) or 1.1 lbs/hr as demonstrated by initial and annual compliance tests. [Application No. 0570057-020-AC; and Rules 62-4.070(3) and 62-210.200(PTE), F.A.C.]

7. Pb Emission Standard: Pb emissions from the battery breaker stack shall not exceed 0.80 milligram per dry standard cubic meter (mg/dscm) or 0.077 lbs/hr as demonstrated by initial and annual compliance tests. [Application No. 0570057-020-AC; and Rules 62-4.070(3) and 62-210.200(PTE), F.A.C.]

8. SO_2 Emission Standard: SO_2 emissions from the battery breaker stack shall not exceed 5.0 mg/dscm or 0.48 lbs/hr as demonstrated by an initial test. [Application No. 0570057-020-AC; and Rules 62-4.070(3) and 62-210.200(PTE), F.A.C.]

9. VOC Emissions Standard: VOC emissions from the battery breaker stack shall not exceed 0.28 lbs/hr as demonstrated by initial test. [Application No. 0570057-020-AC; and Rules 62-4.070(3) and 62-210.200(PTE), F.A.C.]

10. Visible Emission (VE) Standard: VE from the battery breaker area shall not exceed 3% opacity as demonstrated by initial and annual compliance tests on the battery breaking area stack. [Application No. 0570057-020-AC; Rules 62-296.603 and 62-296.712, F.A.C.; and 40 CFR 60.122(a)(2)]

TESTING AND MONITORING REQUIREMENTS

11. PM, Pb, SO_2, and VOC Compliance Tests: The battery breaker stack shall be tested to demonstrate initial compliance with the PM, Pb, SO_2 and VOC standards no later than 180 days after initial operation of the hammer mill (battery breaker). During each federal fiscal year (October 1st to September 30th), the battery breaker stack shall be tested to demonstrate compliance with the PM and Pb standards. [Application No. 0570057-020-AC; and Rules 62-4.070(3) and 62-210.200(PTE), F.A.C.]

12. VE Compliance Tests: The battery breaker stack shall be tested to demonstrate initial compliance with the VE standards no later than 180 days after initial operation of the EFT facility and during each federal fiscal year (October 1st to September 30th) thereafter. [Rule 62-4.070(3), F.A.C.]

13. Test Requirements: The permittee shall notify the EPCHC (Compliance Authority) in writing at least 15 days prior to any required tests. Tests shall be conducted in accordance with the applicable requirements specified in Appendix CTR (Common Testing Requirements) of this permit. [Rule 62-297.310(7)(a)9, F.A.C.]

14. Test Methods: Any required stack tests shall be performed in accordance with the following methods.

Method	Description of Method and Comments
EPA 5/29	Determination of Particulate Emissions. The minimum sample volume shall be 30 dry standard cubic feet.
EPA 8	Determination of Sulfuric Acid and Sulfur Dioxide Emissions from Stationary Sources
EPA 12/29	Determination of Lead Emissions.
EPA 25A	Determination of Total Gaseous Organic Concentration using a flame ionization analyzer.

RECORDS AND REPORTS

15. Test Reports: The permittee shall prepare and submit reports for all required tests in accordance with the requirements specified in Appendix CTR (Common Testing Requirements) of this permit. For each test run, the report shall also indicate the operating rate. [Rule 62-297.310(8), F.A.C.]

NESHAP APPLICABILITY

16. NESHAP Subpart X Applicability: The battery breaker area is subject to and shall comply with all applicable requirements of 40 CFR 63, Subpart X which applies to Secondary Lead Smelting. Specifically, the battery breaker area shall comply with 40 CFR 63.550 Reporting and Recordkeeping Requirements. Subpart X is provided in Appendix X of this permit. [Rule 62-204.800(11)(b) and 40 CFR 63, -Subpart X – National Emissions Standards for Hazardous Air Pollutants (NESHAP) for Secondary Lead Smelting].

B. Lead Smelting

This section of the permit addresses the following emissions units.

ID No.	Emission Unit Description
001	Collocated blast furnace
022	Feed dryer
023	Collocated reverb furnace

The metallic lead and desulfurized lead salts from the battery breaker area are conveyed to the 40 TPH feed dryer to remove most of the moisture prior to being feed into the reverb furnace. The feed dryer is fueled by 10 mmBtu per hour (mmBtu/hr) natural gas burners (with propane as a backup fuel). PM and Pb emissions from the feed dryer are controlled by a shaker type baghouse with a design flow rate of 18,000 acfm at approximately 200 degrees Fahrenheit (°F) before being ducted to the process stack.

The reverb furnace is heated using primarily natural gas or propane as a backup fuel. Molten soft lead from the reverb furnace will be conveyed through channels called launders directly to the refining kettles. The reverb furnace is fired by 23 mmBtu/hr burners. Slag from the reverb furnace and other lead bearing scrap materials will be fed to a blast furnace that produces hard lead. Metallurgical coke will be combined with slag to help supply fuel for the blast furnace smelting process.

Exhaust gases from both furnaces will be ducted to a new afterburner, followed by a shaker type baghouse and a wet scrubber before being combined with the exhaust gases from the feed dryer for final discharge through the new 130 foot process stack.

CONSTRUCTION

1. Equipment: The permittee is authorized to construct a feed dryer and a collocated reverb furnace and modify the existing collocated blast furnace consisting of the following equipment.

   a. Enclosure: The applicant shall fully enclose and ventilate the feed dryer and the collocated blast and reverb furnaces before operation of these emission units can commence. Emissions from the dryer are controlled by a baghouse while emissions from the furnaces will be controlled by an afterburner, baghouse and wet scrubber. Fugitive emissions of PM and Pb from the dryer and furnaces due to process upsets and other sources within the enclosed facility will be vented to the Torit filter of the enclosed facility's ventilation system (EU ID 015). [Application No. 0570057-020-AC; Rules 62-4.070(3) and 62-210.200(PTE), F.A.C.]

   b. Process Stack: The permittee is authorized to construct a process stack that is 130 feet above grade, has an exit diameter of 60 inches, with an exhaust flow rate of approximately 58,886 acfm at an average temperature of 150 °F.
   [Application No. 0570057-020-AC; Rules 62-4.070(3) and 62-210.200(PTE), F.A.C.]

   c. Feed Dryer: The permittee is authorized to construct a feed dryer capable of drying a maximum of 40 TPH of lead feed material with a maximum capacity of 338,400 tons in any consecutive twelve month period utilizing 10 mmBtu/hr burners fired by natural gas with propane as a backup fuel.
   [Application No. 0570057-020-AC; Rules 62-4.070(3) and 62-210.200(PTE), F.A.C.]

   d. Feed Dryer Baghouse: One shaker type baghouse shall be designed, installed and maintained to remove PM and Pb from the dryer exhaust. The baghouse shall be installed and operational before the dryer becomes operational. The baghouse shall have a design flow rate of 18,000 acfm and operate a temperature of approximately 200 °F.
   [Application No. 0570057-020-AC; Rules 62-4.070(3) and 62-210.200(PTE), F.A.C.]

e. Collocated Blast Furnace: The permittee is authorized to modify the existing blast furnace capable of processing a maximum of 7.5 TPH of lead feed material with a maximum capacity of 65,700 tons in any consecutive twelve month period utilizing metallurgical coke mixed with the lead-bearing feed as fuel. [Application No. 0570057-020-AC; Rules 62-4.070(3) and 62-210.200(PTE), F.A.C.]

f. Collocated Reverb Furnace: The permittee is authorized to construct a reverb furnace capable of processing a maximum of 40 TPH of lead-bearing feed material with a maximum capacity of 262,800 tons per any consecutive twelve month period utilizing burners fired by natural gas with propane as a backup fuel.
[Application No. 0570057-020-AC; Rules 62-4.070(3) and 62-210.200(PTE), F.A.C.]

g. Furnace Afterburner, Baghouse, and Scrubber: One afterburner, shaker type baghouse and wet scrubber shall be designed, installed and maintained to control CO, VOC, PM, Pb and SO_2 emissions from the blast and reverb furnaces. The afterburner, baghouse and wet scrubber must be operational before the furnaces commence operations. The afterburner, baghouse and scrubber shall vent to the 130 foot process stack. The afterburner and baghouse shall have a design flow rate of 54,000 acfm at approximately 350° F. The scrubber shall have a design flow rate of 42,800 acfm at approximately 125 °F with a caustic usage rate of approximately 264 gallons per hour (GPH).
[Application No. 0570057-020-AC; Rules 62-4.070(3) and 62-210.200(PTE), F.A.C.]

2. Circumvention: The permittee shall not circumvent the air pollution control equipment or allow the emission of air pollutants without this equipment operating properly. [Rule 62-210.650, F.A.C.]

PERFORMANCE RESTRICTIONS

3. Blast and Reverb Furnace Capacities: The maximum charge rate of the reverb furnace is 40 TPH with a maximum capacity of 262,800 tons in any twelve month consecutive period. The maximum charge rate of the blast furnace is 7.5 TPH with a maximum capacity of 65,700 tons in any twelve month consecutive period.
[Application No. 0570057-020-AC; Rules 62-210.200(PTE) and 62-212.400(10)(c), F.A.C.]

4. Reverb Furnace Burner Capacity: The maximum heat input rating of the reverb furnace burner is 23 mmBtu/hr. [Application No. 0570057-020-AC; Rules 62-210.200(PTE) and 62-212.400(10)(c), F.A.C.]

5. Feed Dryer Capacity: The maximum charge rate of the dryer is 40 TPH with a maximum capacity of 338,400 tons in any twelve month consecutive period.
[Application No. 0570057-020-AC; Rules 62-210.200(PTE) and 62-212.400(10)(c), F.A.C.]

6. Feed Dryer Burner Capacity: The maximum heat input rating of the dryer burner is 10 mmBtu/hr.
[Application No. 0570057-020-AC; Rules 62-210.200(PTE) and 62-212.400(10)(c), F.A.C.]

7. Hours of Operation: The hours of operation of the dryer and blast and reverb furnaces are not limited (8,760 hours per year).
[Application No. 0570057-020-AC; Rules 62-210.200(PTE) and 62-212.400(10)(c), F.A.C.]

8. Reverb Furnace Fuel: Natural gas is the primary fuel for the reverb furnace burners. Propane may be used as a backup fuel. A combination of the fuels shall not exceed a total heat input of 201,480 mmBtu to the reverb furnace burners during any consecutive twelve month period.
[Application No. 0570057-020-AC; Rules 62-210.200(PTE) and 62-212.400(10)(c), F.A.C.]

9. Feed Dryer Fuel: Natural gas is the primary fuel for the feed dryer burner. Propane may be used as a backup fuel. A combination of the fuels shall not exceed a total heat input of 87,600 mmBtu to the dryer burner during any consecutive twelve month period.
[Application No. 0570057-020-AC and Rule 62-210.200(PTE), F.A.C.]

10. Lead Production: The maximum lead produced from the EFT facility shall not exceed 150,000 tons in any consecutive twelve month period.
[Application No. 0570057-020-AC and Rule 62-210.200(PTE), F.A.C.]

EMISSIONS STANDARDS

11. PM Emission Standard: PM emissions from the dryer, blast furnace and reverb furnace shall not exceed 0.005 gr/dscf as demonstrated by initial and annual compliance tests on the process stack.
[Application No. 0570057-020-AC; Rules 62-4.070(3), 62-210.200(PTE) and 62-212.400(10)(c), F.A.C.]

12. Pb Emission Standard: Pb emissions from the dryer and blast furnace and reverb furnace shall not exceed 0.3 mg/dscm as demonstrated by initial and annual compliance tests on the process stack.
[Application No. 0570057-020-AC; Rules 62-4.070(3), 62-210.200(PTE), and 62-212.400(10)(c), F.A.C. and 40 CFR 63.543(a)]

13. NO_X Emission Standard: NO_X emissions from the feed dryer shall not exceed 0.21 pounds per ton (lb/ton) of material charged and 2.1 pounds per hour (lb/hr) as demonstrated by a combined 29.1 lb/hr 30-day rolling CEMS average on the process stack. NO_X emissions from the blast furnace and reverb furnace shall not exceed 0.4 lb/ton and 0.6 lb/ton of material charged as demonstrated by a combined 29.1 lb/hr 30-day rolling CEMS average on the process stack.
[Application No. 0570057-020-AC; Rules 62-4.070(3), 62-210.200(PTE), and 62-212.400(10)(c), F.A.C.]

14. CO Emission Standard: CO emissions from the feed dryer and blast furnace and reverb furnace shall not exceed 204.7 lb/hr as demonstrated by a combined 30-day rolling CEMS average on the process stack.
[Application No. 0570057-020-AC; Rules 62-4.070(3) and 62-210.200(PTE), F.A.C.]

15. SO_2 Emission Standard: SO_2 emissions from the feed dryer and blast furnace and reverb furnace shall not exceed 194.3 lb/hr as demonstrated by a combined 30-day rolling CEMS average on the process stack.
[Application No. 0570057-020-AC; Rules 62-4.070(3) and 62-210.200(PTE), F.A.C.]

16. VOC Emission Standard: The blast furnace shall not discharge VOC in excess of 360 ppm by volume, expressed as propane corrected to 4 percent carbon dioxide (CO_2), to the atmosphere when the reverb furnace is not operating as demonstrated by initial and annual compliance tests on the process stack. When the blast furnace and reverb furnace are both operating, the collocated blast and reverb furnace shall not discharge VOC in excess of 20 ppm by volume, expressed as propane corrected to 4 percent CO_2, to the atmosphere as demonstrated by initial and annual compliance tests on the process stack.
[Application No. 0570057-020-AC; Rules 62-4.070(3) and 62-210.200(PTE) F.A.C.; and 40 CFR 63.543(c)]

17. VE Standard: VE from the dryer, blast and reverb furnaces shall not exceed 3% opacity as demonstrated by initial and annual compliance tests on the process stack.
[Application No. 0570057-020-AC; Rules 62-296.603 and 62-296.712, F.A.C.; and 40 CFR 60.122(a)(2)]

TESTING AND MONITORING REQUIREMENTS

18. PM, Pb and VOC Compliance Tests: The feed dryer and blast and reverb furnace process stack exhaust shall be tested to demonstrate initial compliance with the PM, Pb, and VOC standards no later than 180 days after initial startup of these emissions units and during each federal fiscal year (October 1st to September 30th) thereafter. [Rule 62-4.070(3), F.A.C.]

19. SO_2, NO_X and CO Compliance Tests: The feed dryer, and blast and reverb furnace process stack exhaust shall be tested to demonstrate initial compliance with the SO_2, NO_X and CO standards no later than 180 days after initial startup of these emission units. The SO_2, NO_X and CO CEMS monitors shall install, calibrate, certify, operate and maintain in accordance with the CEMS requirements specified in Appendix CEMS of this permit. [Rule 62-4.070(3), F.A.C.]

20. VE Compliance Tests: The feed dryer and blast and reverb furnace process stack exhaust shall be tested to demonstrate initial compliance with the VE standards no later than 180 days after initial startup of these emissions units and during each federal fiscal year (October 1st to September 30th) thereafter. [Rule 62-4.070(3), F.A.C.]

21. Test Requirements: The permittee shall notify the EPCHC in writing at least 15 days prior to any required tests. Tests shall be conducted in accordance with the applicable requirements specified in Appendix CTR (Common Testing Requirements) of this permit. [Rule 62-297.310(7)(a)9, F.A.C.]

22. Test Methods: Any required stack tests shall be performed in accordance with the following methods:

Method	Description of Method and Comments
EPA 5/29	Determination of Particulate Emissions. The minimum sample volume shall be 30 dry standard cubic feet.
EPA 6, 6C	Determination of Sulfur Dioxide Emissions from Stationary Sources
EPA 7, 7A, 7B, 7C, 7D or 7E	Determination of Nitrogen Oxide Emissions from Stationary Sources
EPA 9	Determination of Visible Emissions. Each EPA Method 9 test shall be thirty (30) minutes in duration pursuant to Rule 62-297.310, F.A.C. and concurrent with one of the EPA Method 12 runs.
EPA 10	Determination of Carbon Monoxide Emissions from Stationary Sources.
EPA 12/29	Determination of Lead Emissions.
EPA 25A	Determination of Total Gaseous Organic Concentration using a flame ionization analyzer.

23. Required CEMS: The permittee shall install, calibrate, certify, operate and maintain CEMS on the process stack (blast furnace, reverb furnace and feed dryer emissions) to demonstrate compliance with the SO_2, NO_X and CO emissions standards in this section. The permittee shall comply with the CEMS requirements specified in Appendix CEMS of this permit. [Rule 62-4.070(3), F.A.C.]

24. Monitoring Afterburner: The permittee shall monitor and record the temperature of the afterburner at least every 15 minutes during the annual VOC compliance test and determine an arithmetic average for the recorded temperature measurements. If the 3-hour average temperature falls more than 50 °F below the 3-hour average temperature during the previous annual VOC compliance demonstration, it shall constitute a violation of the applicable emission standard for VOC listed in this permit. [40 CFR 63.548(j)(1)]

25. Pressure Drop: The permittee shall maintain and calibrate a device which continuously measures and records the pressure drop across each baghouse compartment controlling the dryer (dryer baghouse) and blast and reverb furnaces (process baghouse). [Rule 62-4.070(3), F.A.C. and 40 CFR 63.548(c)(1)]

26. Bag Leak Detection: The permittee shall maintain continuous operation of bag leak detection systems on the dryer baghouse as well as the blast and reverb furnace baghouse in accordance with 40 CFR 63.548. [Rule 62-4.070(3), F.A.C. and 40 CFR 63.548]

RECORDS AND REPORTS

27. Notification, Recordkeeping and Reporting Requirements: The permittee shall maintain records of the amount of natural gas and propane used in the dryer and the blast and reverb furnaces on a monthly basis and shall comply with the notification, recordkeeping and reporting requirements pursuant to 40 CFR 63.550. These records shall be submitted to the EPCHC on an annual basis or upon request. [Rule 62-4.070(3), F.A.C. and 40 CFR 60]

28. Test Reports: The permittee shall prepare and submit reports for all required tests in accordance with the requirements specified in Appendix CTR (Common Testing Requirements) of this permit. For each test run, the report shall also indicate the operating rate. [Rule 62-297.310(8), F.A.C.]

NSPS AND NESHAP APPLICABILITY

29. NSPS Subpart L Applicability: The furnaces are subject to and shall comply with all applicable requirements of 40 CFR 60 Subpart L which applies to Secondary Lead Smelters emissions of PM. Subpart L is provided in Appendix L of this permit. [Rule 62-204.800(11)(b) and 40 CFR 60, -Subpart L – New Source Performance Standards (NSPS) for Secondary Lead Smelting].

30. NESHAP Subpart X Applicability: The feed dryer and blast and reverb furnaces are subject to and shall comply with all applicable requirements of 40 CFR 63, Subpart X which applies to Secondary Lead Smelting. Specifically, the feed dryer and furnaces shall comply with 40 CFR 63.550 Reporting and Recordkeeping Requirements. Subpart X is provided in Appendix X of this permit. [Rule 62-204.800(11)(b) and 40 CFR 63, -Subpart X – National Emissions Standards for Hazardous Air Pollutants (NESHAP) for Secondary Lead Smelting].

C. Furnace Tapping, Charging and Lead Refining

This section of the permit addresses the following emissions unit.

ID No.	Emission Unit Description
011	Furnace tapping, charging and lead refining (process fugitive emissions).

Furnace tapping, charging and lead refining generate emissions that are termed as process fugitive emissions in the lead recycling process. This emissions unit includes the operations related to charging and tapping the collocated reverb and blast furnaces as well as the direct exhaust from the 10 refining kettles that receive and process lead from the furnaces. The emissions are captured by hooding, routed to a 72,000 acfm process fugitive emissions (hygiene) baghouse and exhausted via a 130 foot hygiene stack.

The refining kettles are indirectly heated by natural gas burners (EU ID 013) described in Subsection D. Alloying and fluxing agents such as sulfur and niter (sodium nitrate) are mixed in to produce lead alloys that meet predetermined specifications. The pollutant emissions consist of PM, Pb, NO_X, VOC, SO_2 and trace metal HAP. The PM and metals HAP, including Pb, are controlled by the hygiene baghouse.

CONSTRUCTION

1. Equipment: The permittee is authorized to modify and construct a refining area capable of processing approximately 20 TPH of hard and soft lead and consisting of the following equipment.

   a. Enclosure: The permittee shall include the operations related to charging and tapping the collocated reverb and blast furnaces as well as the direct exhaust from the 10 refining kettles that receive and process lead from the furnaces, hence forth called process fugitive emissions, within a fully enclosed and ventilated facility. Process fugitive emissions of PM and Pb are controlled by a baghouse. Fugitive emissions of PM and Pb due to process upsets and from other fugitive sources within the enclosed facility will be vented to the Torit filter of the enclosed facility ventilation system (EU ID 015). [Application No. 0570057-020-AC; Rules 62-4.070(3) and 62-210.200(PTE), F.A.C.]

   b. Hygiene Stack: The permittee is authorized to construct a hygiene stack that is 130 feet tall has a diameter of 60 inches with an exhaust flow rate of approximately 72,000 acfm at an average temperature of 150 °F.
   [Application No. 0570057-020-AC; Rules 62-4.070(3) and 62-210.200(PTE), F.A.C.]

   c. 100-Ton Refining Kettles: The permittee is authorized to modify the four existing 75-ton refining kettles to capacities of 100-tons each and to construct four new 100-ton refining kettles.
   [Application No. 0570057-020-AC; Rules 62-4.070(3) and 62-210.200(PTE), F.A.C.]

   d. 150-Ton Refining Kettles: The permittee is authorized to construct two new 150-ton refining kettles.
   [Application No. 0570057-020-AC; Rules 62-4.070(3) and 62-210.200(PTE), F.A.C.]

   e. Hygiene Baghouse: One shaker-type baghouse shall be designed, installed and maintained to remove PM and Pb from the process fugitive emissions. The baghouse shall have a flow rate of approximately 72,000 acfm and operate an average temperature of 150 °F. The hygiene baghouse must be installed and operational before this emissions unit commences operations.
   [Application No. 0570057-020-AC; Rules 62-4.070(3) and 62-210.200(PTE), F.A.C.]

   f. Enclosure Hoods: The permittee is authorized to construct and/or modify the enclosure hoods for the furnaces and refining kettles (modified and new) including tapping and charging in accordance with 40 CFR 63.544 of Subpart X which applies to standards for process fugitive sources from Secondary Lead Smelting. [Application No. 0570057-020-AC; Rules 62-4.070(3) and 62-210.200(PTE), F.A.C.]

2. Circumvention: The permittee shall not circumvent the air pollution control equipment or allow the emission of air pollutants without this equipment operating properly. [Rule 62-210.650, F.A.C.]

C. Furnace Tapping, Charging and Lead Refining

PERFORMANCE RESTRICTIONS

3. Refining Kettle Production: The maximum production rate of the ten refining kettles is 20 TPH. [Application No. 0570057-020-AC; Rules 62-210.200(PTE) and 62-212.400(10)(c), F.A.C.]

4. Hours of Operation: The hours of operation of the refining kettles are not limited (8,760 hours per year). [Application No. 0570057-020-AC; Rules 62-210.200(PTE) and 62-212.400(10)(c), F.A.C.]

5. Lead Production: The maximum lead produced from the EFT facility shall not exceed 150,000 tons in any consecutive twelve month period. [Application No. 0570057-020-AC and Rule 62-210.200(PTE), F.A.C.]

EMISSIONS STANDARDS

6. PM Emissions Standard: PM emissions from the hygiene stack shall not exceed 0.005 gr/dscf or 2.68 lbs/hr as demonstrated by initial and annual compliance tests. [Application No. 0570057-020-AC; Rules 62-4.070(3), 62-210.200(PTE), and 62-212.400(10)(c), F.A.C.]

7. Pb Emissions Standard: Pb emissions from the hygiene stack shall not exceed 0.2 mg/dscm or 0.05 lbs/hr as demonstrated by initial and annual compliance tests. [Application No. 0570057-020-AC; Rules 62-4.070(3), 62-210.200(PTE), and 62-212.400(10)(c), F.A.C. and 40 CFR 63.543(a)]

8. NO_X Emissions Standard: NO_X emissions shall not exceed 14.33 lbs/hr as demonstrated by a 30-day rolling CEMS average on the hygiene stack. [Application No. 0570057-020-AC; Rules 62-4.070(3), 62-210.200(PTE), and 62-212.400(10)(c), F.A.C.]

9. SO_2 Emissions Standard: SO_2 emissions shall not exceed 7.94 lbs/hr as demonstrated by 30-day rolling CEMS average on the hygiene stack. [Application No. 0570057-020-AC; Rules 62-4.070(3), 62-210.200(PTE), and 62-212.400(10)(c), F.A.C.]

10. VOC Emissions Standard: VOC emissions from the hygiene stack shall not exceed 20 parts per million or 8.95 lbs/hr as demonstrated by initial test on the hygiene stack. [Application No. 0570057-020-AC; Rules 62-4.070(3), 62-210.200(PTE), and 62-212.400(10)(c), F.A.C.]

11. VE Standard: VE from the hygiene stack shall not exceed 3% opacity as demonstrated by initial and annual compliance tests. [Application No. 0570057-020-AC; Rules 62-296.603 and 62-296.712, F.A.C.; and 40 CFR 60.122(a)(2)]

TESTING AND MONITORING REQUIREMENTS

12. PM, Pb and VOC Compliance Tests: The hygiene stack exhaust shall be tested to demonstrate initial compliance with the PM, Pb and VOC standards no later than 180 days after initial startup of this emissions unit. PM and Pb testing will also take place during each federal fiscal year (October 1st to September 30th) thereafter. [Rule 62-4.070(3), F.A.C.]

13. VE Compliance Tests: The hygiene stack exhaust shall be tested to demonstrate initial compliance with the VE standards no later than 180 days after initial startup of this emissions unit and during each federal fiscal year (October 1st to September 30th) thereafter. [Rule 62-4.070(3), F.A.C.]

14. SO_2, and NO_x Compliance Tests: The hygiene stack exhaust shall be tested to demonstrate initial compliance with the SO_2 and NO_x standards no later than 180 days after the initial startup of this emissions unit. [Rule 62-4.070(3), F.A.C.]

15. Test Requirements: The permittee shall notify the EPCHC in writing at least 15 days prior to any required tests. Tests shall be conducted in accordance with the applicable requirements specified in Appendix CTR (Common Testing Requirements) of this permit. [Rule 62-297.310(7)(a)9, F.A.C.]

16. Test Methods: Any required stack tests shall be performed in accordance with the following methods:

Method	Description of Method and Comments
EPA 5/29	Determination of Particulate Emissions. The minimum sample volume shall be 30 dry standard cubic feet.
EPA 6, 6C	Determination of Sulfur Dioxide Emissions from Stationary Sources
EPA 7, 7A, 7B, 7C, 7D or 7E	Determination of Nitrogen Oxide Emissions from Stationary Sources
EPA 9	Determination of Visible Emissions. Each EPA Method 9 test shall be thirty (30) minutes in duration pursuant to Rule 62-297.310, F.A.C. and concurrent with one of the EPA Method 12 runs.
EPA 12/29	Determination of Lead Emissions.
EPA 25A	Determination of Total Gaseous Organic Concentration using a flame ionization analyzer.

17. Required CEMS: The permittee shall install, calibrate, certify, operate and maintain CEMS on the hygiene stack to demonstrate compliance with the SO_2 and NO_X emissions standards in this section. The permittee shall comply with the CEMS requirements specified in Appendix CEMS of this permit. [Rule 62-4.070(3), F.A.C.]

18. Pressure Drop: The permittee shall maintain and calibrate a device which continuously measures and records the pressure drop across each hygiene baghouse compartment controlling process fugitive emissions. [Rule 62-4.070(3), F.A.C. and 40 CFR 63.548(c)(1)]

19. Bag Leak Detection: The permittee shall maintain continuous operation of bag leak detection systems on the hygiene baghouse in conjunction with 40 CFR 63.548. [Rule 62-4.070(3), F.A.C. and 40 CFR 63.548]

RECORDS AND REPORTS

20. Notification, Recordkeeping and Reporting Requirements: The permittee shall maintain records of the amount sulfur and niter used in the refining kettles on a monthly basis and shall comply with the notification, recordkeeping and reporting requirements pursuant to 40 CFR 63.550. These records shall be submitted to the EPCHC on an annual basis or upon request. [Rule 62-4.070(3), F.A.C. and 40 CFR 60]

21. Test Reports: The permittee shall prepare and submit reports for all required tests in accordance with the requirements specified in Appendix CTR (Common Testing Requirements) of this permit. For each test run, the report shall also indicate the operating rate. [Rule 62-297.310(8), F.A.C.]

NSPS AND NESHAP APPLICABILITY

22. NSPS Subpart L Applicability: The furnaces are subject to and must comply with all applicable requirements of 40 CFR 60 Subpart L which applies to Secondary Lead Smelters emissions of PM. Subpart L is provided in Appendix L of this permit. [Rule 62-204.800(11)(b) and 40 CFR 60, -Subpart L – New Source Performance Standards (NSPS) for Secondary Lead Smelting].

23. NESHAP Subpart X Applicability: The process fugitive emissions are subject to all applicable requirements of 40 CFR 63, Subpart X which applies to Secondary Lead Smelting. Specifically, the feed dryer shall comply with 40 CFR 63.550 Reporting and Recordkeeping Requirements. Subpart X is provided in Appendix X of this permit. [Rule 62-204.800(11)(b) and 40 CFR 63, -Subpart X – National Emissions Standards for Hazardous Air Pollutants (NESHAP) for Secondary Lead Smelting].

D. Refining Kettles Exhaust

This section of the permit addresses the following emissions unit.

ID No.	Emission Unit Description
013	Combustion exhaust consisting of 10 burners and associated stacks fueled by natural gas and propane as a backup to heat the refining kettles.

The ten refining kettles are indirectly fired (i.e., the combustion products do not contact the process) utilizing individual oxygen enhanced burners. Therefore, the stacks that exhaust these combustion products are identified as a separate emission unit from the process fugitive emissions (EU ID No. 011). The kettles' indirect combustion emissions are vented to the atmosphere through three separate stacks.

EQUIPMENT

1. Refining Kettle Burners: The permittee is authorized to construct ten oxygen enhanced burners fired by natural gas with propane as a backup fuel. The burners will exhaust combustion gases through three separate stacks. [Application No. 0570057-020-AC; Rules 62-4.070(3) and 62-210.200(PTE), F.A.C.]

PERFORMACE RESTRICTIONS

2. Heat Input Rate: The maximum combined heat to the 10 burners used to indirectly heat the refining kettles shall not exceed 40 mmBtu/hr.
   [Application No. 0570057-020-AC; Rules 62-4.070(3) and 62-210.200(PTE), F.A.C.]

3. Refining Kettle Burner Fuels: Natural gas is the primary fuel for the refining kettle burner. Propane may be used as a backup fuel. A combination of the fuels shall not exceed a total heat input of 35,400 mmBtu to all refining kettle burners in any consecutive twelve month period.
   [Application No. 0570057-020-AC; Rules 62-4.070(3) and 62-210.200(PTE), F.A.C.]

EMISSION STANDARDS

4. VE Standard: Visible emissions from the kettle combustion stacks shall not exceed 3% opacity as demonstrated by initial and annual compliance tests on the kettle exhaust stacks.
   [Application No. 0570057-020-AC; Rules 62-296.603 and 62-296.712, F.A.C.; and 40 CFR 60.122(a)(2)]

TESTING AND MONITORING REQUIREMENTS

5. VE Compliance Tests: The kettle exhaust gas stacks shall be tested to demonstrate initial compliance with the VE standards no later than 180 days after the startup of this emissions unit and during each federal fiscal year (October 1st to September 30th) thereafter. [Rule 62-4.070(3), F.A.C.]

6. Test Methods: Any required stack tests shall be performed in accordance with the following methods.

Method	Description of Method and Comments
EPA 9	Determination of Visible Emissions. Each EPA Method 9 test shall be thirty (30) minutes in duration pursuant to Rule 62-297.310, F.A.C. and concurrent with one of the EPA Method 12 runs.

RECORDS AND REPORTS

7. Notification, Recordkeeping and Reporting Requirements: The permittee shall maintain records of the amount of natural gas and propane used in the kettle combustors on a monthly basis and shall comply with the notification, recordkeeping and reporting requirements pursuant to 40 CFR 63.550. These records shall be submitted to the EPCHC on an annual basis or upon request. [Rule 62-4.070(3), F.A.C. and 40 CFR 60]

8. Test Reports: The permittee shall prepare and submit reports for all required tests in accordance with the requirements specified in Appendix CTR (Common Testing Requirements) of this permit. For each test run, the report shall also indicate the operating rate. [Rule 62-297.310(8), F.A.C.]

NESHAP APPLICABILITY

9. NESHAP Subpart X Applicability: The process fugitive emissions are subject to and must comply with all applicable requirements of 40 CFR 63, Subpart X which applies to Secondary Lead Smelting. Specifically, the feed dryer shall comply with 40 CFR 63.550 Reporting and Recordkeeping Requirements. Subpart X is provided in Appendix X of this permit. [Rule 62-204.800(11)(b) and 40 CFR 63, -Subpart X – National Emissions Standards for Hazardous Air Pollutants (NESHAP) for Secondary Lead Smelting].

E. Soda Ash Silos

This section of the permit addresses the following emissions unit.

ID No.	Emission Unit Description
008	The soda silos consist of a small soda ash receiving silo for receiving soda ash by truck and two larger soda ash process silos.

The soda ash is received by the soda ash receiving silo and then distributed to the soda ash process silos. The soda ash is then transferred from the process silos to the desulfurization process and the sulfur dioxide scrubber used to control SO_2 emissions from the reverb and blast furnaces. Emissions from these silos consist of PM and will be controlled by bin vent filters (fabric filters) atop the silos that filter the air displaced from the silos as they are filled.

CONSTRUCTION

1. Equipment: The permittee is authorized to construct the following.

   a. One soda ash receiving silo with a bin filter, with a stack height of 35 feet, a diameter of 16 inches and a flow rate of approximately 650 acfm.

   b. Two soda ash process silos with bin filters, with stack heights of 70 feet, diameters of 16 inches and flow rates of approximately 650 acfm.

   [Application No. 0570057-020-AC]

PERFORMANCE RESTRICTION

2. Maximum Fill Rate: The maximum fill rate for each silo shall not exceed 50 TPH with a maximum capacity of 25,000 tons per any consecutive twelve month period.
   [Application No. 0570057-020-AC; Rules 62-4.070(3) and 62-210.200(PTE), F.A.C.]

EMISSIONS STANDARDS

3. PM Emission Standard: PM emissions from each bin vent filters of the soda ash silos *shall not* exceed 0.005 gr/dscf. [Application No. 0570057-020-AC; Rules 62-4.070(3) and 62-210.200(PTE), F.A.C.]

4. VE Standard: VE from the soda ash silos bin filters shall not exceed 3% opacity as demonstrated by initial and annual compliance tests. A visible emission reading of 3% opacity or less may be used to establish compliance with the PM emission standard in Specific Condition 3. A visible emission reading greater than 3% opacity will require the permittee to perform a PM emissions stack test within 60 days to show compliance.
   [Application No. 0570057-020-AC; Rules 62-296.603 and 62-296.712, F.A.C.; and 40 CFR 60.122(a)(2)]

TESTING AND MONITORING REQUIREMENTS

5. Initial Compliance Tests: Each unit shall be tested to demonstrate initial compliance with the VE emissions standards specified in Specific Condition 4. The initial test shall be conducted within 180 days after initial operation. [Rule 62-297.310(7)(a)1., F.A.C. and Rule 62-4.070(3), F.A.C.]

6. Annual Compliance Tests: During each federal fiscal year (October 1st to September 30th), each unit shall be tested to demonstrate compliance with the VE standard specified in Specific Condition 4.
   [Rule 62-297.310(7)(a)4, F.A.C. and Rule 62-4.070(3), F.A.C.]

7. PM Compliance Test: The initial and annual VE tests in Specific Conditions 5 and 6 shall serve as a surrogate for the PM emissions tests. If the VE emissions standard in Specific Condition 4 is not meet, PM tests utilizing EPA Method 5 must be conducted within 60 days on the silo bin vent filters to show compliance with the PM emissions standard in Specific Condition 3. [Rule 62-297.620(4), F.A.C.]

8. Test Requirements: The permittee shall notify the EPC of Hillsborough County in writing at least 15 days prior to any required tests. Tests shall be conducted in accordance with the applicable requirements specified in Appendix CTR (Common Testing Requirements) of this permit. [Rule 62-297.310(7)(a)9, F.A.C.]

9. Test Methods: Any required stack tests shall be performed in accordance with the following methods.

Method	Description of Method and Comments
EPA 5	Determination of Particulate Emissions. The minimum sample volume shall be 30 dry standard cubic feet.
EPA 9	Method 9 - Visual Determination of the Opacity of Emissions from Stationary Sources.

RECORDS AND REPORTS

10. Test Reports: The permittee shall prepare and submit reports for all required tests in accordance with the requirements specified in Appendix CTR (Common Testing Requirements) of this permit. For each test run, the report shall also indicate the operating rate. [Rule 62-297.310(8), F.A.C.]

F. Facility Grounds and Roadways

This section of the permit addresses the following emissions unit.

ID No.	Emission Unit Description
009	Facility grounds and roadways controlled by wet suppression, vacuum sweeping and wheel washing.

Vehicular traffic movement on plant roads and in parking areas will produce fugitive emissions of PM and Pb. These fugitive emissions from paved areas at the plant will be controlled by a variety of work practice standards, including vacuum sweeping and wet suppression. Also, as required by the Secondary Lead Maximum Achievable Control Technology (MACT), (40 CFR 63, Subpart X, see Appendix X) the building will have wheel wash stations to remove lead contamination from vehicles prior to exiting the building.

CONSTRUCTION ACTIVITIES

1. Standard Operating Procedures (SOP) During Construction Activities: In order to limit the potential to emit emissions of PM and Pb from the roadways and grounds during construction activities, the permittee must follow the SOP for Fugitive Dust Control During Construction Activities given in Appendix FDCA of this permit upon commencement of construction activities.
   [Application No. 0570057-020-AC; Rules 62-210.200(PTE) and 62-212.400(10)(c), F.A.C.]

FACILITY OPERATION

2. SOP During Facility Operation: To show compliance with the emission limits of PM and Pb from the roadways and grounds of the upgraded facility during operation, the permittee must follow the SOP for Fugitive Dust Control During Operational Activities given in Appendix FDCO of this permit once construction activities are completed and the EFT facility becomes operational.
   [Application No. 0570057-020-AC; Rules 62-210.200(PTE) and 62-212.400(10)(c), F.A.C.]

   {Permitting Note: PM_{10} and Pb from the roadways and grounds during operation of the facility after it is upgraded are estimated to be 0.084 and 0.023 tons in any consecutive twelve month period. [Application No. 0570057-020-AC; Rules 62-210.200(PTE) and 62-212.400(10)(c), F.A.C.]}

3. Revised Operational SOP: If the permittee desires, a revised SOP to control fugitive dust emissions during facility operation can be submitted no later than 60 days from when the EFT facility becomes operational. Once the Operational SOP is in effect, the permittee may submit additional revisions to improve its effectiveness to the EPCHC for approval.

AMBIENT MONITORING AND MODELING REQUIRED

4. Lead–Total Suspended Particles (Pb-TSP) Monitors: The owner or operator shall install and operate two ambient monitoring stations for Lead in TSP (Pb-TSP) at offsite locations (sites) to be determined by the Department. The devices shall be installed and operational within 120 days of final issuance of this permit and shall operate at a sampling frequency to be determined by the EPCHC, and/or the Ambient Monitoring Section (AMS) of the Department's Bureau of Air Monitoring and Mobile Sources (BAMMS). Access to the monitoring sites and instruments must be provided to the EPCHC, and/or the AMS of the Department's BAMMS. The monitoring devices shall be those designated as EPA reference or equivalent methods and must be operated in accordance with BAMMS-approved quality assured policies and procedures.

5. Quality Assurance: Ambient monitoring activities required by this permit for Pb shall be conducted in such a manner so as to meet the Department's minimum quality assurance requirements as delineated in 40 CFR Parts 50 and 58.14; Part 58, Appendices A, C, D and E; and the Department's *State-Wide Quality Assurance Air Program Plan* (*Plan*). Changes to the *Plan* will be distributed by BAMMS to the owner or operator. The owner or operator shall comply with *Plan* changes as soon as practicable, but no later than upon renewal of this permit.

6. SOP for Monitors: The owner or operator shall, within 90 days of the effective permit date, submit to the Department and/or EPCHC for review and approval standard operating procedures for each monitor, calibrator and ancillary piece of equipment utilized in the production of the required ambient air quality data.

7. Monitoring Data: The owner or operator shall submit the verified monitoring data and quality assurance results to BAMMS and EPCHC within ninety (90) days after the end of each calendar quarter in an electronic medium and format: either Aerometric Information Retrieval System (AIRS) or other EPA acceptable electronic format for the monitoring data, and the Precision and Accuracy Data (PAData) or other EPA acceptable electronic format for the quality assurance data, as specified by the Department.

8. The owner or operator shall allow the Department and/or EPCHC auditors, with a minimum of seven (7) days prior notification, access to the monitoring locations for the purpose of the performance of accuracy audits which may be completed in lieu of, or in addition to, the owner or operator's quarterly accuracy audits as specified in 40 CFR, Part 58, Appendix A, 3.2 and 3.4. The owner or operator shall also submit to an annual systems audit as specified in 40 CFR Part 58, Appendix A, 2.5. The systems audit, which reviews the quality assurance and monitoring effort for the preceding year, shall be conducted between February and June of the year following the year in which the audited data were produced. In addition, the Department and/or EPCHC staff shall be allowed access to the monitoring locations, with a minimum of seven (7) days prior notification, on an annual basis, for the purpose of determining compliance with the siting requirements as specified in 40 CFR Part 58, Appendix E.

[Rule 62-212.400(7), F.A.C. and 62-4.070(3) Reasonable Assurance]

LIMITATIONS ON FACILITY OPERATIONS

9. Sprinkler System: If the sprinkler system used for the wet suppression of PM and Pb fugitive emissions from the EFT facility's roadways and grounds malfunctions, a water truck or other means shall be used to maintain wet suppression of affected zones. Truck traffic shall be halted in any zones for which wet suppression cannot be maintained until the sprinkler system is repaired.
[Rule 62-4.070, F.A.C. Reasonable Assurance and Rule 62-210.200(PTE).]

10. Truck Traffic: Truck traffic that is involved with the receiving of lead bearing materials, including lead-acid batteries, at EFT facility and the shipping of lead alloy products from the EFT facility is only allowed between the hours of 6:00 am to 10:00 pm seven days a week.
[Rule 62-4.070, F.A.C. Reasonable Assurance and Rule 62-210.200(PTE).]

NESHAP APPLICABILITY

11. NESHAP Subpart X Applicability: The facility grounds and roadways at the EFT facility are subject to all applicable requirements of 40 CFR 63, Subpart X which applies to Secondary Lead Smelting. Specifically, the feed dryer shall comply with 40 CFR 63.550 Reporting and Recordkeeping Requirements. Subpart X is provided in Appendix X of this permit. [Rule 62-204.800(11)(b) and 40 CFR 63, -Subpart X – National Emissions Standards for Hazardous Air Pollutants (NESHAP) for Secondary Lead Smelting].

G. Building Ventilation

This section of the permit addresses the following emissions unit.

ID No.	Emission Unit Description
015	Building ventilation of enclosed facility controlled by Torit filter.

EFT will enclose all process areas of the facility and ventilate the air exhausted from the facility through a large 195,000 acfm cartridge collector identified as the Torit filter. This air flow will produce an inward draft velocity at all openings in the building of 50 feet per minute (fpm) to prevent PM and Pb emissions from escaping uncontrolled. The filtered gases will be emitted from a new stack identified as the Torit stack.

CONSTRUCTION

1. Equipment: The permittee is required to construct in phases a fully enclosed and ventilated facility consisting of the following equipment.

   a. Enclosure: The applicant shall construct a fully enclosed and ventilated facility that when completed will contain the feed dryer (EU ID 022), blast furnace (EU ID 001), reverb furnace (EU ID 023) and furnace tapping and charging and refining (EU ID 011). The full enclosure shall be completed before the entire EFT facility commences operations that utilize all the emissions units cited in the previous sentence. As specified in Subsections III-A, -B and –C of this permit, individual emissions units may commence operations once they have been individually enclosed. Fugitive emissions consisting of PM and Pb within the enclosed facility are controlled by a Torit filter.
   [Application No. 0570057-020-AC; Rules 62-4.070(3) and 62-210.200(PTE), F.A.C.]

   b. Torit Stack: The permittee is authorized to construct a Torit stack that is 130 feet tall and has a diameter of 96 inches with a design exhaust flow rate of 195,000 acfm at ambient temperature.
   [Application No. 0570057-020-AC; Rules 62-4.070(3) and 62-210.200(PTE), F.A.C.]

2. Circumvention: The permittee shall not circumvent the air pollution control equipment or allow the emission of air pollutants without this equipment operating properly. [Rule 62-210.650, F.A.C.]

PERFORMANCE RESTRICTIONS

3. Hours of Operation: The hours of operation of the enclosed facility are not limited (8,760 hours per year). [Application No. 0570057-020-AC; Rules 62-210.200(PTE) and 62-212.400(10)(c), F.A.C.]

4. Malfunction: If the Torit filter malfunctions causing the complete loss of negative pressure inside the enclosure, lead production at the EFT facility must stop until the malfunction can be corrected. The permittee must notify the EPC of Hillsborough County within 12 hours of a malfunction occurring. [Rule 62-210.200(PTE), F.A.C.]

5. Production: Upon completion of the total enclosure, the maximum lead produced from the enclosed facility shall not exceed 150,000 tons any consecutive twelve month period. [Application No. 0570057-020-AC and Rule 62-210.200(PTE), F.A.C.]

EMISSIONS STANDARDS

6. PM Emissions Standard: PM emissions from the Torit stack shall not exceed 0.005 gr/dscf or 36.60 lbs/hr as demonstrated by initial and annual compliance tests.
   [Application No. 0570057-020-AC; Rules 62-4.070(3), 62-210.200(PTE), and 62-212.400(10)(c), F.A.C.]

7. Pb Emissions Standard: Pb emissions from the Torit stack shall not exceed 0.05 mg/dscm or 0.160 lbs/hr as demonstrated by initial and annual compliance tests.
   [Application No. 0570057-020-AC; Rules 62-4.070(3), 62-210.200(PTE), and 62-212.400(10)(c), F.A.C. and 40 CFR 63.543(a)]

8. VE Standard: Visible emissions from the Torit stack shall not exceed 3% opacity as demonstrated by initial and annual compliance tests.
[Application No. 0570057-020-AC; Rules 62-296.603 and 62-296.712, F.A.C.; and 40 CFR 60.122(a)(2)]

TESTING AND MONITORING REQUIREMENTS

9. PM and Pb Compliance Tests: The Torit stack exhaust shall be tested to demonstrate initial compliance with the PM and Pb standards no later than 180 days after initial operation of the total enclosure and during each federal fiscal year (October 1st to September 30th) thereafter. [Rule 62-4.070(3), F.A.C.]

10. VE Compliance Tests: The Torit stack exhaust shall be tested to demonstrate initial compliance with the VE standards no later than 180 days after initial operation and during each federal fiscal year (October 1st to September 30th) thereafter. [Rule 62-4.070(3), F.A.C.]

11. Test Requirements: The permittee shall notify the EPC of Hillsborough County in writing at least 15 days prior to any required tests. Tests shall be conducted in accordance with the applicable requirements specified in Appendix CTR (Common Testing Requirements) of this permit.
[Rule 62-297.310(7)(a)9, F.A.C.]

12. Opening In-Draft Velocity Requirement: The in-draft velocity at all openings of the enclosed facility shall be at a minimum of 50 fpm. [Application No. 0570057-020-AC]

    a. Opening In-Draft Monitoring: Compliance with the doorway in-draft requirement of Specific Condition No. 12 shall be determined using either of the following two procedures:

        (i) The permittee shall use a propeller anemometer or equivalent device meeting the requirements of 40 CFR 63.547(d)(2)(ii) through (d)(2)(iv).

        (ii) Doorway in-draft shall be determined by placing the anemometer in the plane of the doorway opening near its center.

        (iii) Doorway in-draft shall be demonstrated for each doorway that is open during normal operation, excluding the passageway between the enclosure and containment room, with all remaining doorways in the position they are in during normal operation.

    b.

        (i) The permittee shall install a differential pressure gauge on the leeward wall of the building to measure the pressure difference between the inside and outside of the building.

        (ii) The pressure gauge shall be certified by the manufacturer to be capable of measuring pressure differential in the range of 0.02 to 0.2 mm mercury (Hg.)

        (iii) Both the inside and outside taps shall be shielded to reduce the effects of wind.

        (iv) The permittee shall demonstrate the inside of the building is maintained at a negative pressure as compared to the outside of the building of no less than 0.02 mm Hg when all doors are in the position they are in during normal operation.

    [Rule 62-4.070(3), F.A.C. and 40 CFR 63.547]

13. Test Methods: Any required stack tests shall be performed in accordance with the following methods:

Method	Description of Method and Comments
EPA 5/29	Determination of Particulate Emissions. The minimum sample volume shall be 30 dry standard cubic feet.
EPA 9	Determination of Visible Emissions. Each EPA Method 9 test shall be thirty (30) minutes in duration pursuant to Rule 62-297.310, F.A.C. and concurrent with one of the EPA Method 12 runs.
EPA 12/29	Determination of Lead Emissions.

RECORDS AND REPORTS

14. Test Reports: The permittee shall prepare and submit reports for all required tests in accordance with the requirements specified in Appendix CTR (Common Testing Requirements) of this permit. For each test run, the report shall also indicate the operating rate. [Rule 62-297.310(8), F.A.C.]

NESHAP APPLICABILITY

15. NESHAP Subpart X Applicability: The fugitive Pb emissions from the enclosed facility are subject to and must comply with all applicable requirements of 40 CFR 63, Subpart X which applies to Secondary Lead Smelting. Specifically, the feed dryer shall comply with 40 CFR 63.550 Reporting and Recordkeeping Requirements. Subpart X is provided in Appendix X of this permit. [Rule 62-204.800(11)(b) and 40 CFR 63, -Subpart X – National Emissions Standards for Hazardous Air Pollutants (NESHAP) for Secondary Lead Smelting].

H. Plastic Pellet Silos

This section of the permit addresses the following emissions unit.

ID No.	Emission Unit Description
024	Four (4) plastic pellet silos

ETF will install a total of four Plastic Pellet Silos for off-loading to truck and railcar. Two of the silos will be dedicated to truck loading and two for railcar loading. The silos will emit minor amounts of PM when they are being filled. The PM will be controlled by bin vent filters (fabric filters) atop the silos.

CONSTRUCTION

1. Equipment: The permittee is authorized to construct four plastic pellet silos (two for truck loading and two for train loading) with bin filters to control PM emissions. Each silo will have a stack height of 68.5 feet, a stack diameter of 14 inches and a flow rate of approximately 1,750 acfm.
[Application No. 0570057-020-AC]

PERFORMANCE RESTRICTIONS

2. Maximum Fill Rate: The maximum fill rate for each plastic pellet silo shall not exceed 1.75 TPH with a maximum capacity of 12,000 tons in any consecutive twelve month period.
[Application No. 0570057-020-AC; Rules 62-4.070(3) and 62-210.200(PTE), F.A.C.]

EMISSIONS STANDARDS

3. PM Emission Standard: PM emissions from each bin filter of the plastic pellet silos shall not exceed 0.001 gr/dscf. [Application No. 0570057-020-AC; Rules 62-4.070(3) and 62-210.200(PTE), F.A.C.]

4. VE Standard: VE from the plastic pellet silo bin vent filters shall not exceed 3% opacity as demonstrated by initial and annual compliance tests. A visible emission reading of 3% opacity or less may be used to establish compliance with the PM emission standard in Specific Condition 3. A visible emission reading greater than 3% opacity will require the permittee to perform a PM emissions stack test within 60 days to show compliance with the PM standard.
[Application No. 0570057-020-AC; Rules 62-296.603 and 62-296.712, F.A.C.; and 40 CFR 60.122(a)(2)]

TESTING AND MONITORING REQUIREMENTS

5. Initial Compliance Tests: Each unit shall be tested to demonstrate initial compliance with the VE emissions standards specified in Specific Condition 4. The initial test shall be conducted within 180 days after initial operation. [Rule 62-297.310(7)(a)1., F.A.C. and Rule 62-4.070(3), F.A.C.]

6. Annual Compliance Tests: During each federal fiscal year (October 1st to September 30th), each unit shall be tested to demonstrate compliance with the VE standard specified in Specific Condition 4.
[Rule 62-297.310(7)(a)4, F.A.C. and Rule 62-4.070(3), F.A.C.]

7. PM Compliance Test: The initial and annual VE tests in Specific Conditions 5 and 6 shall serve as a surrogate for the PM emissions tests. If the VE emissions standard in Specific Condition 4 is not meet, PM tests utilizing EPA Method 5 must be conducted on the silo bin filters to show compliance with the PM emissions standard in Specific Condition 3 within 60 days. [Rule 62-297.620(4), F.A.C.]

8. Test Methods: Any required stack tests shall be performed in accordance with the following methods.

Method	Description of Method and Comments
EPA 5	Determination of Particulate Emissions. The minimum sample volume shall be 30 dry standard cubic feet.
EPA 9	Method 9 - Visual Determination of the Opacity of Emissions from Stationary Sources

RECORDS AND REPORTS

9. Test Reports: The permittee shall prepare and submit reports for all required tests in accordance with the requirements specified in Appendix CTR (Common Testing Requirements) of this permit. For each test run, the report shall also indicate the operating rate. [Rule 62-297.310(8), F.A.C.]

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS

I. Propane Vaporizer and Slurry Heaters

This section of the permit addresses the following emissions unit.

ID No.	Emission Unit Description
025	Propane vaporizer (1) with 1.2 mmBtu/hour burner and soda ash slurry heaters (2) with 0.25 mmBtu/hour burners.

Natural gas will be used as the primary fuel for many of the processes at the EFT facility, such as the furnaces (EU ID 001 and EU ID 023) and dryer (EU ID 022). However, the site will maintain a propane tank to use in the event of natural gas curtailment. The propane tank operation will require the use of a propane vaporizer that includes a 1.2 mmBtu/hr burner.

The plant will use a soda ash slurry injection system in the furnace gases as needed to supplement the sulfur dioxide removal performance of the scrubber. Soda ash may also be used as a backup reagent to the caustic ordinarily used in the scrubber. The soda ash slurry will be heated by two natural gas fired 0.25 mmBtu/hr burners. Heating the slurry will improve the soda ash dissolve time.

EQUIPMENT

1. Propane Vaporizer: The permittee is authorized to install a propane vaporizer with a burner rated at 1.2 mmBtu/hr of heat input when firing propane. The propane vaporizer shall only operate during time of natural gas curtailment. [Application No. 0570057-020-AC]

2. Propane Vaporizer Stack: The permittee is authorized to install a propane vaporizer stack with a height of 9 feet, a diameter of 8 inches and a flow rate of approximately 500 acfm at n average temperature of 600 °F. [Application No. 0570057-020-AC]

3. Slurry Heaters: The permittee is authorized to install two 0.25 mmBtu/hr soda ash slurry heaters. [Application No. 0570057-020-AC]

4. Slurry Heater Stacks: The permittee is authorized to install two soda ash slurry heater stacks with heights of 11.2 feet, diameters of 8 inches and flow rates of approximately 1,600 acfm at an average temperature of 300 °F. [Application No. 0570057-020-AC]

PERFORMANCE RESTRICTIONS

5. Hours of Operation: The hours of operation of the propane vaporizer and soda ash slurry heaters are not limited (8,760 hours per year).
[Application No. 0570057-020-AC; Rules 62-210.200(PTE) and 62-212.400(10)(c), F.A.C.]

6. Burner Heat Input Rates: The maximum heat input rate to the propane vaporizer burner shall not exceed 1.2 mmBtu/hr. The maximum heat input rate to the soda ash slurry heaters shall not exceed 0.50 mmBtu/hr (2 @ 0.25 mmBtu/hr).
[Application No. 0570057-020-AC; Rules 62-210.200(PTE) and 62-212.400(10)(c), F.A.C.]

7. Propane Vaporizer Heat Input: The maximum heat input into the propane vaporizer in any consecutive twelve month period shall not exceed 10,512 mmBtu.
[Application No. 0570057-020-AC; Rules 62-210.200(PTE) and 62-212.400(10)(c), F.A.C.]

8. Soda Ash Slurry Heaters Heat Input: Natural gas is the primary fuel used for the soda ash slurry heaters. Propane may be used as a backup fuel. The maximum heat input into the soda ash slurry heaters in any consecutive twelve month period shall not exceed 4,380 mmBtu.
[Application No. 0570057-020-AC; Rules 62-210.200(PTE) and 62-212.400(10)(c), F.A.C.]

I. Propane Vaporizer and Slurry Heaters

EMISSIONS STANDARDS

9. VE Standard: VE from the propane vaporizer and soda ash slurry heaters stacks shall not exceed 3% opacity as demonstrated by initial and annual compliance tests.
[Application No. 0570057-020-AC; Rules 62-210.200(PTE) and 62-212.400(10)(c), F.A.C.]

TESTING AND MONITORING REQUIREMENTS

10. VE Compliance Tests: The propane vaporizer and soda ash slurry heater stacks exhaust s shall be tested to demonstrate initial compliance with the VE standards no later than 180 days after initial operation and during each federal fiscal year (October 1st to September 30th) thereafter. [Rule 62-4.070(3), F.A.C.]

11. Test Requirements: The permittee shall notify the EPCHC in writing at least 15 days prior to any required tests. Tests shall be conducted in accordance with the applicable requirements specified in Appendix CTR (Common Testing Requirements) of this permit.
[Rule 62-297.310(7)(a)9, F.A.C.]

12. Test Methods: Any required stack tests shall be performed in accordance with the following methods:

Method	Description of Method and Comments
EPA 9	Determination of Visible Emissions. Each EPA Method 9 test shall be thirty (30) minutes in duration pursuant to Rule 62-297.310, F.A.C. and concurrent with one of the EPA Method 12 runs.

RECORDS AND REPORTS

13. Notification, Recordkeeping and Reporting Requirements: The permittee shall maintain records of the amount of natural gas and propane used in the sodas ash slurry heaters and the amount of propane used in the propane vaporizer on a monthly basis and shall comply with the notification, recordkeeping and reporting requirements pursuant to 40 CFR 63.550. These records shall be submitted to the EPCHC on an annual basis or upon request. [Rule 62-4.070(3), F.A.C. and 40 CFR 60]

14. Test Reports: The permittee shall prepare and submit reports for all required tests in accordance with the requirements specified in Appendix CTR (Common Testing Requirements) of this permit. For each test run, the report shall also indicate the heat input rate. [Rule 62-297.310(8), F.A.C.]

J. Emergency Generator

This section of the permit addresses the following emissions unit.

ID No.	Emission Unit Description
026	One 500 kilowatt (kW) liquid fueled emergency generator

The facility will install a diesel-fired emergency generator with an anticipated capacity of 500 kW. The generator will only be used when power is not available from the local utility. The maximum hours of operation are not to exceed 500 hours per year.

1. Equipment: The permittee is authorized to install, operate, and maintain one 500 kW emergency generator. [Applicant Request and Rule 62-210.200(PTE), F.A.C.]

2. Hours of Operation and Fuel Specifications: The hours of operation shall not exceed 500 hours in any consecutive 12 month period. The generator shall burn ultralow sulfur diesel fuel oil (0.0015% sulfur). [Applicant Request and Rule 62-210.200(PTE), F.A.C.]

3. NSPS Subpart IIII Applicability: The emergency generator is Stationary Compression Ignition Internal Combustion Engines (Stationary ICE) and shall comply with applicable provisions of 40 CFR 60, Subpart IIII, including emission testing or certification. [40 CFR 60, Subpart IIII - Standards of Performance for Stationary Compression Ignition Internal Combustion Engines, See Appendix IIII]

4. NESHAPS Subpart ZZZZ Applicability: The emergency generator is a Liquid Fueled Reciprocating Internal Combustion Engines (RICE) and shall comply with applicable provisions of 40 CFR 63, Subpart ZZZZ. Pursuant to 40 CFR 63.6590(c) the generator must meet the requirements of Subpart ZZZZ by meeting the requirements of 40 CFR 60, Subpart IIII.
[40 CFR 63, Subpart ZZZZ - National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE)]

5. Emissions Limits: Each emergency generator shall comply with the following emission limits and demonstrate compliance in accordance with the procedures given in 40 CFR 60, Subpart IIII the language of which is given in Appendix IIII. Manufacturer certification can be provided to the Department in lieu of actual stack testing.

Source (model year)[a]	CO (g/hp-hr)	PM (g/hp-hr)	Hydrocarbons (g/hp-hr)	NO_X (g/hp-hr)[c]
Subpart IIII (2007 and later)	---	0.12	4.0 (NMHC[b]+NO_X)	

a. As per 40 CFR § 89.113.
b. NMHC means Non-Methane Hydrocarbons.
c. g/hp-hr means grams per horsepower-hour

[Application No. 0570057-020-AC; 40 CFR 60, Subpart IIII and Rule 62-4.070(3), F.A.C.]

6. Visible Emission (VE) Limit: The liquid-fueled emergency generator shall comply with a visible emission limit of 3% opacity. An initial VE test shall be conducted in accordance with EPA Method 9 within 60 days after achieving the maximum production rate at which the unit will be operated, but not later than 180 days after initial startup. [Rules 62-296.603, 62-296.712, F.A.C.; and 40 CFR 60.122(a)(2)]

7. Notification, Recordkeeping and Reporting Requirements: The permittee shall maintain records of the amount of fuel oil used in the emergency generator along with the hours of operation and shall comply with the notification, recordkeeping and reporting requirements pursuant to 40 CFR 60.4214 and 40 CFR 60.7. These records shall be submitted to the Compliance Authority on an annual basis or upon request. [Rule 62-4.070(3), F.A.C. and 40 CFR 60, Subparts A and IIII]

TECHNICAL EVALUATION
AND
PRELIMINARY DETERMINATION

EnviroFocus Technologies, LLC

Lead-Acid Battery Recycling Facility

Facility Upgrade and Production Increase

Hillsborough County

DEP File No. 0570057-020-AC
PSD-FL-404

Florida Department of Environmental Protection
Division of Air Resource Management
Bureau of Air Regulation
Special Projects Section

August 7, 2009

I. APPLICATION INFORMATION

A. Applicant name and address

EnviroFocus Technologies, LLC (EFT)
1901 North 66th Street
Tampa, Florida 33619

Authorized Representative: Mr. John Tapper, Chief Operating Officer

B. Processing schedule

August 13, 2008	Department received application from EFT.
September 12	Department sent a request for additional information (RAI) to EFT.
October 14	Department received response to RAI from EnviroFocus.
November 3	Department representatives met with applicant, consultant and U.S. Environmental Protection Agency (EPA) to discuss project and regulations.
November 12	EPA issued final rule revising the National Ambient Air Quality Standard for lead (Pb).
November 14	Department sent a second RAI to EFT.
November 25, 26	A Department representative met with EFT and visited facility in Eagan, Minnesota (MN) operated by affiliate, Gopher Resource Corporation (GRC).
February 13, 2009	Department received partial response to second RAI from EFT.
February 17	Department received modeling files in support of response to second RAI.
March 18	Department send a third RAI to EFT.
April 3	Department received response to third RAI from EFT.
April 14	Department representative met with company consultant to discuss modeling issues.
May 8	Department received revised truck traffic modeling information in further support of RAI response received April 3, 2009.
August 7	The Intent to Issue Air Permit was distributed.

C. Facility location

Refer to Figure 1. EFT operates a lead acid battery recycling facility, which is located in Hillsborough County at 1901 North 66th Street, Tampa, Florida. The UTM coordinates for the site are Zone 17, 364.0 kilometers (km) East and 3093.5 km North. The site is located 70 km south from the Chassahowitzka National Wildlife Area; the nearest Federal Prevention of Significant Deterioration (PSD) Class I Area.

The EFT property is bounded on the south side by the CSX railroad tracks oriented northeast to southwest. A large rail road switchyard operated by CSX is located further south and is a prominent feature visible in the photograph on the right hand side of Figure 1. The EFT facility entrance, scales and battery breaking building as seen from the outside are shown in Figure 2 below. Process details and related photographs are shown in sections further below.

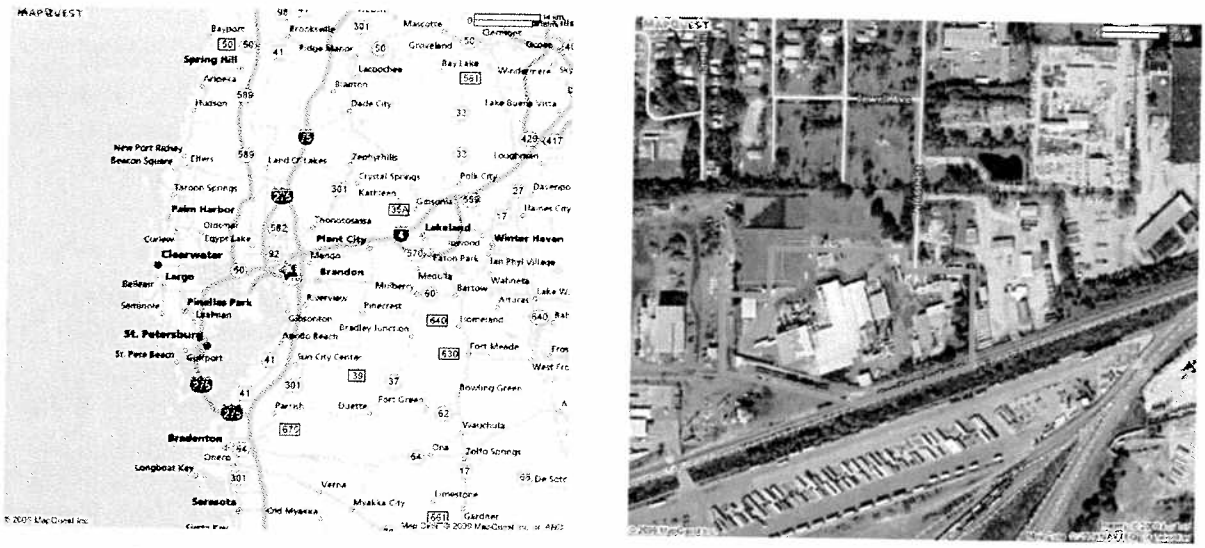

Figure 1. EFT facility location in Tampa and an aerial view of the facility and environs.

Figure 2. EFT facility entrance, shipping and receiving scales, battery process area.

There are industrial areas east and west of the EFT property, such as the one on the left hand side of Figure 3 that are related to scrap metal recycling. There is a residential area located generally northwest of the facility, within 100 meters (m) of the EFT facility boundary and within 250 m from the main process. Some nearby homes and a mobile home park are shown in the middle photographs. Kenly Elementary School is located at 2909 North 66th Street approximately 500 m north of the EFT facility boundary and about 750 m from the main process.

Figure 3. Adjacent scrap yard, nearby homes, mobile home park, Kenly Elementary School.

D. Standard industrial classification codes (SIC)

Industry Group No.	33	Primary metal industries
Industry No.	3341	Secondary smelting & refining of nonferrous metals

According to theNational Emission Standards for Hazardous Air Pollutants (NESHAP), Subpart X for Secondary Lead Smelting a *Secondary lead smelter* means any facility at which lead-bearing

scraps material, primarily, but not limited to, lead-acid batteries, is recycled into elemental lead or lead alloys by smelting.

In this review, the term "lead" will be used within the context of raw and intermediate materials as well as product. When emitted, lead is a hazardous air pollutant (HAP) and its chemical symbol (Pb) will be used in the context of air pollution control and measurement.

E. Regulatory classifications

The EFT facility is subject to 40 Code of Federal Regulations (CFR), Part 60 – Standards of Performance for New Stationary Sources (NSPS). The facility and project are subject to 40 CFR 60, Subpart L - NSPS for Secondary Lead Smelters. A proposed emergency diesel engine is subject to 40 CFR 60, Subpart IIII - NSPS for Compression Ignition Internal Combustion Engines.

The EFT facility is a "Major Stationary Source" as defined in Rule 62-210.200, Florida Administrative Code (F.A.C.). The project triggers the rules for the Prevention of Significant Deterioration (PSD) pursuant to Rule 62-212.400, F.A.C. and requires a Best Available Control Technology (BACT) determination.

The EFT facility is a Title V or "Major Source" of air pollution as defined in Rule 62-210.200, F.A.C., because the potential emissions of at least one regulated pollutant exceeds 100 tons per year (TPY). Regulated pollutants include pollutants such as carbon monoxide (CO), nitrogen oxides (NO_X), particulate matter ($PM/PM_{10}/PM_{2.5}$), sulfur dioxide (SO_2), volatile organic compounds (VOC) and sulfuric acid mist (SAM).

The EFT facility is also a "Major Source of HAP" because it has the potential to emit, in the aggregate, 10 TPY of any one HAP, 25 TPY of any combination of HAPs, or any lesser quantity of a HAP as established through EPA rulemaking.

The EFT facility is subject to 40 Code of Federal Regulations (CFR), Part 63 – National Emission Standards for Hazardous Air Pollutants (NESHAP) for Source Categories. The facility is subject to 40 CFR 63, Subpart X - NESHAP for Secondary Lead Smelting. A proposed emergency diesel engine is subject to 40 CFR 63, Subpart ZZZZ – NESHAP for Stationary Reciprocating Internal Combustion Engines (RICE).

II. PROPOSED PROJECT SUMMARY

A. Current process description

The EFT facility recycles automotive and industrial lead-acid batteries, as well as other lead-acid bearing scrap materials to produce lead ingots. The process involves several key operations (or steps) including: receiving of batteries and recyclable materials; battery breaking and separation into lead, lead salts, plastic and acid electrolyte; storage and containment of recovered lead and lead waste; acid neutralization and wastewater treatment; lead smelting and refining; casting; and shipping.

Figure 4 shows a greatly simplified diagram of the lead-acid battery recycling process with particular attention to the battery breaking and separation step. The lead-acid battery life cycle and additional details of the process as practiced at GRC (the model for the future EFT project) are shown at the following GRC links:

www.gopherresource.com/lead_cycle.asp

www.gopherresource.com/lead_process.asp

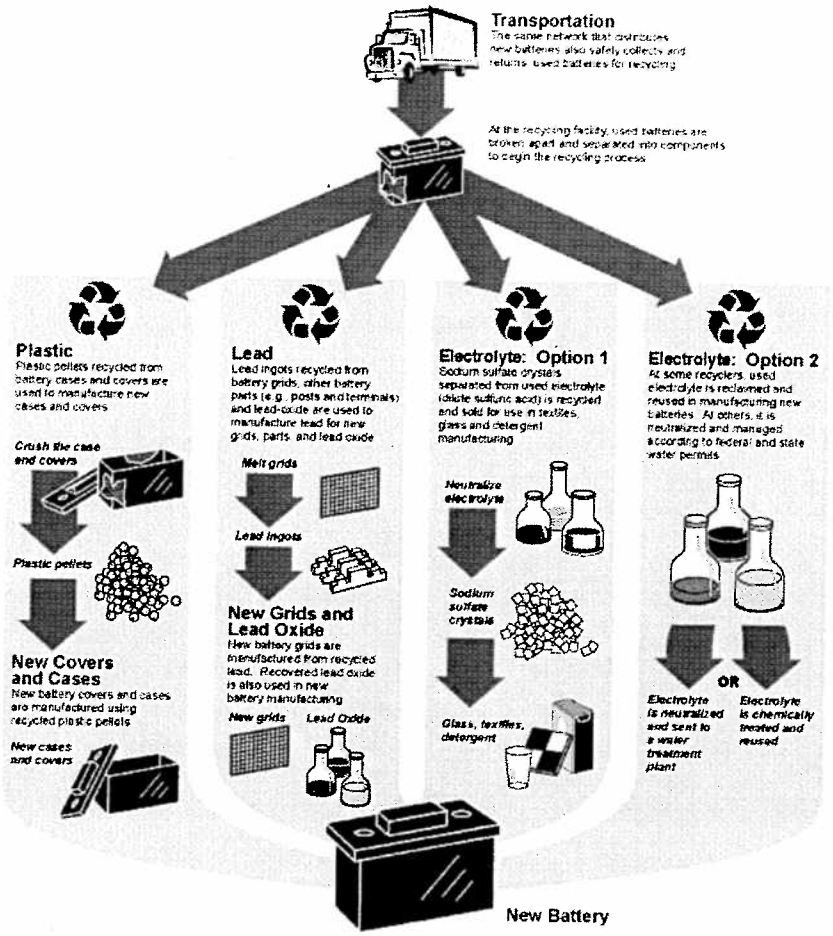

Figure 4. Lead-acid battery recycling process.

Summary of existing emissions units at EFT

The following table is a list of the emissions units (EU) and control equipment located at EFT.

Table 1. Current emission units and pollution controls devices.

EU ID Number	Description	Current Pollution Control Device
None	Battery breaking area (BBA)	None
001	Blast furnace	Afterburner & 35,000 acfm* baghouse
004	Tapping & charging	18,000 acfm hygiene baghouse
008	Soda ash silo	Bin vent filter
009	Facility grounds & roadways	Wet suppression
011	Refining kettles (four @ 75 tons each)	25,000 acfm refinery baghouse
013	Refining kettle heater exhaust	Natural gas or propane
015	Materials storage and handling area (MSHA) and blast furnace enclosure	65,000 acfm cartridge collector

* Actual cubic feet per minute (acfm)

Figure 5 is an aerial view from the north of the EFT facility. The four key stacks and some of the key process areas are shown and related back to the EU listed in the table above.

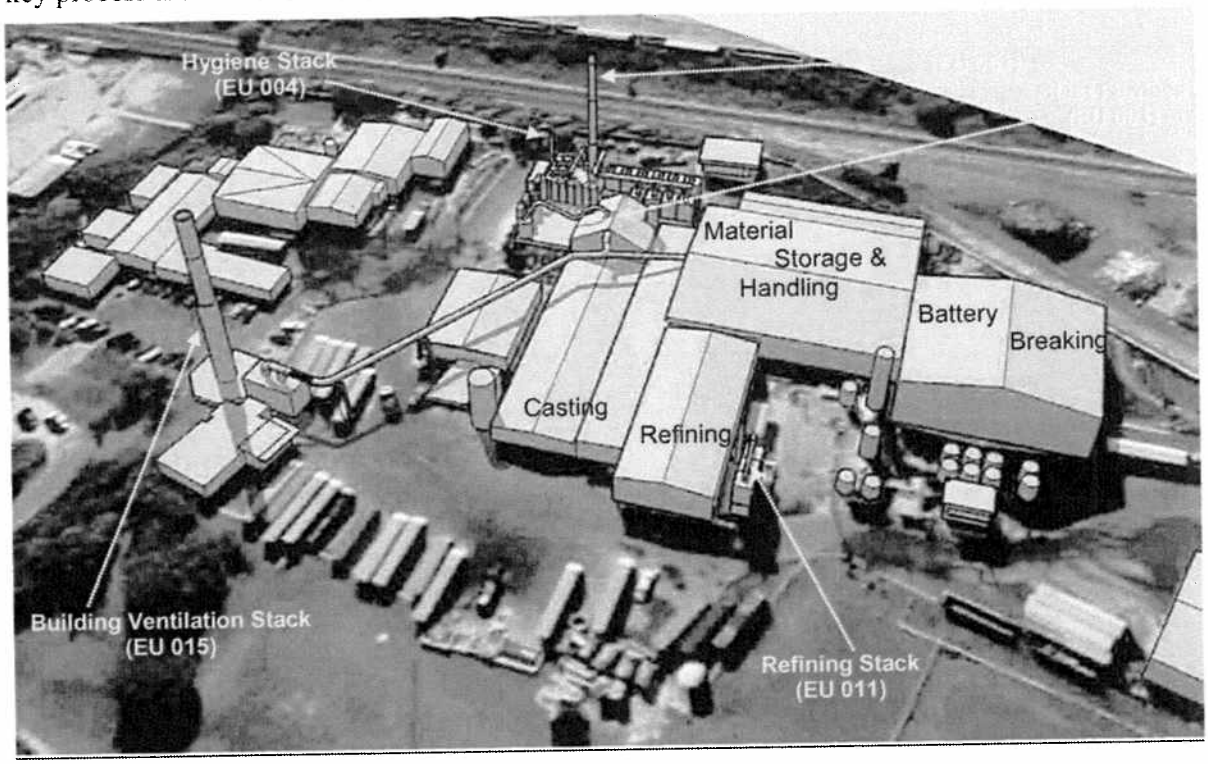

Figure 5. Aerial view of present operation at EFT from the north towards CSX railroad yard.

Lead battery receiving and breaking

Battery breaking area (BBA) means the plant location at which lead-acid batteries are broken, crushed, or disassembled and separated into components. Refer to Figure 6. Spent batteries, such as shown on the pallets in the left hand photograph, are delivered by trucks to the BBA located inside a building that has an opening on at least two sides to the ambient air. The staging portion of the BBA is shown in the middle photograph. The batteries are transferred by conveyor to a battery breaker (a large hammer mill) visible on the top right hand side of last photograph in the figure. The acid is drained and the crushed material then passes through countercurrent flotation and separation equipment (visible in the same photograph) that separates the metallic lead, plastic and lead salts, or muds.

Figure 6. Received lead batteries, staging and conveyance, hammer mill and wet screening.

Baghouse dusts and on-site treatment plant sludge are slurried and fed through the battery breaker and comprise some of the lead muds.

The control room within the BBA is shown on the left hand side of Figure 7 along with one of the separation tanks. Acid drained from the shredder is stored in the tank shown in the middle photograph of Figure 7 and shipped off-site. The case material is separated from the lead-bearing components, washed, and the recovered plastic chips are shipped to customers in tractor trailers, such as shown in the right hand side of the figure. The lead salts are slurried with soda ash (Na_2CO_3) in the desulfurization tanks forming solid lead carbonate ($PbCO_3$) and sodium sulfate (Na_2SO_4) solution. The $PbCO_3$ is filtered and the press cake is also sent to the MSHA. The remaining Na_2SO_4 solution is combined with other process waters, treated and sent to the sanitary sewer system.

Figure 7. Settling tank & control room, sulfuric acid storage, trailer awaiting load of plastics.

Materials storage and handling area (MSHA) means any area of a secondary lead smelter in which lead-bearing materials (including, but not limited to, broken battery components, reverberatory (reverb) furnace slag, flue dust, and dross) are stored or handled between process steps including, but not limited to, areas in which materials are stored in piles, bins, or tubs, and areas in which material is prepared for charging to a smelting furnace. MSHA does not include areas used exclusively for storage of blast furnace slag.

The metallic lead, lead salts, small amounts of plastic, and rubber are conveyed to the MSHA storage and handling area shown on left hand side of Figure 8. The area was totally enclosed in October 2008. Shredded lead is shown in the middle photograph of Figure 8 that was taken within the material storage and handling area. The photograph on the right hand side shows (from left to right) the storage sections for silica, scrap iron, lead-bearing slag and lime rock.

Figure 8. MSHA; shredded lead in storage; material bins for silica, iron, slag and lime rock.

Smelting

Smelting means the chemical reduction of lead compounds to elemental lead or lead alloys through processing in high-temperature (greater than 980 °C) furnaces including, but not limited to, blast furnaces, reverb furnaces, rotary furnaces, and electric furnaces.

Blast furnace means a smelting furnace consisting of a vertical cylinder atop a crucible, which lead-bearing charge materials are introduced at the top of the furnace and combustion air is introduced through tuyeres at the bottom of the cylinder, which uses coke as a fuel source and is operated at such a temperature in the combustion zone (greater than 980 °C) that lead compounds are chemically reduced to elemental lead metal.

The main operation occurs in the blast furnace located within the building in the photograph on the left hand side of Figure 9. A total enclosure was recently installed that surrounds the blast furnace area with permanent walls that connect to the existing roof. An inner shroud, similar to a chimney, extending from the roof to a height of approximately 15 feet (ft) above the floor now surrounds the blast furnace.

Figure 9. Blast furnace area from outside, weighing and charging, bottom of blast furnace.

A new negative air filtration system was installed in 2008 that removes approximately 32,500 acfm from the blast furnace enclosure. The negative air filtration system includes a "horseshoe" type ventilation hood from which another 32,500 acfm is drawn from the perimeter of the opening between the material charging storage area and the blast furnace area.

The raw materials described above together with coke, furnace fluxes and refining kettle dross are weighed and charged via a skip hoist through doors at the top of the blast furnace as shown in the middle photograph.

The blast furnace shown on the right hand side of Figure 9 is an oval shaped vessel that is 36 inches by 72 inches. The coke and blast air convert the charged materials into molten lead. The picture was taken on a day when maintenance was conducted on the furnace.

Leaded materials, various fluxing agents and coke are added to the top of the furnace using various "menus" depending on the types of available leaded materials. The molten lead flows down through the layers of feed into a crucible at the bottom of the furnace. A pulled crucible is shown on the right hand side of Figure 10. A layer of molten slag comprised primarily of calcium, silica and iron floats on top of the molten lead. This slag is periodically tapped into pans as shown on the left hand side of Figure 10. The molten lead is drained into water cooled molds in 2-ton sized "buttons" seen in the middle photograph. The buttons can be shipped "as is" or charged into the refining kettles as described below. A significant amount of slag is produced, some of which is reused. Most is shipped to a landfill after testing.

Figure 10. Blast furnace tapping, 2-ton buttons, holding kettle can be moved to refining area.

Process gasses from the blast furnace pass through an afterburner to destroy CO and VOC. The afterburner is shown in the left hand photograph in Figure 11. The process gasses then pass through several cooling loops visible in the second photograph. Sodium bicarbonate ($NaHCO_3$) is blown into one of the cooling loops to partially control SO_2. Dust and fumes containing PM/PM_{10} and Pb emissions are collected in the 10-compartment process baghouse shown in the same photograph and exhausted via the tall (150 ft) stack partly visible in the second photograph.

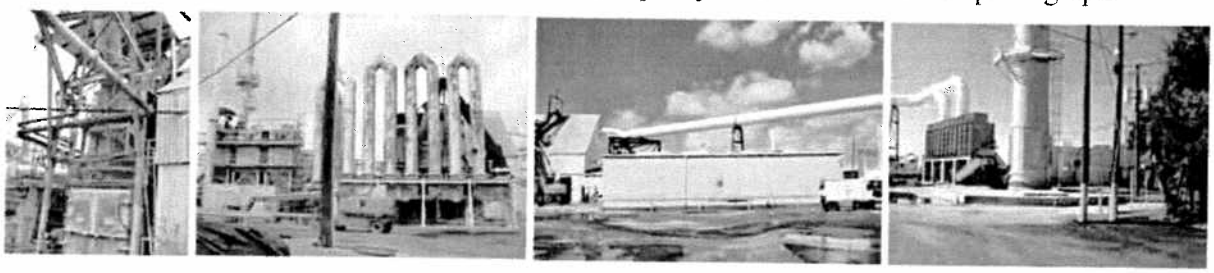

Figure 11. Afterburner; cooling loops, baghouses, stacks; negative air baghouse with stack.

The fugitive emissions from the blast furnace charging and tapping, as well as the skip hoist are captured by hoods and enclosures. Some of the gasses are exhausted via the 3-compartment 18,000 acfm hygiene baghouse and the 60-ft hygiene stack, also visible in the second photograph.

The horseshoe hood creates a null air flow at the opening between the MSHA building and the smelting building to prevent drawing lead bearing dust from the MSHA into the blast furnace enclosure area. The ducts from the two removal points, visible in the third photograph, are joined in a single 56-inch duct. The large duct transfers the gases to the large 65,000 acfm cartridge collector (based on nano-fitration principles) and the 130-ft stack shown in the photograph on the right hand side of Figure 10.

Refining and casting

Refining kettle means an open-top vessel that is constructed of cast iron or steel and is indirectly heated from below and contains molten lead for the purpose of refining and alloying the lead. Included are pot furnaces, receiving kettles, and holding kettles.

In the refining area, the lead from the blast furnace is currently charged into one of the facility's four refining kettles along with alloying agents and fluxes appropriate for the type of finished lead to be produced. The photograph on the left hand side in Figure 12 shows the four existing 75-ton refining kettles.

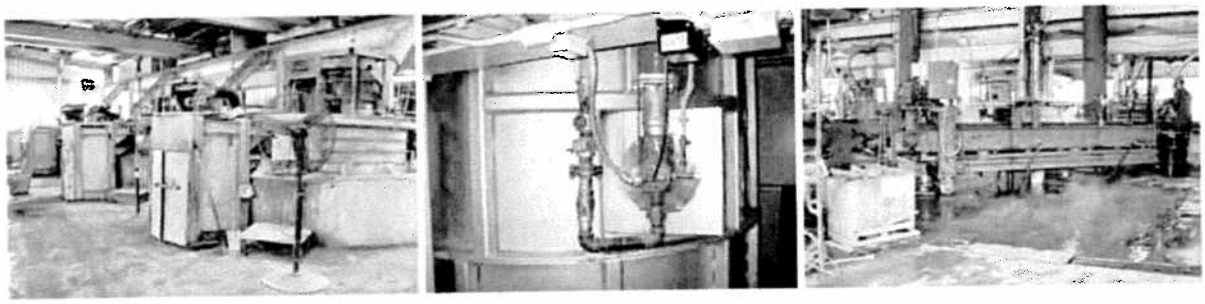

Figure 12. Refining kettles and ducts, gas burner on kettle at GRC, ingot casting machines.

Each refining kettle is indirectly heated by a natural gas burner similar to the one shown in the middle photograph (taken at Gopher Resource Corporation (GRC)). The refined lead is tapped from the kettles and cast into lead alloy products such as ingots and blocks using the equipment and labor as shown in the photograph on the right hand side.

The first photograph in Figure 13 is of product ingots. The second photograph shows stacks of refined ingots, as well as larger refined blocks ready for shipment.

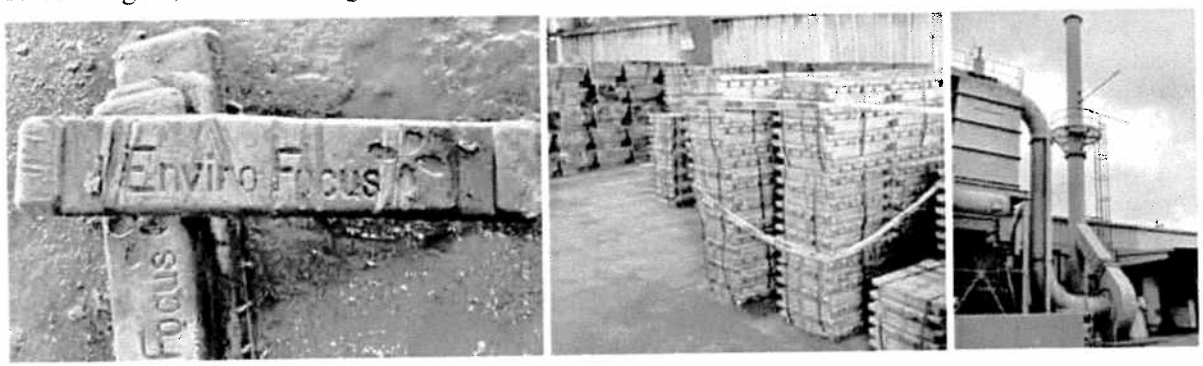

Figure 13. Individual ingots, stacks of ingots and larger blocks, refining baghouse and stack.

Sodium nitrate ($NaNO_3$) and sulfur are added as fluxing agents during refining to aid in the removal of certain metals, such as antimony (Sb), depending on the product specifications. Direct refining kettle emissions are ducted to a plenum, vented through a 25,000 acfm baghouse and exhausted via the 60-ft refinery stack shown in the right hand photograph in Figure 13. Emissions from the refining kettle burners are exhausted separately from the direct kettle emissions through small dedicated stacks.

Figure 14 is a series of photographs to provide the reader with an idea of some other outside features of the operation. The first shows a covered but largely open storage area for some of the materials used in the process. The surrounding pavement is wetted down for Pb-laden dust suppression.

Figure 14. Storage area and wetted pavement, watering truck, wet sweeper truck, wet brush.

The two middle photographs show the complementary dust suppression vehicles including a watering truck and a wet sweeper truck. A close-up of a brush is shown in the right hand photograph.

Figure 15 is a set of photographs related to the existing operation showing some of the computer screens introduced by EFT since they acquired the facility. Good process control and feedback produces a more efficient and cleaner operation and greatly aids in recordkeeping and reporting.

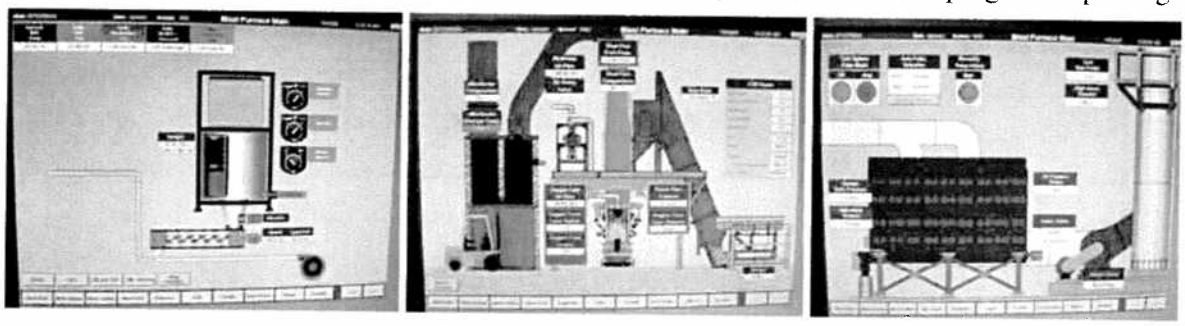

Figure 15. Screens for bicarbonate injection, blast furnace, negative pressure air filtration.

B. Project overview

EFT submitted an application for an air construction permit to upgrade the operations and expand the production capacity of its lead-acid battery recycling facility from 32,000 to 150,000 TPY of lead. The project includes the following key actions:

- Relocate the BBA and the MSHA from west to east of the smelt area and totally enclose. Replace the existing battery breaker with a larger nominal 50 tons per hour (TPH) hammer mill having a maximum capacity and limitation of 60 TPH.
- Install a dedicated wet impingement scrubber with a dedicated 130-ft stack on the BBA for SAM, PM/PM_{10} and Pb control.
- Replace the existing soda ash silo with a soda ash receiving silo and two soda ash process silos with associated bin vent baghouses and stacks.
- Install a 15 TPH reverb lead furnace utilizing dried feed to produce soft lead.
- Install channels (launders) heated by small natural gas-fueled pipe burners to convey molten lead from the new reverb furnace to the refining kettles.
- Keep the 3 TPH blast furnace for hard lead production using reverb slag and other lead bearing waste materials.
- Replace the afterburner with a larger unit for the collocated reverb and blast furnaces, followed by an expanded process baghouse and a process SO_2 wet scrubber exhausted through a new 130-ft combined process stack.
- Install a natural gas-fueled (propane backup) 40 TPH feed dryer for use with a new reverb furnace.
- Provide separate hooding for the feed dryer and a dedicated 18,000 acfm baghouse vented to the new 130-ft combined process stack.
- Enlarge the four 75-ton refining kettles to 100-ton kettles.
- Add four 100-ton refining kettles and two 150-ton holding kettles.
- Replace and install additional natural gas (with propane backup) burners to heat the ten kettles.
- Install three small stacks for the combustion product exhaust from the ten kettle burners.

- Increase dross removal from the refining area to the raw materials charging area.
- Consolidate and expand hooding and ducting for tapping, charging and direct refining kettle exhausts into a process fugitive emissions system.
- Install a new 72,000 acfm process fugitive emissions baghouse and a new dedicated 130-ft stack to replace the separate existing hygiene and refining baghouses and stacks.
- Install additional facility baghouse dust conveyance and slurrying equipment to return the material to the process via the battery breaker.
- Install a propane vaporizer with a small stack.
- Install natural gas-fueled (propane backup) slurry heaters and small stacks.
- Construct a plastics plant to convert plastic from the battery casings into pellets for sale.
- Install four plastics pellet bins and a small stack for the plastics plants.
- Expand the ventilation system from 65,000 to 195,000 acfm. Increase the cartridge collector filter capacity to match the increase and exhaust via the existing 120-ft stack.
- Implement total enclosure and general ventilation that maintains the key operations at a lower than ambient pressure to ensure in-draft through any doorway openings.
- Install a 500 kilowatts (kW) emergency diesel generator and a small stack.

As previously mentioned, the GRC facility in Minnesota is the basic model for the planned project at EFT. GRC has collocated blast and reverb furnaces (defined below). The addition of a reverb furnace at EFT is the key project feature that will make it possible to greatly increase lead production.

Reverb furnace means a refractory-lined furnace that uses one or more flames to heat the walls and roof of the furnace and lead-bearing scrap to such a temperature (greater than 980 °C) that lead compounds are chemically reduced to elemental lead metal.

Collocated blast and reverb furnaces means operation at the same location of a blast furnace and a reverberatory furnace with the volumetric flow rate discharged from the blast furnace being at equal to or less than that discharged from the reverberatory furnace.

The GRC facility also features indoor chemical storage and total enclosure of key operations including the BBA, MSHA, smelting, refining and casting. *Total enclosure* means a roofed and walled structure with limited openings to allow access and egress for people and vehicles.

The photographs in Figure 16 were taken by a Department representative who visited the GRC facility in November 2008.

Figure 16. Reverb furnace, chemical storage, totally enclosed raw materials storage area.

Although the inside operations are of a rough nature, the activities are separated from the environment making it possible to more efficiently contain, collect, treat and vent emissions than the present EFT arrangement.

The GRC business presently has a more modern, clean and safe look than the EFT business. Figure 17 contains exterior photographs of the GRC facility. The upgraded and expanded EFT facility will have a similarly modern appearance on the outside.

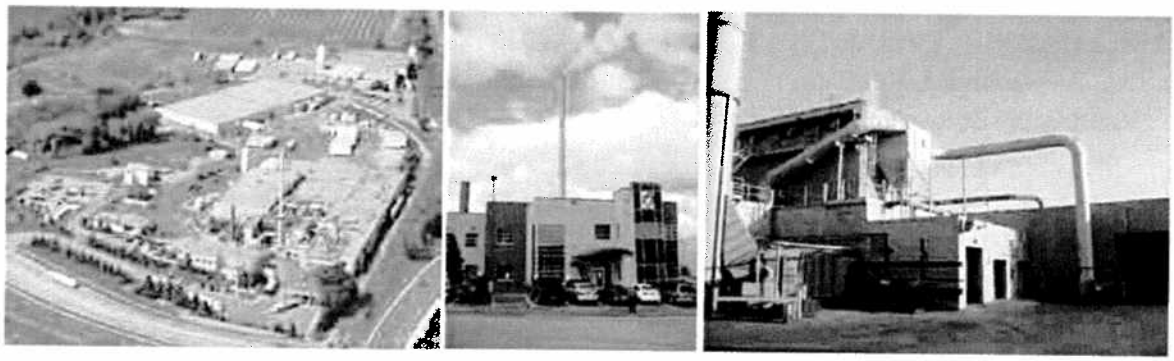

Figure 17. Overview of GRC, office building, enclosed operation, good ducts and baghouses.

The steps to totally enclose the key operations at the EFT facility will be conducted in phases beginning with the physical expansion of the complex of builds towards the east (the left) as shown in red within the rendition on the left hand side of Figure 18. The expanded area will primarily consist of warehouses, the new BBA, the new plastics plant and the new MSHA.

Figure 18. Building expansion, enclosure of smelting and refining areas, finished goods area.

The middle frames show the enclosure of the smelting and refining areas. The rendition on the right shows the completed building complex. The positions of the new baghouses and stacks are not shown with the exception of the building ventilation stack.

A video showing the progressive expansion and enclosure of the smelting and refining areas is available at the following link:

www.dep.state.fl.us/Air/emission/construction/hillsborough_county/timeline.wmv

C. Emissions from key operations

Following are the main pollutants emitted from each of the key operations:

BBA: $PM/PM_{10}/PM_{2.5}$, SAM, Pb.

MSHA: $PM/PM_{10}/PM_{2.5}$, Pb.

Feed dryer: $PM/PM_{10}/PM_{2.5}$, Pb, NO_X, CO.

Smelting: $PM/PM_{10}/PM_{2.5}$, Pb, CO, VOC, NO_X, SO_2, other metal HAP.

Refining, tapping and charging (process fugitive emission sources*): $PM/PM_{10}/PM_{2.5}$, Pb, NO_X, SO_2, other metal HAP.

Building ventilation: $PM/PM_{10}/PM_{2.5}$, Pb.

Natural gas burners: $PM/PM_{10}/PM_{2.5}$, NO_X, CO.

* *Process fugitive emission source* means a source of emissions at a secondary lead smelter that is associated with lead smelting or refining, but is not the primary exhaust stream from a smelting furnace, and is not a fugitive dust source. Process fugitive sources include, but are not limited to, smelting furnace charging points, smelting furnace lead and slag taps, refining kettles and dryer transition pieces.

{This is an industry term not to be confused with fugitive emissions as defined in Rule 62-210.200 (Definitions), F.A.C.}

Table 2 is a list and description of the EU in accordance with the future facility configuration.

Table 2. List and descriptions of EU after the project.

EU ID Number	Description
021	Battery breaking area including a 50 ton per hour (TPH) hammer mill, separation equipment, plastics plant, wet impingement scrubber and a new 130 ft stack.
022	Feed dryer fueled by natural gas (propane backup) to remove moisture from lead and lead salts prior to introduction into new reverb furnace. Includes an 18,000 acfm baghouse that will be vented through the combined process (blast and reverb furnace) stack.
001	Collocated blast furnace. Direct emissions controlled by common afterburner, common wet SO_2 scrubber, common process baghouse and combined 130-ft process stack.
023	Collocated reverb furnace. Direct emissions controlled by common afterburner, common wet SO_2 scrubber, common process baghouse and combined 130-ft process stack.
011	Furnace tapping, charging and lead refining. Process fugitive emissions from furnace tapping and charging and 10 refining kettles. Includes a 72,000 acfm process fugitive emissions (hygiene) baghouse and 130-ft stack.
008	Soda ash silos. (3) with bin filters and stacks.
009	Facility grounds and roadways. Controlled by wet suppression, vacuum sweeping and wheel wash station.
013	Combustion gases from (10) natural gas burners with a total capacity of 40,000,000 Btu per hour (mmBtu/hr) providing heat to the refining kettles. Exhaust is vented to 10 small stacks.
015	Building ventilation of the totally enclosed lead recycling process to maintain the key operations at a lower than ambient pressure ensuring in-draft through any doorway opening. Includes a 195,000 acfm cartridge collector and 130 ft stack.
024	Plastics plant pellet silos (4) for truck and train loading. Each silo will have a bin filter and a small stack. The plastics plant is vented via the building ventilation system.
025	Propane vaporizer (1) and soda ash slurry heaters (2).
026	Emergency generator rated at 500 kilowatts (kW).

D. Facility wide emission estimates

Table 3 is a list of baseline actual and future potential emissions of PSD-pollutants from the EFT facility.

Table 3. Past actual and estimated future potential emissions from the EFT facility in TPY.

Pollutants	Baseline Actual Emissions	Future Potential Emissions	Net Emissions Increase	PSD Significant Emission Rate	PSD Triggered? Yes/No
CO	813	912	99	100	No
NO_X	35	204	169	40	Yes
$PM/PM_{10}/PM_{2.5}$	24	65	41	25/15/10	Yes
SAM	4.4	6.5	2.1	7	No
Pb	0.97	0.96	-0.01	0.6	No
SO_2	853	892	39.0	40	No
VOC	60	16	-44.0	40	No
Mercury (Hg)*	0.012	0.018	0.006	0.1	No

* Hg is a PSD-pollutant per state rules, but not per federal rules.

Table 4 is a list of future HAP emissions from the EFT facility.

Table 4. Future HAP emissions from the EFT facility estimated by the applicant.

Pollutants	Past emissions (TPY)	Future Emissions (TPY)
Pb	0.97	0.96
Hg	0.012	0.018
Antimony (Sb)	Not estimated	0.009
Arsenic (As)	Not estimated	0.32
Cadmium (Cd)	Not estimated	0.033
Hydrogen chloride (HCl)	Not estimated	0.22
Carbon disulfide (CS_2)	29.4	5.0
Total HAP	> 30	6.56

The listed future emission estimates are based on emission tests conducted at the GCR facility that is the basic model for the EFT project. Past emissions of some of the metal HAP from the EFT facility are not known with any accuracy and are not listed except for Pb and Hg.

EFT's estimate of 29.4 TPY of CS_2 is based on testing conducted on a facility with a blast furnace. Despite the future HAP emission estimates, there is insufficient rationale at this time to classify the future EFT operation other than a major source of HAP on the basis of potential to emit and on past operations.

III. RULE APPLICABILITY

A. State Regulations

The project is subject to the applicable environmental laws specified in Section 403 of the Florida Statutes (F.S.). The Florida Statutes authorize the Department of Environmental Protection to establish rules and regulations regarding air quality as part of the F.A.C. This project is subject to the following rules in the F.A.C.

Table 5. Key applicable state regulations.

Chapter	Description
62-4	Permitting Requirements
62-204	Air Pollution Control (Includes Adoption of Federal Regulations)
62-210	Stationary Sources – General Requirements
62-212	Stationary Sources – Preconstruction Review (including PSD Requirements)
62-213	Operation Permits for Major Sources of Air Pollution
62-296	Stationary Sources – Emission Limiting Standards
62-297	Stationary Sources – Emissions Monitoring

B. Federal Regulations

This project is also subject to certain applicable federal provisions regarding air quality as established by the EPA in the CFR and summarized below.

Table 6. Key applicable federal regulations.

Title 40	Description
Part 60	Standards of Performance for New Stationary Sources (NSPS)
Part 63	National Emission Standards for Hazardous Air Pollutants (NESHAP)

The key emission limits from the referenced federal standards are given in Tables 7, 8 and 9. The values apply together with limitations at least as stringent based on BACT or avoidance of PSD and BACT.

Table 7. Pb and total hydrocarbons (THC) limits for process sources - collocated reverb furnace and existing blast furnace as applicable to EFT.

Furnace configuration	Pb compounds (mg/dscm)[3]	THC (ppmvd)[1]	Citation 40 CFR 63, Subpart X
Both furnaces operating	2.0	20 ppmvd	§63.543(a),(c).
Only the blast furnace[2]	2.0	360 ppmvd	§63.543(a),(c)(1).

1. THC emission limits are expressed in parts per million by volume, dry, as propane at 4 percent carbon dioxide (ppmvd @ 4% CO_2) to correct for dilution, based on a 3-hour average.
2. The blast furnace at EFT is an existing source that commenced construction or reconstruction on or before June 9, 1994.
3. Pb compounds emission limits are expressed as milligrams per dry standard cubic meter (mg/dscm).

Table 8. Summary of Pb standards for process fugitive sources.[2]

Process fugitive emission source	Control device Pb compound emission limit (mg/dscm)	Enclosed hood or doorway face velocity (fpm)	Citation 40 CFR 63 Subpart X
Control Option I			
Smelting furnace and dryer charging hoppers, chutes, and skip hoists	2.0	300 [1]	§63.544 (b), (c).
Smelting furnace lead taps and molds during tapping	2.0	300 [1]	§63.544 (b), (c).
Smelting furnace slag taps and molds during tapping	2.0	300 [1]	§63.544 (b), (c).
Refining kettles	2.0	250 [1]	§63.544 (b), (c).
Dryer transition pieces	2.0	350 [1]	§63.544 (b), (c).
Dryer	2.0		§63.544 (d).
Control Option II			
Enclosed building ventilated to a control device	2.0		§63.544 (b), (c).

1. Enclosure hood face velocity in feet per minute (fpm) applicable to those process fugitive sources not located in an enclosed building ventilated to a control device.

2. At EFT process fugitive emissions will be exhausted through the new hygiene baghouse and stack.

EFT asserts that Control Option II applies to their project rather than Control Option I because the building will be entirely enclosed and ventilated to a control device. However, the emissions controlled by the complete enclosure are those not already controlled by Option I. The Department believes that Option I applies and will request that EPA advise on this matter during the comment period.

The issue is somewhat academic because (as discussed further below) the Department is requiring adherence to the provisions of Control Option I through the BACT process but with more stringent Pb limitations. The Department is also requiring the total enclosure of the building coupled with ventilation of the remaining air through a different control device and stack.

In addition, measures related to fugitive emissions from the BBA, the MSHA, plant roadways and process points not specifically listed above, are given in 40 CFR 60, Subpart X, § 63.545 - Standards for Fugitive Dust Sources. These are primarily reasonable precautions and the only quantified measure is that Pb emissions from any building or enclosure ventilation system shall not exceed 2.0 mg/dscm (0.00087 gr/dscf).

Table 9. PM and visible emissions (VE) limits for blast and reverb furnaces.

Furnace type	PM		VE	Citation 40 CFR 60, Subpart L
	(mg/dscm)	(gr/dscf)	(% opacity)	
Reverb or blast furnace	50	0.022	20	§ 60.122 (a).

1. PM emission limits are expressed mg/dscm and the equivalent as grains per dry standard cubic foot (gr/dscf).

C. Description of PSD Applicability Requirements

The Department regulates major air pollution sources in accordance with Florida's Prevention of Significant Deterioration (PSD) program, as described in Rule 62-212.400, F.A.C. A PSD review is only required in areas that are currently in attainment with the National Ambient Air Quality Standard (National AAQS) for a given pollutant or areas designated as "unclassifiable" for the pollutant.

The EFT Lead-Acid Battery Recycling Facility is a Major Stationary Source with respect to the PSD Rules because it is a "Secondary Metal Production Plant" which is one of the facility categories with the PSD applicability threshold of 100 tons per year of a PSD pollutant. [Rule 62-210.200(195)(a)1., F.A.C.]

The EFT project is a Major Modification of a Major Stationary Source because there will be a net emissions increase greater than the significant emission rate (SER) of at least one PSD pollutant. The SER means a rate of pollutant emissions that would equal or exceed the values described in Rule 62-210.200(280)(a)1., F.A.C. SER values relevant to the project are listed in Table 3 above. Specifically, the project will result in emissions increases equal to or greater than the respective SER for NO_X and $PM/PM_{10}/PM_{2.5}$.

D. PSD and BACT Review Requirements

PSD review requires an Air Quality Analysis consisting of: an air dispersion modeling analysis to estimate the resulting ambient air pollutant concentrations; a comparison of modeled concentrations from the project with National AAQS and PSD increments; an analysis of the air quality impacts from the proposed project upon soils, vegetation, wildlife, and visibility (Air Quality Related Values – AQRV); and an evaluation of the air quality impacts resulting from associated commercial, residential, and industrial growth related to the proposed project. [Rule 62-212.400(5) through (9), F.A.C.]

For each pollutant with a net emission increase exceeding the respective SER, the applicant must propose the BACT as defined in Section 62-210.200(40), F.A.C. and in accordance with procedures described in Section 62-212.400(10), F.A.C.

IV. DRAFT BACT DETERMINATION

A. BACT Determination Procedure

BACT is defined in Paragraph 62-210.200(40), FAC as follows:

(a) An emission limitation, including a visible emissions standard, based on the maximum degree of reduction of each pollutant emitted which the Department, on a case by case basis, taking into account:

1. Energy, environmental and economic impacts, and other costs;

2. *All scientific, engineering, and technical material and other information available to the Department; and*

3. *The emission limiting standards or BACT determinations of Florida and any other state; determines is achievable through application of production processes and available methods, systems and techniques (including fuel cleaning or treatment or innovative fuel combustion techniques) for control of each such pollutant.*

(b) If the Department determines that technological or economic limitations on the application of measurement methodology to a particular part of an emissions unit or facility would make the imposition of an emission standard infeasible, a design, equipment, work practice, operational standard or combination thereof, may be prescribed instead to satisfy the requirement for the application of BACT. Such standard shall, to the degree possible, set forth the emissions reductions achievable by implementation of such design, equipment, work practice or operation.

(c) Each BACT determination shall include applicable test methods or shall provide for determining compliance with the standard(s) by means which achieve equivalent results.

(d) 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, 61, and 63.

According to Rule 62-212.400(4)(c), F.A.C., the applicant must at a minimum provide certain information in the application including:

(c) A detailed description as to what system of continuous emission reduction is planned for the source or modification, emission estimates, and any other information necessary to determine BACT including a proposed BACT;

According to Rule 62-212.400(10), F.A.C., the Department is required to conduct a control technology review and shall not issue any permit unless it determines that:

(a) The owner or operator of a major stationary source or major modification shall meet each applicable emissions limitation under the State Implementation Plan and each applicable emissions standard and standard of performance under 40 CFR Parts 60, 61, and 63.

(b) The owner or operator of a new major stationary source shall apply best available control technology for each PSD pollutant that the source would have the potential to emit in significant amounts.

(c) The owner or operator of a major modification shall apply BACT for each PSD pollutant which would result in a significant net emissions increase at the source. (This requirement applies to each proposed emissions unit at which a net emissions increase in the pollutant would occur as a result of a physical change or change in the method of operation in the unit.)

B. $PM/PM_{10}/PM_{2.5}$ BACT Determination

A summary of the BACT proposal for $PM/PM_{10}/PM_{2.5}$ submitted by EFT for the key operations is presented in Table 10. The proposal regarding Pb is included because of the importance to insure the project does not trigger PSD for that pollutant.

Table 10. Applicant BACT proposal for $PM/PM_{10}/PM_{2.5}$ and Proposed Pb Limits.

Stack	Also Includes	$PM/PM_{10}/PM_{2.5}$ (gr/dscf)	Pb (mg/dscm)	Controls
BBA	Plastics plant extrusion	0.005	0.80	Impingement Scrubber
Smelting (process stack)	Dryer	0.005	0.30	Baghouses Afterburner Caustic scrubber
Process fugitive emissions (hygiene stack)	Refining, tapping, charging	0.005	0.20	Baghouse
Building total enclosure (building ventilation stack)	fugitive emissions all building areas	0.005	0.05	Cartridge Collector
Soda ash silos (bin vent outlets)	For receiving and distribution	0.005	Not applicable	Baghouses

The proposed values for PM are less than 25% of the 40 CFR 60, Subpart L limit that applies to the smelting. Depending on the stack, the Pb proposal is between 2.5 to 40% of the maximum achievable control technology (MACT) limit that applies to smelting and to process fugitive emissions.

The value of the BACT proposal is not just in the proposed emission limits from the recognized sources such as the BBA, smelting and process fugitive emissions. The total building enclosure increases the capture efficiency and pulls in a greater volume of air that contains dust and Pb that would otherwise leave the building as fugitive emissions. The overall level of control is beyond what is practiced at any secondary lead smelter and insures that, unlike the historical operation, fugitive emissions are kept to an absolute minimum. The total enclosure part of the proposal is the linchpin in the strategy to control Pb emissions and ambient concentrations.

The proposal is more stringent than any BACT determinations for lead smelting facilities given in the RACT/BACT/LAER Clearinghouse (RBLC), including the Gopher Resource Corporation (GRC) facility in Egan, Minnesota. The Department accepts the proposal by EFT as BACT for $PM/PM_{10}/PM_{2.5}$.

C. NO_X BACT Determination

The future sources and quantities of NO_X emitted and BACT proposals from the various operations at EFT are listed in Table 11.

The most important source is thermal NO_X generated in the new reverb furnace due to combustion of natural gas in the indirect heating of the charge. The blast furnace burner is much smaller in terms of capacity and NO_X emissions. The manner by which combustion occurs (layered coke within the charge) apparently evens out the heat in such a manner that it tends to minimize thermal NO_X formation.

The BACT NO_X analysis by EFT for the listed emission units is presented in pages 16 through 26 of the application submitted in August 2008 and which is available at the following link:

www.dep.state.fl.us/Air/emission/construction/hillsborough_county/PSD.pdf

The new reverb furnace will be responsible for 105 of the 169 TPY of the NO_X increase due to the proposed project. Thus most of the focus is on the possibilities of control on that emission unit.

Table 11. Sources and quantities of NO_X emitted and Applicant BACT proposals by emission unit.

Emission Unit	Future Actual Emissions (TPY)	Comments Cause of NO_X, Exhaust Stack	Proposed Control	Proposed Limit
Feed dryer	9.2	Natural gas combustion, filtered then vented via process stack	Good combustion	0.21 lb/mmBtu
Reverb furnace	105	Natural gas combustion, afterburner, filtered, scrubbed, then vented via process stack	Air/oxy/fuel burners and furnace draft control	0.6 lb/ton material charged
Blast furnace	13.1	Coke combustion, afterburner, filtered, scrubbed, then vented via process stack	Furnace draft	0.4 lb/ton material charged
Kettles - refining	62.8	Intermittent niter addition, filtered, then vented via hygiene stack	None	
Kettles combustion	8.8	Ten small natural gas burners. Vented via three small stacks	Good combustion	
Propane vaporizer	1.1	Small propane burner, vented via short stack	Good combustion	None
Emergency generator	2.4	Diesel-fueled engine vented via short stack	Combustion design	6.9 grams/brake horsepower-hour
Slurry heaters	1.4	Small natural gas burner, vented via short stack	Good combustion	None
Total (to nearest ton)	**204**	**Increase is 169 TPY**		

According to EFT, The two most effective options are low NO_X burners (LNB) and furnace draft control (FDC). LNB are configured to minimize the formation of thermal NO_X by using flame patterns that eliminate hot spots and/or by substituting oxygen for air to minimize the nitrogen available for thermal NO_X formation. FDC refers to minimizing air infiltration through the various openings, such as tap and slag holes, so that there is less air available for conversion to NO_X, as furnace draft control. Additionally, this has the added benefit of reducing the amount of fuel combustion needed to melt the feed stock, thereby minimizing the emission of all products of combustion.

EFT claimed that alternative technologies such as selective catalytic reduction (SCR) and selective non-catalytic reduction (SNCR) that rely on ammonia injection have not been used to control NO_X from secondary smelting and that they are technically infeasible.

According to EFT, SCR catalysts are especially susceptible to poisoning by the types of metals present in smelting furnace emissions. The claim is certainly plausible given the presence of HAP metals such as Pb, As, Cd and Sb.

According to EFT, boiler exhaust gases (e.g. from a power plant) "are more consistent in temperature, air flow, and NO_X concentration than metallurgical furnaces. The use of SNCR on a lead smelting furnace would require the use of excessive ammonia or urea in order to accommodate the fluctuating conditions while achieving any reasonable control efficiency. These conditions would inevitably lead to considerable "slip" of the reagent into the gases emitted to the atmosphere and the resulting control efficiency would be lower than what is achieved in boilers as a consequence. The reagent would also interfere with the operation of the downstream sulfur dioxide scrubber."

Within the additional information submitted nn February 13, 2009, EFT identified additional reasons in support of the contention that SNCR is not feasible. The details are given in pages 7 and 8 of the document attached to the cover letter and titled "Response to Second Request for Additional Information – Project Number: 0570057-020-AC". The entire submittal is available at the following link:

www.dep.state.fl.us/Air/emission/construction/hillsborough_county/RAIResponseLetter.pdf

According to EFT, the following additional reasons support their case that SNCR and SCR are not feasible:

- Affinity of metals for ammonia (NH_3) causing injection of greater than stoichiometric amounts of NH_3 and causing additional slip and salts formation;
- Salt formation in the wet scrubber;
- Introduction of significant amounts of NH_3 into the wastewater system;
- Ammonium ions interfere with the removal of Pb and other metals in the wastewater treatment system;
- The wastewater pretreatment standards for secondary lead smelters (40 CFR 421, Subpart M) allow no NH_3 discharge from any of the activities at such smelters;
- SCR would have to be installed downstream of the baghouse to avoid premature catalyst fouling, where gases have cooled below the temperature required for catalyst operation, necessitating the reheating of the gas stream;
- These concerns are the reasons SNCR and SCR have never been employed at secondary lead smelters in the U.S.; and
- The small amount of NO_X potentially prevented is not worth interference with these facilities' primary function – to prevent Pb reaching the environment from spent lead-acid batteries.

The following table from 40 CFR 421, Subpart M appears to support the claim regarding the pretreatment standard for water from furnace wet air pollution control.

Table 12. Pretreatment Standards for Existing Sources. Wet Air Pollution Controls on Blast, Reverb or Rotary Furnaces.

Pollutant or pollutant property	Maximum for any 1 day	Maximum for monthly average
	pounds per million pounds of lead produced from smelting	
Antimony	5.038	2.245
Arsenic	3.628	1.488
Lead	.731	.339
Zinc	2.662	1.096
Ammonia (as N)	.000	.000

Individually, each of the claims regarding SCR or SNCR can be disputed. However, taken as a whole they support EFT's claim that SNCR and SCR are not feasible.

The Department reviewed a draft document issued in July 2009 by the European Commission on the Best Available Techniques (BAT) for the Non-Ferrous Metals Industry. The document is available at the following link:

ftp://ftp.jrc.es/pub/eippcb/doc/nfm_2d_07-2009_public.pdf

Table 5.57 on Page 513 lists BAT for secondary lead and zinc smelters. The listed BAT ranges for NO_X are < 100 mg/dscm by LNB or <100 to 300 mg/dscm by using an oxy-fuel burner. No correction for oxygen (O_2) is identified, but might actually exist.

EFT plans to use burners that incorporate both techniques. According to EFT, when combined into a single exhaust, the limits proposed by EFT of 0.4 and 0.6 lb NO_X/ton of material charged equate to 163 mg/dscm with no O_2 correction (electronic mail dated August 7, 2009).

The only mention of SCR or SNCR in the European Commission BAT document is in the context of precious metals refining. However, no installations have been reported and the technology is considered viable at only a single facility.

The Department preliminarily concludes that at this time SCR and SNCR are not appropriate for the reduction of the levels of NO_X expected from the EFT operation.

V. AIR QUALITY IMPACT ANALYSIS

A. Introduction

The proposed project will increase emissions of two PSD-pollutants, PM/PM_{10}/$PM_{2.5}$ and NO_X, at levels in excess of the respective SER. PM_{10} and NO_X are criteria pollutants and have national and state ambient air quality standards (AAQS), PSD increments, significant impact levels and de minimis monitoring levels defined for them. NO_X is an ozone precursor and any net increase of 100 tons per year of pollutant requires an ambient air impact analysis including the gathering of preconstruction ambient air quality data. $PM_{2.5}$ is also a criteria pollutant and has national and state AAQS, but is not subject to PSD at this time. $PM_{2.5}$ does not have defined PSD increments (i.e. allowable increases in ambient air concentration), significant impact levels (SIL) and de minimis monitoring levels.

The proposed EFT project is not subject to PSD review for Pb because the project will not increase emissions of Pb by the SER of 0.6 TPY or greater. However, the applicant provided an air quality impact analysis with respect to a recently revised National AAQS for this pollutant.

B. Major Stationary Sources Near the EFT Facility

The current largest stationary sources of air pollution in the region are listed below. The information is from annual operating reports submitted to the Department. The baseline and future emissions from the EFT facility rather than the 2007 emissions are shown.

Table 13. Largest Sources of NO_X (2007)

Owner	Site Name	TPY
Tampa Electric Company (TECO)	TECO Big Bend Station	24,566
Progress Energy Florida (PEF)	PEF Bartow Plant	2,526
Pinellas County (PC)	PC Resource Recovery Facility (RRF)	1,433
Hillsborough County (HC)	HCRRF	581
City of Tampa	McKay Bay Refuse-to-Energy	371
PEF	PEF Bayboro Power Plant	326
EFT	**EFT Lead Battery Recycling (past/future)**	**35/204**

Table 14. Largest Sources of PM/PM_{10} (2007)

Owner	Site Name	TPY
TECO	TECO Big Bend Station	1,608
PEF	PEF Bartow Plant	901
Kinder Morgan	Kinder Morgan Port Sutton Terminal	84
Kinder Morgan Bulk Terminal	Tampa Bay Stevedores	76
Conagra Foods, Inc.	Conagra	69
EFT	**EFT Lead Battery Recycling (past/future)**	**24/65**

Table 15. Largest Sources of SO_2 (2007)

Owner	Site Name	TPY
PEF	PEF Bartow Plant	12,448
TECO	TECO Big Bend Station	9,904
Mosaic Fertilizer	Mosaic Fertilizer	4,000
CF Industries	CF Industries	3,037
EFT	**EFT Lead Battery Recycling (past/future)**	**853/892**

Table 16. Largest Sources of Pb (2007)

Owner	Site Name	TPY
EFT	**EFT Lead Battery Recycling (past/future)**	**0.097/0.96**
TECO	TECO Big Bend Station	0.84
PEF	PEF Bartow Plant	0.53
Tampa Steel Erecting Company	Tampa Steel Erecting Company	0.16
APAC-SE, Inc., Central Florida	APAC-SE, Inc., Central Florida	0.09
Johnson Control Battery Group	Johnson Control Battery Group	0.04

C. Regional SO_2 and NO_X Emission Trends

To put the emissions from the EFT project into perspective, the Department graphed the SO_2 and NO_X emission trends during the period 1998-2008 from power plants located in Hillsborough County and the contiguous Pasco, Polk, Pinellas and Manatee Counties. The data source is the EPA Clean Markets Acid Rain database. The results are summarized in Figure 19.

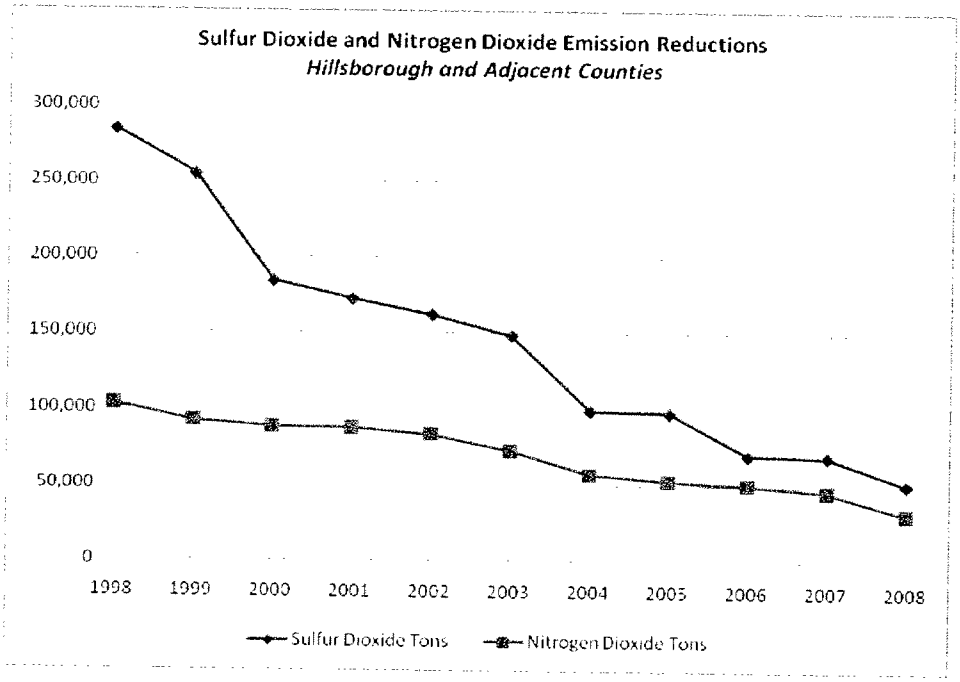

Figure 19. Stationary source SO_2 and NO_X emissions in Hillsborough and adjacent counties.

During the period 1998-2008 there was a *decrease* from 284,318 to 51,632 TPY (~82%) in SO_2 emissions from the five-county area. The main reasons for the reductions include: addition or improvement of wet scrubbers at the TECO Big Bend Station; the conversion of the coal-fueled TECO Gannon Station to a natural gas-fueled combined cycle facility; and the reduction in usage of the residual oil-fueled units at the PEF Bartow Power Plant in anticipation of their conversion to a natural gas-fueled combined cycle unit.

Similarly there was a *decrease* from 103,222 to 31,769 TPY (~69%) in NO_X emissions. The main reasons for the reductions include: installation of low NO_X burner, separate overfire air and selective catalytic reduction (SCR) at several of the TECO Big Bend Station units; the conversion of the Gannon Station; and the reduction of usage of the PEF Bartow residual oil-fueled units.

Further reductions, in NO_X emissions, are foreseen due to the completion of the SCR projects at TECO Big Bend Units 2 and 1 in May 2009 and May 2010 respectively and completion of the PEF Bartow combined cycle project in late 2008. This will extend the ongoing trend documented above of lower NO_X emissions in the five-county area.

The projected emission increases at EFT of 39 and 169 TPY of SO_2 and NO_X, respectively, are minimal when compared with the documented reductions of nearly 20,000 TPY in the most recent year alone from nearby sources for each of these pollutants.

D. Ambient Air Monitoring in Hillsborough County

The Environmental Protection Commission of Hillsborough County (EPCHC) operates twenty-seven monitors at fourteen sites measuring one or more of the following Pb, PM_{10}, $PM_{2.5}$ (also called PM_{fine}), ozone, CO, nitrogen dioxide (NO_2) and SO_2 as shown in Figure 20. Of special significance are the monitors associated with measurement of ambient Pb concentrations near EFT.

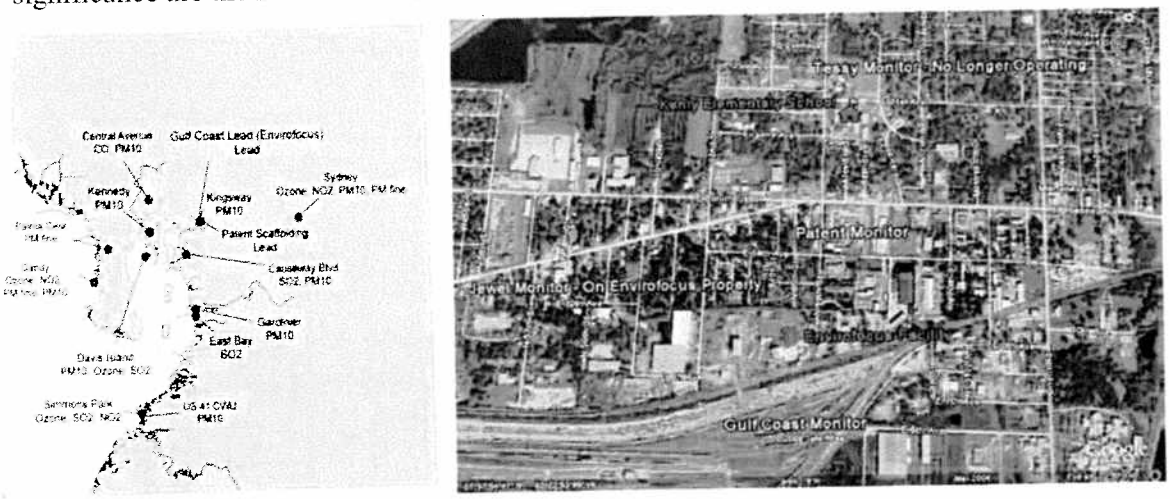

Figure 20. EPCHC air monitoring network, Pb monitors in the vicinity of the EFT site.

There is a regulatory Pb monitor (Gulf Coast) located south of EFT on property owned by CSX Railroad as shown on the right hand side of Figure 20. The data are available through the EPA Air Quality System (AQS).

There is a second (non-regulatory) Pb monitor collocated at the site of the regulatory Gulf Coast Pb monitor. The second monitor serves as a quality assurance (QA) check on the first and records similar values.

There is a third (non-regulatory) special purpose monitor (SPM) at the Gulf Coast location that is used for research. Historically, it was activated only during occurrences of sustained winds from the general direction of EFT. The sampling and filter collection frequencies and the results cannot be directly compared with the Pb AAQS for determination of attainment.

Presently, the SPM is used in a PM_{10} configuration as opposed to the typical total suspended particle (TSP) configuration characteristic of other Pb monitors.

There is also a nearby regulatory Pb monitor (Patent) located to the northeast of the EFT facility. The monitoring results are also included in the EPA AQS.

Another non-regulatory Pb monitor (Jewel) is located on former residential property immediately to the north and since purchased by EFT. It is no longer incorporated into the EPA AQS but the data are of important historical value and useful in trend analysis.

From 1998 to 2002 the EPCHC operated a regulatory Pb monitor (Tessy) adjacent to the nearest school (Kenly Elementary School). The collected data also have important value in the historical trend analysis, assessment of the aerial extent of elevated concentrations, and the possibilities for future attainment.

Air quality measurements from 2008 at regulatory monitors are summarized in the Table 17 below.

Table 17. Ambient air quality measurements nearest to the EFT project site (2008).

Pollutant	Location	Averaging Period	Ambient Concentration				
			High	2nd High	Mean	Standard	Units [a]
PM_{10}	Gardinier	24-hour	76	58		150 [b]	$\mu g/m^3$
		Annual			23	50 [c]	$\mu g/m^3$
$PM_{2.5}$	Sydney	24-hour	20	19		35 [d]	$\mu g/m^3$
		Annual			8	15 [e]	$\mu g/m^3$
SO_2	Causeway	3-hour	13	13		500 [f]	ppb
		24-hour	3	3		100 [f]	ppb
		Annual			1 [i]	20 [c]	ppb
NO_2	Gandy [j]	Annual			6	53 [c]	ppb
CO	Central	1-hour	3	3		35 [f]	ppm
		8-hour	2	2		9 [f]	ppm
Ozone	Davis Island	8-hour	84	83		75 [g]	ppb
		4th highest high			75	75 [g]	ppb
Pb	Gulf Coast	Highest 3-month rolling (2006-2008)			1.77	0.15 [h]	$\mu g/m^3$
		quarterly			0.62	1.5 [h]	$\mu g/m^3$
	Patent	Highest 3-month rolling (2006-2008)			0.40	0.15 [h]	$\mu g/m^3$
		quarterly			0.40	1.5 [h]	$\mu g/m^3$

a. Units are in: micrograms per cubic meter ($\mu g/m^3$); parts per billion (ppb); or parts per million (ppm).
b. Not to be exceeded on more than an average of one day per year over a three-year period.
c. Arithmetic mean.
d. Three year average of the 98th percentile of 24-hour concentrations.
e. Three year average of the weighted annual mean.
f. Not to be exceeded more than once per year.
g. Three year average of the 4th highest daily maximum.
h. National AAQS for Pb was reduced in November 2008 from 1.5 $\mu g/m^3$ on a quarterly basis to 0.15 $\mu g/m^3$ on a 3-month rolling basis. The data collected were compared with both limits.
i. Causeway is the nearest site but has incomplete data. Nearest monitor with complete data averaged 3 ppb.
j. Gandy is the nearest site with complete NO_2 data.

There are two pollutants that deserve further focus and review. These are ozone and Pb.

E. Discussion of Ambient Air Quality in Hillsborough County - Ozone

On March 27, 2008 the U.S. Environmental Protection Agency (EPA) published a final rule reducing the 8-hour ozone AAQS from 85 to 75 ppb. The fourth highest value measured at the Sydney monitor during 2008 equaled the new AAQS for ozone. The average of the annual fourth highest measurements over the period 2006-2008 is the value that is compared to the ozone AAQS for determining whether an area is in attainment. For the Davis Island monitor (the nearest to EFT), the value was 75 ppb. The highest reporting monitor in the county registered a value of 81 ppb as the average of the annual fourth highest readings during the period 2006-2008.

Upon final redesignation and classification, most likely in 2010, the counties shown in red (including Hillsborough County) in Figure 21 below will likely no longer be in attainment with the more stringent ozone AAQS based on the period 2006-2008.

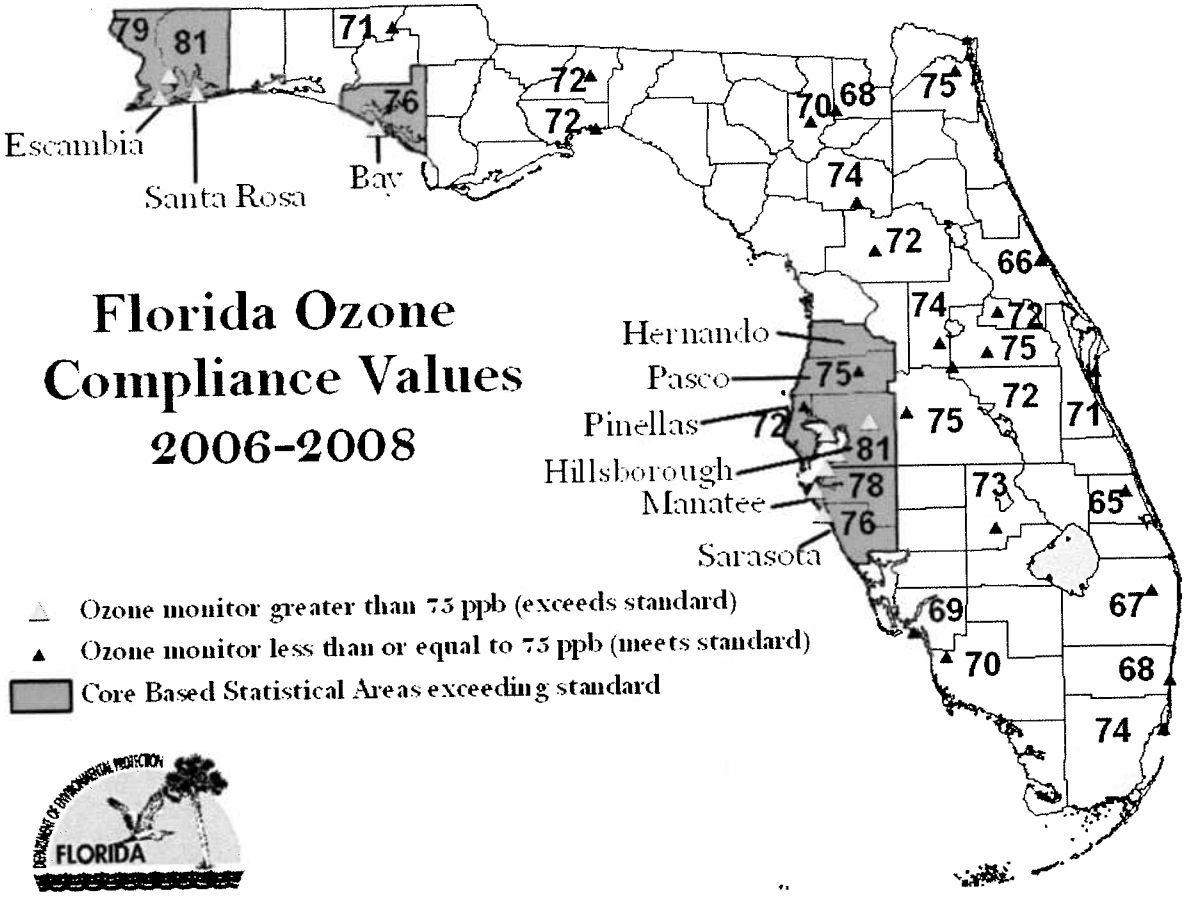

Figure 21. Florida ozone compliance values based on data reported during 2006-2008.

It is noteworthy that while ambient ozone concentrations are occasionally high, NO_2 (one of the key precursors to ozone) concentrations are well below the applicable AAQS. With the historical and ongoing NO_X reductions in Hillsborough and adjacent counties as well as regional reductions (such as at the large coal-fueled PEF Crystal River Power Plant) there is reason for optimism regarding the ability of the five-county area to attain the more stringent new ozone AAQS.

Again, the projected NO_X emission increase at EFT of 169 TPY is minimal when compared with the documented reductions of nearly 20,000 TPY from nearby sources in the last year alone. The contribution to ozone formation from EFT is negligible compared with the much greater beneficial effects from the recent and ongoing reductions at the nearby power plants. Further, the 169 TPY of NO_X from EFT is dwarfed by emissions from other facilities, such as 24,566 TPY from the TECO Big Bend Electric Station.

F. Discussion of Ambient Air Quality in Hillsborough County - Pb

On November 12, 2008 EPA published a final rule reducing the National AAQS for Pb from 1.5 $\mu g/m^3$ on a quarterly basis to 0.15 $\mu g/m^3$ on a 3-month rolling basis. The final rule is available at the following link:

www.epa.gov/fedrgstr/EPA-AIR/2008/November/Day-12/a25654.pdf

The Gulf Coast and Patent monitors listed in the table above registered concentrations in excess of the new AAQS before and since its promulgation. Note that although the lead facility name was changed in recent years from Gulf Coast Recycling to EFT, the name of monitoring site remains Gulf Coast and it is actually located on property owned by CSX.

The graph on the left hand side of Figure 22 shows the Pb concentration trends at all of the monitors (i.e. regulatory and non-regulatory) with the exception of the SPM at the Gulf Coast site. The horizontal reference line represents the new Pb AAQS. The regulatory and QA monitors at the Gulf Coast site were averaged and plotted as a single curve. It is noteworthy that there was a pronounced peak in ambient Pb concentrations every winter until the winter of 2008-2009.

The graph on the right hand side of the figure focuses on the most recent 24-month period for which data have been analyzed. It is clearer in the second graph that (as in previous winters) there was a pronounced peak during the winter of 2007-2008 but not during the winter of 2008-2009.

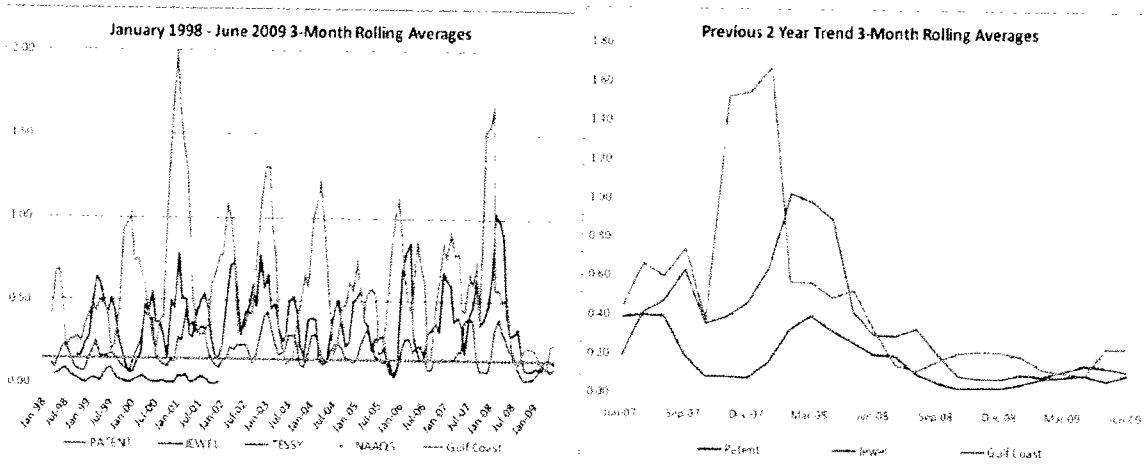

Figure 22. Ambient Pb monitoring data near EFT from 1998 through May 2009 $\mu g/m^3$.

The data associated with the graph on the right hand side are given in the Table 18 below.

The SPM (values not shown) were activated only when the wind blew from the general direction of EFT. The values recorded at the SPM at the Gulf Coast site (located at CSX) were greater than the readings at the other monitors including the regulatory and QA monitors collocated with the SPM. The conclusion is that EFT is the main source of Pb in the area. Since the SPM data are "over weighted" by air from EFT, it is logical that readings at the SPM were greater than at the regulatory monitors. It is also reasonable to conclude that the elevated local Pb readings at the regulated monitors are primarily caused by operations at EFT.

The winter peaks are hypothesized to be caused by increased winter wind speeds that until recently overwhelmed the ability of the ventilation systems at EFT to capture process fugitive emissions and exhaust them via the existing baghouses and stacks. The winter winds also tend to entrain

more dust from road surfaces and building roofs. The specific improvements that ameliorated the winter 2008-2009 readings include an enclosure constructed around the blast furnace and the installation of the 65,000 acfm building ventilation system and cartridge collector system described in the previous technical sections.

Table 18. Pb data from January 2008 through May 2009 (µg/m^3, 3-month rolling averages).

Month, Year	Site Name, Number			
	Gulf Coast Lead		Patent	Jewel
	139A	139B (QA)	144	146 (NR)
January, 2008	1.77	1.58	0.16	0.65
February	0.66	0.49	0.33	1.03
March	0.62	0.51	0.40	0.99
April	0.54	0.45	0.32	0.90
May	0.64	0.42	0.26	0.42
June	0.40	0.26	0.21	0.31
July	0.23	0.09	0.20	0.30
August	0.16	0.09	0.11	0.34
September	0.22	0.13	0.06	0.21
October	0.23	0.20	0.04	0.10
November	0.19	0.25	0.04	0.09
December	0.19	0.25	0.04	0.09
January, 2009	0.21	0.19	0.06	0.11
February	0.14	0.13	0.09	0.10
March	0.13	0.11	0.10	0.13
April	0.11	0.10	0.11	0.16
May	0.25	0.24	0.08	0.15

QA: Non-regulatory QA monitor.

NR: Non-regulatory monitor within the EFT property.

The results from the Tessy monitor (near Kenly Elementary School) shown in the chart indicate that even during the period 1998-2002, that site complied with the previous Pb AAQS and would have complied with the new Pb AAQS of 0.15 µg/m^3 on a 3-month rolling average.

G. Air Quality Impact Analysis

Significant Impact Analysis (SIA) – PSD Pollutants

SIL are defined for PM/PM_{10}, and NO_X. A significant impact analysis is performed on each of these pollutants to determine if a project can cause an increase in ground level concentration greater than the SIL for each pollutant.

In order to conduct a significant impact analysis, the applicant uses the proposed project's emissions at worst load conditions as inputs to the models. The models used in this analysis and any required subsequent modeling analyses are described below. The highest predicted short-term concentrations and highest predicted annual averages predicted by this modeling are compared to the appropriate SIL for the PSD Class II Area (everywhere except the closest Class I Area, the Chassahowitzka National Wildlife Refuge). A Class I Significant Impact Analysis was not completed for this project. The U.S. Fish and Wildlife Service determined that it was not necessary for this project due to low emissions and distance from the refuge.

For the Class II analysis, a combination of fence line, and non-fence line receptors were chosen for predicting maximum concentrations in the vicinity of the project. The receptor grid consisted of receptors spaced at 50-meter intervals around the facility fence line. For NO_X the remaining receptors were spaced at 100 meter intervals and extended out to approximately 600 to 900 meters depending on the direction. The results of the SIA analysis indicate decreases of close to 90% from the fence-line to the remaining receptors. For PM_{10}, the receptor grid consisted of 100 meter spaced receptors which extended out to approximately 1.5 kilometers. The largest concentrations for PM_{10} were also found along the fence-line.

If this modeling at worst-load conditions shows ground-level increases less than the SIL, the applicant is exempted from conducting any further modeling. If the modeled concentrations from the project exceed the SIL, then additional modeling including emissions from all major facilities or projects in the region (multi-source modeling) is required to determine the proposed project's impacts compared to the AAQS and PSD increments.

The applicant's PM/PM_{10} and NO_X air quality significant impact analyses for this project are shown below in Table 19. Maximum predicted impacts from all pollutants are greater than the applicable SIL for the Class II area. These values are tabulated in the table below and compared with existing ambient air quality measurements from the local ambient monitoring network.

Table 19. Maximum Predicted Air Quality Impacts from the EFT Modernization for Comparison to the PSD Class II SIL

Pollutant	Averaging Time	Max Predicted Impact ($\mu g/m^3$)	Significant Impact Level ($\mu g/m^3$)	2008 Baseline Concentrations ($\mu g/m^3$)	Ambient Air Standards ($\mu g/m^3$)	Significant Impact?
PM_{10}	Annual	3	1	~25	50	YES
	24-Hour	14	5	~75	150	YES
NO_2	Annual	17	1	~11	100	YES

It is clear that maximum predicted impacts from the project are much less than the respective AAQS.

Preconstruction Ambient Monitoring Requirements

A preconstruction monitoring analysis is done for those pollutants with listed de minimis impact levels. These are levels, which, if exceeded, would require pre-construction ambient monitoring. For this analysis, as was done for the significant impact analysis, the applicant used the proposed project's emissions at worst load conditions as inputs to the models. As shown in Table 20 below, the maximum predicted impacts for all pollutants with listed de minimis impact levels were greater than these levels. Therefore, a pre-construction monitoring analysis is required for PM/PM_{10}, and NO_X.

Table 20. Maximum Air Quality Impacts for Comparison to the De Minimis Ambient Impact Levels

Pollutant	Averaging Time	Max Predicted Impact ($\mu g/m^3$)	De Minimis Level ($\mu g/m^3$)	2008 Baseline Concentrations ($\mu g/m^3$)	Impact Greater Than De Minimis?
PM_{10}	24-hour	14	10	~75	YES
NO_2	Annual	17	14	~11	YES

There are six PM_{10} monitors located between 5 and 10 miles from the EFT facility that, taken together, provide sufficient data to satisfy preconstruction monitoring needs. There are also three NO_2 monitors located at sites expected to show influences from mobile sources or from large power plants. These also provide sufficient data to satisfy preconstruction monitoring needs. For reference, the highest values NO_2 recorded are less than 15% of the applicable National AAQS. Given the planned stack heights and low contribution from the present and future EFT operation to NO_X (and NO_2) loading, preconstruction monitoring at the EFT location would yield little useable information.

Although ozone and PM_{fine} did not require an evaluation for preconstruction monitoring it is worth noting that both of these pollutants are formed on an area-wide or regional basis from precursors such as NO_X, SO_2 and VOC. The EPCHC has sufficient PM_{fine} and ozone monitors at optimal locations to assess air quality on an area-wide or regional basis. Additional preconstruction monitoring would not yield much information of additional value regarding the effects of the present or future EFT operation upon air quality based on PM_{fine} and ozone.

The two existing regulatory Pb monitors are close enough to EFT to satisfy the purposes of preconstruction monitoring in the immediate vicinity of the project. Due to previous expansions at the EFT facility, the Jewel monitor is no longer within a nearby residential area and is no longer a regulatory monitor. Also, the Tessy monitor (near Kenly Elementary School) is no longer in operation following years during which it demonstrated attainment with the much greater Pb NAAQS in effect during that period.

The Department, as a condition of the permit, is requiring the establishment of additional Pb monitoring stations in the nearby residential area and close to the nearest school by EFT. The Department has preliminarily determined that a monitoring site should be located within 250 meters of the northwest quadrant with respect to the intersection of Jewell Avenue and North 64th Street, beyond the EFT property boundary. Another monitoring site should be located north of East 19th Avenue and within 500 meters of the intersection of East 19th Avenue and North 66th Street.

The final site selection will be made in accordance with EPA siting criteria and in consultation with the Department's Bureau of Air Monitoring and Mobile Sources (BAMMS), the EPCHC and the applicant. Land ownership, electric power supply and topographical features will need to be assessed and could require some adjustment of preliminary locations given above.

Based on the preceding discussions, the only additional detailed air quality analyses required by the PSD regulations for this project are the following:

- A multi-source AAQS and PSD increment analysis for PM_{10} and NO_2 in the Class II area; and
- An analysis of impacts on soils, vegetation, visibility, and of growth-related air quality modeling impacts.

Models and Meteorological Data Used in the Foregoing Air Quality Analysis

PSD Class II Area: The AERMOD modeling system was used to evaluate the pollutant emissions from the proposed project in the surrounding Class II Area. AERMOD was approved by the EPA in November 2005. The AERMOD modeling system incorporates air dispersion based on planetary boundary layer turbulence structure and scaling concepts, including the treatment of both surface and elevated sources, and both simple and complex terrain. AERMOD contains two input data processors, AERMET and AERMAP. AERMAP is the terrain processor and AERMET is the meteorological data processor.

A series of specific model features, recommended by the EPA, are referred to as the regulatory options. The applicant used the EPA recommended regulatory options. Direction specific downwash parameters were used for all sources for which downwash was considered. The stacks associated with this project all satisfied the good engineering practice (GEP) stack height criteria.

The AERMET meteorological data used for this analysis consisted of a concurrent 5-year period of hourly surface weather observations and twice-daily upper air soundings from the Tampa International Airport and the National Weather Service at Ruskin respectively. The 5-year period of meteorological data was from 2001 through 2005. A sensitivity analysis was also completed using surface data from the facility site. The meteorological data used were in accordance with the EPA AERMOD Implementation Guide.

The sensitivity analysis showed that concentrations were similar when comparing the surface characteristics of the airport versus the facility. For PM_{10}, the results were within 0.7 $\mu g/m^3$ except for 2005 when the Tampa surface data was more conservative by over 1 $\mu g/m^3$. For NO_X, the results were more conservative when using surface data from the facility by approximately 1 µg/m3. For Pb, the 3-month rolling averages were identical. Therefore, the Tampa surface dataset was used for this analysis since the NO_X modeled impacts were well below the Increment and AAQS thresholds.

In reviewing this permit application, the Department has determined that the application complies with the applicable provisions of the stack height regulations as revised by EPA on July 8, 1985 (50 FR 27892). Portions of the regulations have been remanded by a panel of the U.S. Court of Appeals for the D.C. Circuit in NRDC v. Thomas, 838 F. 2d 1224 (D.C. Cir. 1988). Consequently, this permit may be subject to modification should EPA revise the regulation in response to the court decision. This may result in revised emission limitations or may affect other actions taken by the source owners or operators. A more detailed discussion of the required analyses follows.

Multi-source PSD Class II Increment Analysis

The PSD increment represents the amount that new sources in an area may increase ambient ground level concentrations of a pollutant from a baseline concentration. The maximum predicted annual and maximum predicted high, second high 24-hour average PSD Class II area impacts from this project and all other increment-consuming sources in the vicinity of the EFT facility are shown in Table 21 below.

Table 21. PSD Class II Increment Analysis

Pollutant	Averaging Time	Max Predicted Impact ($\mu g/m^3$)	Allowable Increment ($\mu g/m^3$)	Impact Greater Than Allowable Increment?
PM_{10}	24-hour[1]	1016	30	YES
	24-hour[2]	26	30	NO
	Annual[1]	41	17	YES
	Annual[2]	5	17	NO
NO_2	Annual	10	25	NO

1. The project does not cause or contribute to the modeled exceedance because the project impacts from EFT were less than the significant impact level (SIL) of 5 and 1 $\mu g/m^3$ for the 24 hour and annual averaging time frames for PM_{10} Increment.

2. The maximum predicted impacts when the project impacts from EFT were greater than or equal to the applicable SIL.

In conducting increment analyses, the following paragraphs from the Department rules are relevant:

Per Rule 62-212.400(5), F.A.C., Source Impact Analysis:

The owner or operator of the proposed source or modification shall demonstrate that allowable emission increases from the proposed source or modification, in conjunction with all other applicable emissions increases or reductions (including secondary emissions), would not cause or contribute to air pollution in violation of:

a. Any ambient air quality standard in any air quality control region; or

b. Any applicable maximum allowable increase (i.e. PSD increment) over the baseline concentration in any area.

Per Rule 62-210.200(75), F.A.C., Definitions, the term "cause or contribute" means:

With respect to a violation of an ambient air quality standard, to have a significant impact on the ambient air concentration of a pollutant at any locality that does not or would not meet the applicable standard.

Per Rule 62-210(281), F.A.C., Definitions, the term "significant impact" means:

An impact of emissions on ambient air quality in excess of any of the following pollutant-specific concentration values:

(b) PM_{10}.

1. Maximum 24-hour concentration not to be exceeded more than once per year – 1.0 $\mu g/m^3$ for Class I areas; 5.0 $\mu g/m^3$ for all other areas. (i.e. the applicable SIL)

2. Annual arithmetic mean – 1.0 $\mu g/m^3$. (i.e. the applicable SIL)

Consistent with the definitions and procedures given above, the applicant demonstrated that allowable emission increases from the proposed source or modification, in conjunction with all other applicable emissions increases or reductions (including secondary emissions), would not cause or contribute to air pollution in violation of any AAQS or increment. Therefore, the permit may be issued.

The Department further investigated the reasons for the increment violations and found they are typically due to minor sources with near ground level emission points. One example is a portable concrete crusher with a 2.5 meter emission release height and a 5 TPY emission limit. While this contributor is not a major source of particulate matter, the modeled impacts are very high due to the low stack, which is typically seen with the AERMOD modeling system.

Upon removal of this one small source (a concrete crusher) from the modeling inventory, the total maximum predicted impacts are decreased by approximately 50%. To further illustrate this effect, upon removal of the portable concrete crusher, the total maximum predicted impact is located near a different concrete plant which is also a minor source with a 5 TPY emission limit and a short, 3 meter stack.

Also, the results of the PM_{10} PSD Class II analysis are conservative. Specifically, the inventory of all increment-consuming sources did not include sources that have expanded increment, i.e. shut down or reduced emissions since the baseline date and potential emissions were used as inputs to the model instead of actual emissions. As an example, the PM_{10} analysis did not account for the over 1,200 tons per year decrease from the TECO Bayside Repowering Project.

AAQS Analysis

For pollutants subject to an AAQS review, the total impact on ambient air quality is obtained by adding a "background" concentration to the maximum modeled concentration. This "background" concentration takes into account all sources of a particular pollutant that are not explicitly modeled. The maximum annual and 24-hour high, sixth high over 5 years impacts for the AAQS analysis are summarized in Table 22 below. As shown in this table, emissions from the proposed facility are not expected to significantly cause or contribute to a violation of an AAQS.

Table 22. Ambient Air Quality Impacts – PSD Pollutants

Pollutant	Averaging Time	Major Sources Impact ($\mu g/m^3$)	Background Conc. 2003- 2007 ($\mu g/m^3$)	Total Impact ($\mu g/m^3$)	Total Impact Greater Than AAQS?	Florida AAQS ($\mu g/m^3$)
PM_{10}	24-hour[1]	1003	80	1083	YES	150
	24-hour[2]	30	80	110	NO	150
	Annual[1]	41	27	68	YES	50
	Annual[2]	6	27	36	NO	50
NO_2	Annual	17	19	36	NO	100

1. The project does not cause or contribute to the modeled exceedance because the project impacts from EFT were less than the significant impact level (SIL) of 5 and 1 $\mu g/m^3$ for the 24 hour and annual averaging time frames for PM_{10} AAQS.

2. The maximum predicted impacts when the project impacts from EFT were greater than or equal to the applicable SIL.

Despite the AAQS violations shown, the permit may be issued for the same reasons enumerated in the preceding section.

Although PSD was not triggered for Pb, an AAQS analysis was performed to compare with the new AAQS as shown in Table 23 below. Unlike the PSD AAQS analysis, the background concentration was not based on the nearest ambient air monitor. The nearest monitors in this case are not considered "background" because they are directly impacted by the EFT facility.

Therefore, the background concentrations when added to the modeled impacts would be "double-counting" the facility Pb emissions.

The background concentration was estimated at 0.05 $\mu g/m^3$ by an analysis of all Pb monitors in the United States that were not impacted by stationary sources of Pb to achieve an appropriate background concentration. The estimated background value is approximately equal to the average of measurements at the Tessy monitor near Kenly Elementary School (that would have been partially influenced by operations at EFT). The conclusion is that the estimated background concentration is on the conservative side.

Table 23. Ambient Air Quality Impacts for Pb

Pollutant	Averaging Time	Major Sources Impact ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Total Impact ($\mu g/m^3$)	Total Impact Greater Than AAQS?	Florida AAQS ($\mu g/m^3$)
Pb	3-month rolling	0.08	0.05	0.13	NO	0.15

The proposed project includes increased battery recycling production but it also includes total enclosure of the facility. The enclosure of the facility will further improve or decrease Pb concentrations than what is already shown in the above chart. As detailed in previous photographs, the existing process areas are not yet fully enclosed so that winds are able to transport Pb to the outside and past the property line.

Completely enclosing the process areas will effectively eliminate this tendency as evidenced by the improvements already realized from the enclosure of the blast furnace. Further reductions of concentrations from total process area enclosure, along with modeling results provide reasonable assurance that the EFT facility will not cause or contribute to violations of the new Pb AAQS in the future. Even with a production increase, the proposed project will improve the chronic ambient Pb concentration issue that has existed in the immediate environs for years.

H. Additional Impacts Analysis

Impact on Soils, Vegetation, and Wildlife

The EFT facility (previously Gulf Coast Recycling) has been operating for decades. The proposed project includes the total enclosure of the process areas. This enclosure will improve the overall air quality in the immediate area and reduce inputs of Pb into the local soils. The modeled impacts from this project will also not contribute to a violation of the AAQS. Emission increases of PM/PM_{10} are relatively low and the increases in NO_X emissions are minimal when compared with the reductions that have occurred in the past decade in the region. Therefore, it is reasonable to assume the impacts on soils, vegetation and wildlife will be minimal.

Growth-Related Impacts Due to the Proposed Project

The proposed project will increase the production capacity of the facility; however, the impact on the workforce will be minimal and is not expected to lead to growth in the surrounding population. It is expected that the bulk of this workforce will be provided from within the existing regional population. An increase in the number of housing units in the area as a result of either the construction or operation of this facility is not expected.

The project will increase truck traffic to accommodate the increased raw materials (spent batteries) and product (lead ingot). Municipal and county transportation authorities are assessing options to improve traffic flow.

In summary, growth and secondary air quality impacts from the proposed facility are expected to be minimal.

Growth-Related Air Quality Impacts since 1977

The population of Hillsborough County doubled between 1977 and 2008 from approximately 600,000 to 1,200,000. Despite the growth and increase in electric power consumption, county-wide air quality has improved with respect to SO_2 due to power plant pollution control projects and the progressive reduction in sulfur levels in diesel fuel. For example, SO_2 emissions have decreased by 230,000 TPY since 1998.

Pb concentrations have also greatly decreased due to the phase-out of leaded automobile fuels and are improving near the few industrial Pb sources in the area.

The county was redesignated from marginal ozone non-attainment to attainment in the mid-1990's. However it may be redesignated as an ozone non-attainment area following promulgation of a more stringent standard. Much of the improvement came from specification of lower vapor pressure (VOC) gasoline.

The continuing reductions of NO_X from power plant pollution control and natural gas repowering projects as well as improvements in automobile emission characteristics are apparently counteracting the entrenched trend of increasing vehicle-miles travelled (VMT).

On balance, regional air quality in Hillsborough County as measured by the PSD-pollutants of NO_X, SO_2 and PM is better today than it was in 1977 despite the substantial growth in Hillsborough and the surrounding counties.

Additional information regarding air quality trends is available at the following EPCHC link:

www.epchc.org/air_tech_reports.htm

VI. CONCLUSION

The Department has reasonable assurance that the proposed EFT project will comply with the Department's regulations and has made a preliminary decision to issue a permit under the PSD rules. The Department has reviewed and concurs with the applicant's BACT proposals.

Based on the ambient air quality review, the Department concludes that the project will not cause or contribute to a violation of ambient air quality standards or increments. Furthermore, there will not be significant impacts on soils, wildlife or vegetation.