

Florida Department of Environmental Protection

Memorandum

TO:	Trina Vielhauer
THROUGH:	Al Linero <i>AL</i>
FROM:	David Read <i>DR</i>
DATE:	August 11, 2009
SUBJECT:	EnviroFocus Technologies, LLC Draft Air Permit No. 0570057-020-AC (PSD-FL-404) Expansion of Lead-Acid Battery Recycling Facility

Attached for your review are the following items:

- Intent to Issue Permit and Public Notice Package;
- Technical Evaluation and Preliminary Determination;
- Draft Permit; and
- PE Certification.

This draft permit is to expand production at the EnviroFocus Lead-Acid Battery Recycling Facility in Hillsborough County, Florida.

The Department gave written notice of its intent to issue a permit to EnviroFocus on August 7, 2009. Prior to publication of the Public Notice of Intent to Issue Air Construction Permit (Public Notice) EnviroFocus provided comments and additional information for consideration by the Department. With this action, the original written notice and accompanying documents are withdrawn and replaced with the present notice and accompanying documents.

I recommend your approval of the attached Draft Permit package for this project.

AAL/dlr

Attachments

P.E. CERTIFICATION STATEMENT

PERMITTEE

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

DEP File No. 0570057-020-AC
EFT Lead-Acid Battery Recycling Facility
Facility Upgrade and Production Increase

PROJECT DESCRIPTION

The ambient air in the area immediately surrounding the facility has exceeded the National Ambient Air Quality Standard (NAAQS) for lead (Pb) concentrations in the past and, at present, exceeds a newer and more stringent standard of 0.15 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$).

The project is to upgrade and increase the production capacity of its lead-acid battery recycling facility from 32,000 to 150,000 tons per year (TPY) of lead alloy products. The key production increase measures include: replacement of the existing battery breaker with a larger hammer mill; addition of a feed dryer and installation of a reverberatory furnace for additional smelting; and installation of six kettles for additional refining. A plastics plant will be constructed at the facility to turn the recycled plastic from the battery casings into saleable pellets.

The application was reviewed in accordance with the rules for the Prevention of Significant Deterioration (PSD). A determination of Best Available Control Technology (BACT) was conducted for particulate matter (PM/PM₁₀/PM_{2.5}) and nitrogen oxides (NO_x). Details of the project are provided in the application and the Technical Evaluation and Preliminary Determination available at the following link:

www.dep.state.fl.us/Air/emission/construction/hillsborough_county.htm

PM/PM₁₀/PM_{2.5} emissions from battery breaking, smelting and refining will be controlled by the measures described above (scrubbers and baghouses). The facility will be completely enclosed, covered and placed under negative pressure and ventilated to the atmosphere through a high-efficiency cartridge collector system. The BACT limitation for the key PM/PM₁₀/PM_{2.5} control equipment is 0.005 grains per dry standard cubic foot (gr/dscf). Fugitive emissions of PM/PM₁₀/PM_{2.5} from plant roadways will be controlled through a combination of vacuum sweeping and wet suppression.


Despite the production increases, PSD will be avoided for SAM and SO₂ by installation of a wet impingement scrubber at the battery breaking area and by a caustic scrubber augmented by soda ash injection for smelting process emissions. PSD will be avoided for CO and VOC primarily by installation of a larger afterburner that provides for comingling and incineration of the exhaust from the existing blast furnace and the new reverb furnace. PSD will be avoided for Pb by the BACT measures described above for the control of PM/PM₁₀/PM_{2.5}. Pb emissions will be limited to 0.2 and 0.3 milligrams per dry standard cubic meter (mg/dscm) from the smelting and refining steps respectively.

The Department will require installation of continuous emission monitoring systems (CEMS) at the smelting (process) stack for CO, SO₂ and NO_x and at the refining (hygiene) stack for SO₂ and NO_x.

An air quality impact analysis was conducted to ensure that the proposed project does not contribute to or cause a violation of any state or federal ambient air quality standards or PSD Class II Increment according to Rule 62-204.200, F.A.C.

Although PSD was not triggered for Pb, modeling was conducted that ultimately demonstrates compliance with the new (NAAQS). The Department will require installation of additional Pb monitors in the neighborhood to supplement the two source-oriented regulatory monitors already in operation near EFT.

I HEREBY CERTIFY that the air pollution control engineering features described in the above referenced application and subject to the proposed permit conditions provide reasonable assurance of compliance with applicable provisions of Chapter 403, Florida Statutes, and Florida Administrative Code Chapters 62-4 and 62-204 through 62-297. However, I have not evaluated and I do not certify aspects of the proposal outside of my area of expertise (including but not limited to the electrical, mechanical, structural, hydrological, and geological features).


8/11/09

Alvaro A. Linero, P.E.

Registration Number: 26032

(Date)



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

August 12, 2009

Electronically Sent – Received Receipt Requested.

Mr. John Tapper jtapper@gopherresource.com
Chief Operation Officer
EnviroFocus Technologies, LLC
1901 North 66th Street
Tampa, Florida 33619

Re: EnviroFocus Technologies, LLC
Lead-Acid Battery Recycling Facility Upgrade and Production Increase
DEP File No. 0570057-020-AC (PSD-FL-404)

Dear Mr. Tapper:

On August 13, 2008 you submitted an application for an air construction permit pursuant to the rules for the Prevention of Significant Deterioration (PSD) in accordance with Rule 62-212.400, Florida Administrative Code. The application is to upgrade and increase production from the lead-acid battery recycling facility referenced above.

Enclosed are the following documents:

- Written Notice of Intent to Issue Air Construction Permit;
- Public Notice of Intent to Issue Air Construction Permit (Public Notice);
- Technical Evaluation and Preliminary Determination; and
- Draft Air Construction Permit.

The original Draft Permit and associated documents that were transmitted by the cover letter dated August 7, 2009 are hereby withdrawn and replaced by those enclosed herewith.

The Public Notice is the actual notice that you must have published in the legal advertisement section of a newspaper of general circulation in the area affected by this project.

If you have any questions, please contact David Read (permit), at 850-414-7268, Debbie Nelson (modeling) at 850-921-9537 or A.A. Linero, P.E. at 850-921-9523.

Sincerely,

Trina Vielhauer, Chief
Bureau of Air Regulation

Enclosures
TLV/aal/dr

WRITTEN NOTICE OF INTENT TO ISSUE AIR CONSTRUCTION PERMIT

In the Matter of an
Application for Air Permit by:

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

Authorized Representative:
Mr. John Tapper, Chief Operating Officer

Air Permit No. PSD-FL-404
Air Permit No. 0570057-020-AC
Lead-Acid Battery Recycling Facility
Facility Upgrade and Production Increase
Hillsborough County, Florida

Facility Location: The applicant, EnviroFocus Technologies, LLC (EnviroFocus), operates a lead-acid battery recycling facility, which is located in Hillsborough County at 1901 North 66th Street, Tampa, Florida.

Project: On August 13, 2008, EnviroFocus submitted an application for an air construction permit pursuant to the rules for the Prevention of Significant Deterioration (PSD) in Rule 62-212.400, Florida Administrative Code (F.A.C.) to upgrade and increase the production capacity of its lead-acid battery recycling facility from 32,000 to 150,000 tons per year of lead. A determination of Best Available Control Technology (BACT) is required for particulate matter (PM/PM₁₀) and nitrogen oxides (NO_x). Details of the project are provided in the application and the enclosed Technical Evaluation and Preliminary Determination.

The Department gave written notice of its intent to issue a permit to EnviroFocus on August 7, 2009. Prior to publication of the Public Notice of Intent to Issue Air Construction Permit (Public Notice) EnviroFocus provided comments and additional information for consideration by the Department. The original written notice and accompanying documents are hereby withdrawn and replaced with the present notice and accompanying documents.

Permitting Authority: Applications for air construction permits are subject to review in accordance with the provisions of Chapter 403, Florida Statutes (F.S.) and Chapters 62-4, 62-210 and 62-212 of the Florida Administrative Code (F.A.C.). The proposed project is not exempt from air permitting requirements and an air permit is required to perform the proposed work. The Florida Department of Environmental Protection's Bureau of Air Regulation is the Permitting Authority responsible for making a permit determination for this project. The Bureau of Air Regulation's physical address is: 111 South Magnolia Drive, Suite 4, Tallahassee, Florida. The mailing address is: 2600 Blair Stone Road, MS #5505, Tallahassee, Florida 32399-2400. The Bureau of Air Regulation's phone number is 850/488-0114.

Project File: A complete project file is available for public inspection during the normal business hours of 8:00 a.m. to 5:00 p.m., Monday through Friday (except legal holidays), at address indicated above for the Permitting Authority. The complete project file includes the Draft Permit, the Technical Evaluation and Preliminary Determination, the application, and the information submitted by the applicant, exclusive of confidential records under Section 403.111, F.S. Interested persons may contact the Permitting Authority's project review engineer for additional information at the address and phone number listed above.

www.dep.state.fl.us/Air/emission/construction/hillsborough_county.htm

Notice of Intent to Issue Air Permit: The Permitting Authority gives notice of its intent to issue an air permit to the applicant for the project described above. The applicant has provided reasonable assurance that operation of the proposed equipment will not adversely impact air quality and that the project will comply with all applicable provisions of Chapters 62-4, 62-204, 62-210, 62-212, 62-296 and 62-297, F.A.C. The Permitting Authority will issue a Final Permit in accordance with the conditions of the proposed Draft Permit unless a timely petition for an administrative hearing is filed under Sections 120.569 and 120.57, F.S. or unless public comment received in accordance with this notice results in a different decision or a significant change of terms or conditions.

Public Notice: Pursuant to Section 403.815, F.S. and Rules 62-110.106 and 62-210.350, F.A.C., you (the applicant) are required to publish at your own expense the enclosed Public Notice of Intent to Issue Air Permit (Public Notice). The Public Notice shall be published one time only as soon as possible in the legal advertisement section of a newspaper of general circulation in the area affected by this project. The newspaper used must meet the requirements of Sections 50.011 and 50.031, F.S. in the county where the activity is to take

EnviroFocus Lead-Acid Battery Recycling Facility
Facility Upgrade and Production Increase

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

WRITTEN NOTICE OF INTENT TO ISSUE AIR CONSTRUCTION PERMIT

place. If you are uncertain that a newspaper meets these requirements, please contact the Permitting Authority at the address or phone number listed above. Pursuant to Rule 62-110.106(5) and (9), F.A.C., the applicant shall provide proof of publication to the Permitting Authority at the above address within 7 days of publication. Failure to publish the notice and provide proof of publication may result in the denial of the permit pursuant to Rule 62-110.106(11), F.A.C.

Comments: The Permitting Authority will accept written comments concerning the proposed Draft Permit and requests for a public meeting for a period of 30 days from the date of publication of the Public Notice. Written comments must be received by the Permitting Authority by close of business (5:00 p.m.) on or before the end of this 30-day period. In addition, if a public meeting is requested within the 30-day comment period and conducted by the Permitting Authority, any oral and written comments received during the public meeting will also be considered by the Permitting Authority. If timely received comments result in a significant change to the Draft Permit, the Permitting Authority shall revise the Draft Permit and require, if applicable, another Public Notice. All comments filed will be made available for public inspection.

Petitions: A person whose substantial interests are affected by the proposed permitting decision may petition for an administrative hearing in accordance with Sections 120.569 and 120.57, F.S. The petition must contain the information set forth below and must be filed with (received by) the Department's Agency Clerk in the Office of General Counsel of the Department of Environmental Protection, 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida 32399-3000 (Telephone: 850/245-2241; Fax: 850/245-2303). Petitions filed by the applicant or any of the parties listed below must be filed within 14 days of receipt of this Written Notice of Intent to Issue Air Permit. Petitions filed by any persons other than those entitled to written notice under Section 120.60(3), F.S., must be filed within 14 days of publication of the attached Public Notice or within fourteen 14 days of receipt of this Written Notice of Intent to Issue Air Permit, whichever occurs first. Under Section 120.60(3), F.S., however, any person who asked the Permitting Authority for notice of agency action may file a petition within 14 days of receipt of that notice, regardless of the date of publication. A petitioner shall mail a copy of the petition to the applicant at the address indicated above, at the time of filing. The failure of any person to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under Sections 120.569 and 120.57, F.S., or to intervene in this proceeding and participate as a party to it. Any subsequent intervention (in a proceeding initiated by another party) will be only at the approval of the presiding officer upon the filing of a motion in compliance with Rule 28-106.205, F.A.C.

A petition that disputes the material facts on which the Permitting Authority's action is based must contain the following information: (a) The name and address of each agency affected and each agency's file or identification number, if known; (b) The name, address, and telephone number of the petitioner; the name, address and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding; and an explanation of how the petitioner's substantial interests will be affected by the agency determination; (c) A statement of when and how each petitioner received notice of the agency action or proposed decision; (d) A statement of all disputed issues of material fact; (e) A concise statement of the ultimate facts alleged, including the specific facts the petitioner contends warrant reversal or modification of the agency's proposed action; (f) A statement of the specific rules or statutes the petitioner contends require reversal or modification of the agency's proposed action including an explanation of how the alleged facts relate to the specific rules or statutes; and, (g) A statement of the relief sought by the petitioner, stating precisely the action the petitioner wishes the agency to take with respect to the agency's proposed action. A petition that does not dispute the material facts upon which the Permitting Authority's action is based shall state that no such facts are in dispute and otherwise shall contain the same information as set forth above, as required by Rule 28-106.301, F.A.C.

Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means that the Permitting Authority's final action may be different from the position taken by it in this Written Notice of Intent to Issue Air Permit. Persons whose substantial interests will be affected by any such final decision of the Permitting Authority on the application have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above.

WRITTEN NOTICE OF INTENT TO ISSUE AIR CONSTRUCTION PERMIT

Mediation: Mediation is not available in this proceeding.

Executed in Tallahassee, Florida.



Trina L. Vielhauer, Chief
Bureau of Air Regulation

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this Notice of Intent to Issue Air Construction Permit package (including the Written Notice of Intent to Issue Air Construction Permit, the Public Notice of Intent to Issue Air Construction Permit, the Technical Evaluation and Preliminary Determination, and the Draft Air Construction Permit) 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 August 12, 2009 to the persons listed below:

John Tapper, EnviroFocus Technologies, LLC: jtapper@gopherresource.com

Heather Abrams, EPA Region 4: abrams.heather@epa.gov

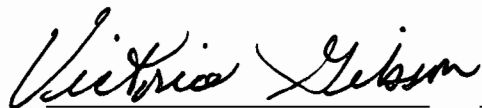
Jerry Campbell, Hillsborough County EPC: campbell@epchc.com

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 §120.52, Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.

 8/12/09
(Clerk) (Date)

PUBLIC NOTICE OF INTENT TO ISSUE AIR CONSTRUCTION PERMIT

Florida Department of Environmental Protection
 Division of Air Resource Management, Bureau of Air Regulation
 Project No. 0570057-020-AC/Draft Air Construction Permit No. PSD-FL-404
 EnviroFocus Lead-Acid Battery Recycling Facility
 Facility Upgrade and Production Increase
 Hillsborough County

Applicant: The applicant for this project is EnviroFocus Technologies, LLC (EnviroFocus). The applicant's authorized representative and mailing address are: Mr. John Tapper, Chief Operating Officer, EnviroFocus Technologies, LLC, 1901 North 66th Street, Tampa, Florida 33619.

Facility and Location: EnviroFocus operates a lead-acid battery recycling facility, which is located in Hillsborough County at 1901 North 66th Street, Tampa, Florida.

Project: On August 13, 2008, EnviroFocus submitted an application for an air construction permit pursuant to the rules for the Prevention of Significant Deterioration (PSD) in Rule 62-212.400, Florida Administrative Code (F.A.C.) to upgrade and increase the production capacity of its lead-acid battery recycling facility from 32,000 to 150,000 tons per year (TPY) of lead alloy products. A Notice of Application was published in The Tampa Tribune on May 1, 2009. A determination of Best Available Control Technology (BACT) is required for particulate matter (PM/PM₁₀) and nitrogen oxides (NO_x). Details of the project are provided in the application and the Technical Evaluation and Preliminary Determination available at the following link:

www.dep.state.fl.us/Air/emission/construction/hillsborough_county.htm

The facility recycles spent automotive and industrial lead-acid batteries, as well as other lead-bearing scrap materials to produce lead ingots by a process that includes battery breaking, lead smelting and refining/casting. The key production expansion measures include: replacement of the existing battery breaker with a larger hammer mill; addition of a feed dryer and installation of a reverberatory (reverb) furnace for additional smelting; and installation of six kettles for additional refining. A plastics plant will be constructed at the facility to turn the recycled plastic from the battery casings into saleable pellets.

Air pollution control measures include: a new wet impingement scrubber and stack and other improvements at the battery breaking area; a larger afterburner, dryer baghouse, process baghouse, wet scrubber and stack for the lead smelting operation; and a new hygiene baghouse and stack for the refining/casting operation. 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 following table is a comparison provided by EnviroFocus of potential PSD-pollutant emissions after the production increase with baseline actual emissions in tons per year (TPY).

<u>Pollutant</u>	<u>Baseline Actual Emissions (TPY)</u>	<u>Future Potential Emissions (TPY)</u>	<u>Net Emissions Increase (TPY)</u>	<u>PSD Significant Emission Rate (TPY)</u>	<u>PSD Triggered?</u>
Carbon monoxide (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
Sulfuric acid mist (SAM)	4.4	6.5	2.1	7	NO
Lead (Pb)	0.97	0.96	-0.01	0.6	NO
Sulfur dioxide (SO ₂)	853	892	39	40	NO
Volatile organic compounds (VOC)	60	56	-4	40	NO
Mercury (Hg)	0.012	0.018	0.006	0.1	NO

Smelting is the key source of NO_x. Emissions will be limited to 0.6 pounds per ton of feed (lb/ton) to the reverb furnace and 0.4 lb/ton feed to the blast furnace as BACT. The control techniques will include furnace draft control at both furnaces and replacement of a portion of the combustion air used in the reverb furnace with oxygen to reduce the nitrogen available for thermal NO_x formation.

(Public Notice to be Published in the Newspaper)

PM/PM₁₀/PM_{2.5} emissions from battery breaking, smelting and refining will be controlled by the measures described above (scrubbers and baghouses). The facility will be completely enclosed, covered and placed under negative pressure and ventilated to the atmosphere through a high-efficiency cartridge collector system. The BACT limitation for the key PM/PM₁₀/PM_{2.5} control equipment is 0.005 grains per dry standard cubic foot (gr/dscf). Fugitive emissions of PM/PM₁₀/PM_{2.5} from plant roadways will be controlled through a combination of vacuum sweeping and wet suppression.

Despite the production increases, PSD will be avoided for SAM and SO₂ by installation of a wet impingement scrubber at the battery breaking area and by a caustic scrubber augmented by soda ash injection for smelting process emissions. PSD will be avoided for CO and VOC primarily by installation of a larger afterburner that provides for comingling and incineration of the exhaust from the existing blast furnace and the new reverb furnace. PSD will be avoided for Pb by the BACT measures described above for the control of PM/PM₁₀/PM_{2.5}. Pb emissions will be limited to 0.2 and 0.3 milligrams per dry standard cubic meter (mg/dscm) from the smelting and refining steps respectively.

The Department will require installation of continuous emission monitoring systems (CEMS) at the smelting (process) stack for CO, SO₂ and NO_x and at the refining (hygiene) stack for SO₂ and NO_x.

An air quality impact analysis was conducted to ensure that the proposed project does not contribute to or cause a violation of any state or federal ambient air quality standards or PSD Class II Increment according to Rule 62-204.200, F.A.C. It was not necessary for this project to complete a Class I analysis due to low emissions and distance from the Chassahowitzka National Wildlife Refuge. The maximum predicted annual and high, second-high 24-hour PSD Class II area impacts from this project and all other increment-consuming sources in the vicinity of the EnviroFocus Technologies (EFT) facility are shown as micrograms per cubic meter (µg/m³) in the following table.

PSD Class II Increment Analysis

Pollutant	Averaging Time	Maximum Predicted Impact (µg/m ³)	Allowable Increment (µg/m ³)	Impact Greater Than Allowable Increment?
PM ₁₀	24-hour	26	30	NO
	Annual	5	17	NO
NO ₂	Annual	10	25	NO

The values given for PM₁₀ represent the predicted impacts when the proposed project contribution exceeds the applicable significant impact level. The analysis revealed cases where the maximum predicted impacts exceeded the allowable increments for PM₁₀, but EFT did not cause or contribute to those exceedances.

Although PSD was not triggered for Pb, modeling was conducted that demonstrates future compliance with the new U.S. Environmental Protection Agency (EPA) national ambient air quality standard (NAAQS) of 0.15 micrograms per cubic meter (µg/m³).

Ambient Air Quality Impacts for Pb

Pollutant	Averaging Time	Maximum Predicted Impact (µg/m ³)	Background (µg/m ³)	Total Impact (µg/m ³)	Impact Greater Than AAQS?	AAQS (µg/m ³)
Pb	3-month rolling	0.08	0.05	0.13	NO	0.15

The Department will require installation of additional Pb monitors in the neighborhood to supplement the two source-oriented regulatory monitors already in operation near EFT.

Permitting Authority: Applications for air construction permits are subject to review in accordance with the provisions of Chapter 403, Florida Statutes (F.S.) and Chapters F.A.C. 62-4, 62-210 and 62-212. The proposed project is not exempt from air permitting requirements and an air construction permit pursuant to PSD is required to perform the proposed work. The Bureau of Air Regulation is the Permitting Authority responsible for making a permit determination for this project. The Permitting Authority's physical address is: 111 South Magnolia Drive, Suite 4, Tallahassee, Florida. The Permitting Authority's mailing address is: 2600 Blair Stone Road, Mail Station (MS) 5505, Tallahassee, Florida 32399-2400. The Permitting Authority's telephone number is 850/488-0114.

Project File: A complete project file is available for public inspection during the normal business hours of 8:00 a.m. to 5:00 p.m., Monday through Friday (except legal holidays), at address indicated above for the Permitting Authority. The

complete project file includes the Draft Permit, the Technical Evaluation and Preliminary Determination, the application, and the information submitted by the applicant, exclusive of confidential records under Section 403.111, F.S. Interested persons may contact the Permitting Authority's project review engineer for additional information at the address or phone number listed above. In addition, electronic copies of these documents are available at the web site given above.

Notice of Intent to Issue Air Construction Permit: The Permitting Authority gives notice of its intent to issue an air construction permit to the applicant for the project described above. The applicant has provided reasonable assurance that operation of the proposed equipment will not adversely impact air quality and that the project will comply with all appropriate provisions of Chapters 62-4, 62-204, 62-210, 62-212, 62-296 and 62-297, F.A.C. The Permitting Authority will issue a Final Permit in accordance with the conditions of the proposed Draft Permit unless a timely petition for an administrative hearing is filed under Sections 120.569 and 120.57, F.S. or unless public comment received in accordance with this notice results in a different decision or a significant change of terms or conditions.

Comments: The Permitting Authority will accept written comments concerning the proposed Draft Permit and requests for a public meeting for a period of 30 days from the date of publication of the Public Notice. Written comments must be received by the Permitting Authority by close of business (5:00 p.m.) on or before the end of this 30-day period. In addition, if a public meeting is requested within the 30-day comment period and conducted by the Permitting Authority, any oral and written comments received during the public meeting will also be considered by the Permitting Authority. If written comments or comments received at a public meeting result in a significant change to the Draft Permit, the Permitting Authority will issue a revised Draft Permit and require, if applicable, another Public Notice. All comments filed will be made available for public inspection.

Petitions: A person whose substantial interests are affected by the proposed permitting decision may petition for an administrative hearing in accordance with Sections 120.569 and 120.57, F.S. The petition must contain the information set forth below and must be filed with (received by) the Department's Agency Clerk in the Office of General Counsel of the Department of Environmental Protection, 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida 32399-3000 (Telephone: 850/245-2241; Fax: 850/245-2303). Petitions filed by any persons other than those entitled to written notice under Section 120.60(3), F.S., must be filed within 14 days of publication of this Public Notice or receipt of a written notice, whichever occurs first. Under Section 120.60(3), F.S., however, any person who asked the Permitting Authority for notice of agency action may file a petition within 14 days of receipt of that notice, regardless of the date of publication. A petitioner shall mail a copy of the petition to the applicant at the address indicated above, at the time of filing. The failure of any person to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under Sections 120.569 and 120.57, F.S., or to intervene in this proceeding and participate as a party to it. Any subsequent intervention (in a proceeding initiated by another party) will be only at the approval of the presiding officer upon the filing of a motion in compliance with Rule 28-106.205, F.A.C.

A petition that disputes the material facts on which the Permitting Authority's action is based must contain the following information: (a) The name and address of each agency affected and each agency's file or identification number, if known; (b) The name, address, and telephone number of the petitioner; the name, address and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding; and an explanation of how the petitioner's substantial interests will be affected by the agency determination; (c) A statement of when and how each petitioner received notice of the agency action or proposed decision; (d) A statement of all disputed issues of material fact; (e) A concise statement of the ultimate facts alleged, including the specific facts the petitioner contends warrant reversal or modification of the agency's proposed action; (f) A statement of the specific rules or statutes the petitioner contends require reversal or modification of the agency's proposed action including an explanation of how the alleged facts relate to the specific rules or statutes; and, (g) A statement of the relief sought by the petitioner, stating precisely the action the petitioner wishes the agency to take with respect to the agency's proposed action. A petition that does not dispute the material facts upon which the Permitting Authority's action is based shall state that no such facts are in dispute and otherwise shall contain the same information as set forth above, as required by Rule 28-106.301, F.A.C.

Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means that the Permitting Authority's final action may be different from the position taken by it in this Public Notice of Intent to Issue Air Permit. Persons whose substantial interests will be affected by any such final decision of the Permitting Authority on the application have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above.

Mediation: Mediation is not available in this proceeding.

DRAFT PERMIT

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 62-212.400, F.A.C.

CONTENTS

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- Section 2. Administrative Requirements
- Section 3. Emissions Unit Specific Conditions
- Section 4. Appendices

Executed in Tallahassee, Florida

(DRAFT)

Joseph Kahn, Director
Division of Air Resource Management

(Date)

SECTION 1. GENERAL INFORMATION (DRAFT)

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/PM₁₀/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 (SO₂) 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.	<u>New Emission Unit Description</u>
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

SECTION 1. GENERAL INFORMATION (DRAFT)

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, SO₂, 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 (DRAFT)

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]

SECTION 2. ADMINISTRATIVE REQUIREMENTS (DRAFT)

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 (DRAFT)

A. Battery Breaking Area

This section of the permit addresses the following emissions unit.

EU ID No.	Emission Unit Description
021	<u>Battery breaking area</u> 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, SO₂ 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.]

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS (DRAFT)

A. Battery Breaking Area

PERFORMANCE RESTRICTIONS

3. Battery Breaker Capacity: The battery breaker 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. SO₂ Emission Standard: SO₂ 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, SO₂, and VOC Compliance Tests: The battery breaker stack shall be tested to demonstrate initial compliance with the PM, Pb, SO₂ 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.]

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS (DRAFT)

A. Battery Breaking Area

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 (FIA).

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].

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS (DRAFT)

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

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS (DRAFT)

B. Lead Smelting

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 SO₂ 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.]

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS (DRAFT)

B. Lead Smelting

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. **SO₂ Emission Standard:** SO₂ 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 (CO₂), 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 CO₂, 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. **SO₂, 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 SO₂, NO_x and CO standards no later than 180 days after initial startup of these emission units. The SO₂, 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.]

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS (DRAFT)

B. Lead Smelting

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 an FIA.

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 SO₂, 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]

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS (DRAFT)

B. Lead Smelting

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].

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS (DRAFT)

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 reverberatory 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, SO₂ 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 reverberatory 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.]

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS (DRAFT)

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. SO₂ Emissions Standard: SO₂ 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. SO₂, and NO_x Compliance Tests: The hygiene stack exhaust shall be tested to demonstrate initial compliance with the SO₂ and NO_x standards no later than 180 days after the initial startup of this emissions unit in order to establish a conversion factor for the purpose of converting SO₂ and NO_x CEMS monitoring data from ppm into units of lbs per hour as specified in Specific Condition Nos. 8 and 9.
[Rule 62-4.070(3), F.A.C.]

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS (DRAFT)

C. Furnace Tapping, Charging and Lead Refining

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 an FIA.

17. **Required CEMS:** The permittee shall install, calibrate, certify, operate and maintain CEMS on the hygiene stack to demonstrate compliance with the SO₂ 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].

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS (DRAFT)

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.]

PERFORMANCE 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]

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS (DRAFT)

D. Refining Kettles Exhaust

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].

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS (DRAFT)

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 SO₂ 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

- Equipment:** The permittee is authorized to construct the following.
 - 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.
 - 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

- 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

- 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.]
- 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

- 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.]
- 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.]
- 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.]

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS (DRAFT)

E. Soda Ash Silos

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.]

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS (DRAFT)

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: PM₁₀ 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.

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS (DRAFT)

F. Facility Grounds and Roadways

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].

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS (DRAFT)

G. Building Ventilation

This section of the permit addresses the following emissions unit.

ID	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

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

- 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.]
- 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.]
- 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

- 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.]
- 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)]

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS (DRAFT)

G. Building Ventilation

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.

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS (DRAFT)

G. Building Ventilation

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].

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS (DRAFT)

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 met, 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

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS (DRAFT)

H. Plastic Pellet Silos

	from Stationary Sources
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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 (DRAFT)

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 an 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.]

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS (DRAFT)

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 exhausts 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.]

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS (DRAFT)

J. Emergency Generator

This section of the permit addresses the following emissions unit.

ID	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.

- 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.]
- 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.]
- 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]
- 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)]
- 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 grams per horsepower hour (g/hp-hr)
Subpart IIII (2007 and later)	---	0.12	4.0 (NMHC ^b +NO _x)	

- As per 40 CFR § 89.113.
- NMHC means Non-Methane Hydrocarbons.

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

- 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)]
- 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]

SECTION IV. APPENDICES

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SECTION IV. APPENDIX CC

COMMON CONDITIONS

Unless otherwise specified in the permit, the following conditions apply to all emissions units and activities at the EFT facility.

EMISSIONS AND CONTROLS

1. Plant Operation - Problems: If temporarily unable to comply with any of the conditions of the permit due to breakdown of equipment or destruction by fire, wind or other cause, the permittee shall notify each Compliance Authority as soon as possible, but at least within one working day, excluding weekends and holidays. The notification shall include: pertinent information as to the cause of the problem; steps being taken to correct the problem and prevent future recurrence; and, where applicable, the owner's intent toward reconstruction of destroyed facilities. Such notification does not release the permittee from any liability for failure to comply with the conditions of this permit or the regulations. [Rule 62-4.130, 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.]
3. Excess Emissions Allowed: Excess emissions resulting from startup, shutdown or malfunction of any emissions unit shall be permitted providing (1) best operational practices to minimize emissions are adhered to and (2) the duration of excess emissions shall be minimized but in no case exceed 2 hours in any 24-hour period unless specifically authorized by the Department for longer duration. Pursuant to Rule 62-210.700(5), F.A.C., the permit subsection may specify more or less stringent requirements for periods of excess emissions. Rule 62-210-700(Excess Emissions), F.A.C., cannot vary or supersede any federal NSPS or NESHAP provision. [Rule 62-210.700(1), F.A.C.]
4. Excess Emissions Prohibited: Excess emissions caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure that may reasonably be prevented during startup, shutdown or malfunction shall be prohibited. [Rule 62-210.700(4), F.A.C.]
5. Excess Emissions - Notification: In case of excess emissions resulting from malfunctions, the permittee shall notify the Compliance Authority in accordance with Rule 62-4.130, F.A.C. A full written report on the malfunctions shall be submitted in a quarterly report, if requested by the Department. [Rule 62-210.700(6), F.A.C.]
6. VOC or OS Emissions: No person shall store, pump, handle, process, load, unload or use in any process or installation, volatile organic compounds (VOC) or organic solvents (OS) without applying known and existing vapor emission control devices or systems deemed necessary and ordered by the Department. [Rule 62-296.320(1), F.A.C.]
7. Objectionable Odor Prohibited: No person shall cause, suffer, allow or permit the discharge of air pollutants, which cause or contribute to an objectionable odor. An "objectionable odor" means 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. [Rules 62-296.320(2) and 62-210.200(Definitions), F.A.C.]
8. General Visible Emissions: No person shall cause, let, permit, suffer or allow to be discharged into the atmosphere the emissions of air pollutants from any activity equal to or greater than 20% opacity. This regulation does not impose a specific testing requirement. [Rule 62-296.320(4)(b)1, F.A.C.]
9. Unconfined Particulate Emissions: During the construction period, unconfined particulate matter emissions shall be minimized by dust suppressing techniques such as covering and/or application of water or chemicals to the affected areas, as necessary. [Rule 62-296.320(4)(c), F.A.C.]

SECTION IV. APPENDIX CC

COMMON CONDITIONS

RECORDS AND REPORTS

10. Records Retention: All measurements, records, and other data required by this permit shall be documented in a permanent, legible format and retained for at least 5 years following the date on which such measurements, records, or data are recorded. Records shall be made available to the Department upon request. [Rule 62-213.440(1)(b)2, F.A.C.]
11. Emissions Computation and Reporting
- a. *Applicability*. This rule sets forth required methodologies to be used by the owner or operator of a facility for computing actual emissions, baseline actual emissions, and net emissions increase, as defined at Rule 62-210.200, F.A.C., and for computing emissions for purposes of the reporting requirements of subsection 62-210.370(3) and paragraph 62-212.300(1)(e), F.A.C., or of any permit condition that requires emissions be computed in accordance with this rule. This rule is not intended to establish methodologies for determining compliance with the emission limitations of any air permit.
 - b. *Computation of Emissions*. For any of the purposes set forth in subsection 62-210.370(1), F.A.C., the owner or operator of a facility shall compute emissions in accordance with the requirements set forth in this subsection.
 - (1) **Basic Approach**. The owner or operator shall employ, on a pollutant-specific basis, the most accurate of the approaches set forth below to compute the emissions of a pollutant from an emissions unit; provided, however, that nothing in this rule shall be construed to require installation and operation of any continuous emissions monitoring system (CEMS), continuous parameter monitoring system (CPMS), or predictive emissions monitoring system (PEMS) not otherwise required by rule or permit, nor shall anything in this rule be construed to require performance of any stack testing not otherwise required by rule or permit.
 - (a) If the emissions unit is equipped with a CEMS meeting the requirements of paragraph 62-210.370(2)(b), F.A.C., the owner or operator shall use such CEMS to compute the emissions of the pollutant, unless the owner or operator demonstrates to the department that an alternative approach is more accurate because the CEMS represents still-emerging technology.
 - (b) If a CEMS is not available or does not meet the requirements of paragraph 62-210.370(2)(b), F.A.C., but emissions of the pollutant can be computed pursuant to the mass balance methodology of paragraph 62-210.370(2)(c), F.A.C., the owner or operator shall use such methodology, unless the owner or operator demonstrates to the department that an alternative approach is more accurate.
 - (c) If a CEMS is not available or does not meet the requirements of paragraph 62-210.370(2)(b), F.A.C., and emissions cannot be computed pursuant to the mass balance methodology, the owner or operator shall use an emission factor meeting the requirements of paragraph 62-210.370(2)(d), F.A.C., unless the owner or operator demonstrates to the department that an alternative approach is more accurate.
 - (2) **Continuous Emissions Monitoring System (CEMS)**.
 - (a) An owner or operator may use a CEMS to compute emissions of a pollutant for purposes of this rule provided:
 - 1) The CEMS complies with the applicable certification and quality assurance requirements of 40 CFR Part 60, Appendices B and F, or, for an acid rain unit, the certification and quality assurance requirements of 40 CFR Part 75, all adopted by reference at Rule 62-204.800, F.A.C.; or

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COMMON CONDITIONS

- 2) The owner or operator demonstrates that the CEMS otherwise represents the most accurate means of computing emissions for purposes of this rule.
 - (b) Stack gas volumetric flow rates used with the CEMS to compute emissions shall be obtained by the most accurate of the following methods as demonstrated by the owner or operator:
 - 1) A calibrated flowmeter that records data on a continuous basis, if available; or
 - 2) The average flow rate of all valid stack tests conducted during a five-year period encompassing the period over which the emissions are being computed, provided all stack tests used shall represent the same operational and physical configuration of the unit.
 - (c) The owner or operator may use CEMS data in combination with an appropriate f-factor, heat input data, and any other necessary parameters to compute emissions if such method is demonstrated by the owner or operator to be more accurate than using a stack gas volumetric flow rate as set forth at subparagraph 62-210.370(2)(b)2., F.A.C., above.
- (3) Mass Balance Calculations.
- (a) An owner or operator may use mass balance calculations to compute emissions of a pollutant for purposes of this rule provided the owner or operator:
 - 1) Demonstrates a means of validating the content of the pollutant that is contained in or created by all materials or fuels used in or at the emissions unit; and
 - 2) Assumes that the emissions unit emits all of the pollutant that is contained in or created by any material or fuel used in or at the emissions unit if it cannot otherwise be accounted for in the process or in the capture and destruction of the pollutant by the unit's air pollution control equipment.
 - (b) Where the vendor of a raw material or fuel which is used in or at the emissions unit publishes a range of pollutant content from such material or fuel, the owner or operator shall use the highest value of the range to compute the emissions, unless the owner or operator demonstrates using site-specific data that another content within the range is more accurate.
 - (c) In the case of an emissions unit using coatings or solvents, the owner or operator shall document, through purchase receipts, records and sales receipts, the beginning and ending VOC inventories, the amount of VOC purchased during the computational period, and the amount of VOC disposed of in the liquid phase during such period.
- (4) Emission Factors.
- a. An owner or operator may use an emission factor to compute emissions of a pollutant for purposes of this rule provided the emission factor is based on site-specific data such as stack test data, where available, unless the owner or operator demonstrates to the department that an alternative emission factor is more accurate. An owner or operator using site-specific data to derive an emission factor, or set of factors, shall meet the following requirements.
 - 1) If stack test data are used, the emission factor shall be based on the average emissions per unit of input, output, or gas volume, whichever is appropriate, of all valid stack tests conducted during at least a five-year period encompassing the period over which the emissions are being computed, provided all stack tests used shall represent the same operational and physical configuration of the unit.
 - 2) Multiple emission factors shall be used as necessary to account for variations in emission rate associated with variations in the emissions unit's operating rate or operating conditions during the period over which emissions are computed.

SECTION IV. APPENDIX CC

COMMON CONDITIONS

- 3) The owner or operator shall compute emissions by multiplying the appropriate emission factor by the appropriate input, output or gas volume value for the period over which the emissions are computed. The owner or operator shall not compute emissions by converting an emission factor to pounds per hour and then multiplying by hours of operation, unless the owner or operator demonstrates that such computation is the most accurate method available.
- b. If site-specific data are not available to derive an emission factor, the owner or operator may use a published emission factor directly applicable to the process for which emissions are computed. If no directly-applicable emission factor is available, the owner or operator may use a factor based on a similar, but different, process.
- (5) Accounting for Emissions During Periods of Missing Data from CEMS, PEMS, or CPMS. In computing the emissions of a pollutant, the owner or operator shall account for the emissions during periods of missing data from CEMS, PEMS, or CPMS using other site-specific data to generate a reasonable estimate of such emissions.
- (6) Accounting for Emissions During Periods of Startup and Shutdown. In computing the emissions of a pollutant, the owner or operator shall account for the emissions during periods of startup and shutdown of the emissions unit.
- (7) Fugitive Emissions. In computing the emissions of a pollutant from a facility or emissions unit, the owner or operator shall account for the fugitive emissions of the pollutant, to the extent quantifiable, associated with such facility or emissions unit.
- (8) Recordkeeping. The owner or operator shall retain a copy of all records used to compute emissions pursuant to this rule for a period of five years from the date on which such emissions information is submitted to the department for any regulatory purpose.
- c. *Annual Operating Report for Air Pollutant Emitting Facility*
 - (1) The Annual Operating Report for Air Pollutant Emitting Facility (DEP Form No. 62-210.900(5)) shall be completed each year for the following facilities:
 - (a) All Title V sources.
 - (b) All synthetic non-Title V sources.
 - (c) All facilities with the potential to emit ten (10) tons per year or more of volatile organic compounds or twenty-five (25) tons per year or more of nitrogen oxides and located in an ozone nonattainment area or ozone air quality maintenance area.
 - (d) All facilities for which an annual operating report is required by rule or permit.
 - (2) Notwithstanding paragraph 62-210.370(3)(a), F.A.C., no annual operating report shall be required for any facility operating under an air general permit.
 - (3) The annual operating report shall be submitted to the appropriate Department of Environmental Protection (DEP) division, district or DEP-approved local air pollution control program office by April 1 of the following year.
 - (4) Beginning with 2007 annual emissions, emissions shall be computed in accordance with the provisions of subsection 62-210.370(2), F.A.C., for purposes of the annual operating report.

[Rule 62-210.370, F.A.C.]

SECTION IV. APPENDIX CEMS

CONTINUOUS EMISSIONS MONITORING SYSTEM (CEMS) REQUIREMENTS

CEMS OPERATION PLAN

1. CEMS Operation Plan: The owner or operator shall create and implement a facility-wide plan for the proper installation, calibration, maintenance and operation of each CEMS required by this permit. The owner or operator shall submit the CEMS Operation Plan to the Bureau of Air Monitoring and Mobile Sources for approval at least 60 days prior to CEMS installation. The CEMS Operation Plan shall become effective 60 days after submittal or upon its approval. If the CEMS Operation Plan is not approved, the owner or operator shall submit a new or revised plan for approval.

{Permitting Note: The Department maintains both guidelines for developing a CEMS Operation Plan and example language that can be used as the basis for the facility-wide plan required by this permit. Contact the Emissions Monitoring Section of the Bureau of Air Monitoring and Mobile Sources at (850)488-0114.}

INSTALLATION, PERFORMANCE SPECIFICATIONS AND QUALITY ASSURANCE

2. Timelines:
 - a. New and Existing Emission Units. For new emission units, the owner or operator shall install each CEMS required by this permit prior to initial startup of the unit. The owner or operator shall conduct the appropriate performance specification for each CEMS within 90 operating days of achieving permitted capacity as defined in Rule 62-297.310(2), F.A.C., but no later than 180 calendar days after initial startup.
3. Installation: All CEMS shall be installed such that representative measurements of emissions or process parameters from the facility are obtained. The owner or operator shall locate the CEMS by following the procedures contained in the applicable performance specification of 40 CFR part 60, Appendix B.
4. Span Values and Dual Range Monitors: The owner or operator shall set appropriate span values for the CEMS. The owner or operator shall install dual range monitors if required by and in accordance with the CEMS Operation Plan.
5. Continuous Flow Monitor: For compliance with mass emission rate standards, the owner or operator shall install a continuous flow monitor to determine the stack exhaust flow rate. The flow monitor shall be certified pursuant to 40 CFR part 60, Appendix B, Performance Specification 6.
6. Diluent Monitor: If it is necessary to correct the CEMS output to the oxygen concentrations specified in this permit's emission standards, the owner or operator shall either install an oxygen monitor or install a CO₂ monitor and use an appropriate F-Factor computational approach.
7. Moisture Correction: If necessary, the owner or operator shall determine the moisture content of the exhaust gas and develop an algorithm to enable correction of the monitoring results to a dry basis (0% moisture).

{Permitting Note: The CEMS Operation Plan will contain additional CEMS-specific details and procedures for installation.}
8. Performance Specifications: The owner or operator shall evaluate the acceptability of each CEMS by conducting the appropriate performance specification, as follows. CEMS determined to be unacceptable shall not be considered installed for purposes of meeting the timelines of this permit.
 - a. CO Monitors. For CO monitors, the owner or operator shall conduct Performance Specification 4 or 4A of 40 CFR part 60, Appendix B
 - b. NO_x and SO₂ Monitors. For NO_x and SO₂ monitors, the owner or operator shall conduct Performance Specification 2 of 40 CFR part 60, Appendix B.

SECTION IV. APPENDIX CEMS

CONTINUOUS EMISSIONS MONITORING SYSTEM (CEMS) REQUIREMENTS

9. Quality Assurance: The owner or operator shall follow the quality assurance procedures of 40 CFR part 60, Appendix F.
 - a. *CO Monitors*. The required relative accuracy test audit (RATA) tests shall be performed using EPA Method 10 in Appendix A of 40 CFR part 60 and shall be based on a continuous sampling train.
 - b. *NO_x Monitors*. The required RATA tests shall be performed using EPA Method 7E in Appendix A of 40 CFR part 60. NO_x shall be expressed "as NO₂."
 - c. *SO₂ Monitors*. The required RATA tests shall be performed using EPA Method 6C in Appendix A of 40 CFR part 60.
10. Substituting RATA Tests for Compliance Tests: Data collected during CEMS quality assurance RATA tests can substitute for annual stack tests, and vice versa, at the option of the owner or operator, provided the owner or operator indicates this intent in the submitted test protocol and follows the procedures outlined in the CEMS Operation Plan.

CALCULATION APPROACH

11. CEMS Used for Compliance: Once adherence to the applicable performance specification for each CEMS is demonstrated, the owner or operator shall use the CEMS to demonstrate compliance with the applicable emission standards as specified by this permit.
12. CEMS Data: Each CEMS shall monitor and record emissions during all periods of operation and whenever emissions are being generated, including during episodes of startups, shutdowns, and malfunctions. All data shall be used, except for invalid measurements taken during monitor system breakdowns, repairs, calibration checks, zero adjustments and span adjustments, and except for allowable data exclusions as per Condition 20 of this appendix.
13. Operating Hours and Operating Days: For purposes of this appendix, the following definitions shall apply. An hour is the 60-minute period beginning at the top of each hour. Any hour during which an emissions unit is in operation for more than 15 minutes is an operating hour for that emission unit. A day is the 24-hour period from midnight to midnight. Unless otherwise specified by this permit, any day with at least one operating hour for an emissions unit is an operating day for that emission unit.
14. Valid Hourly Averages: Each CEMS shall be designed and operated to sample, analyze and record data evenly spaced over the hour at a minimum of one measurement per minute. All valid measurements collected during an hour shall be used to calculate a 1-hour block average that begins at the top of each hour.
 - a. Hours that are not operating hours are not valid hours.
 - b. For each operating hour, the 1-hour block average shall be computed from at least two data points separated by a minimum of 15 minutes. If less than two such data points are available, there is insufficient data, the 1-hour block average is not valid, and the hour is considered as "monitor unavailable."
15. Calculation Approaches: The owner or operator shall implement the calculation approach specified by this permit for each CEMS, as follows:
 - a. *Rolling 30-day average*. Compliance shall be determined after each operating day by calculating the arithmetic average of all the valid hourly averages from that operating day and the prior 30-1 operating days.

SECTION IV. APPENDIX CEMS
CONTINUOUS EMISSIONS MONITORING SYSTEM (CEMS) REQUIREMENTS

MONITOR AVAILABILITY

16. Monitor Availability: The quarterly excess emissions report shall identify monitor availability for each quarter in which the unit operated. Monitor availability for the CEMS shall be 95% or greater in any calendar quarter in which the unit operated for more than 760 hours. In the event the applicable availability is not achieved, the permittee shall provide the Department with a report identifying the problems in achieving the required availability and a plan of corrective actions that will be taken to achieve 95% availability. The permittee shall implement the reported corrective actions within the next calendar quarter. Failure to take corrective actions or continued failure to achieve the minimum monitor availability shall be violations of this permit.

EXCESS EMISSIONS

17. Definitions:
- a. *Startup* is defined as the commencement of operation of any emissions unit which has shut down or ceased operation for a period of time sufficient to cause temperature, pressure, chemical or pollution control device imbalances, which result in excess emissions.
 - b. *Shutdown* means the cessation of the operation of an emissions unit for any purpose.
 - c. *Malfunction* means any unavoidable mechanical and/or electrical failure of air pollution control equipment or process equipment or of a process resulting in operation in an abnormal or unusual manner.
18. Excess Emissions Prohibited: Excess emissions caused entirely or in part by poor maintenance, poor operation or any other equipment or process failure that may reasonably be prevented during startup, shutdown or malfunction shall be prohibited.
19. Data Exclusion Procedures for SIP Compliance: As per the procedures in this condition, limited amounts of CEMS emissions data may be excluded from the corresponding compliance demonstration, provided that best operational practices to minimize emissions are adhered to and the duration of data excluded is minimized. The data exclusion procedures of this condition apply only to SIP-based emission limits.
- a. *Excess Emissions*. Data in excess of the applicable emission standard may be excluded from compliance calculations if the data are collected during periods of permitted excess emissions (for example, during startup, shutdown or malfunction). The maximum duration of excluded data is 2 hours in any 24-hour period, unless some other duration is specified by this permit.
 - b. *Limited Data Exclusion*. If the compliance calculation using all valid CEMS emission data, as defined in Condition 12 of this appendix, indicates that the emission unit is in compliance, then no CEMS data shall be excluded from the compliance demonstration.
 - c. *Event Driven Exclusion*. The underlying event (for example, the startup, shutdown or malfunction event) must precede the data exclusion. If there is no underlying event, then no data may be excluded. Only data collected during the event may be excluded.
 - d. *Reporting Excluded Data*. The data exclusion procedures of this condition are not necessarily the same procedures used for excess emissions as defined by federal rules. Quarterly or semi-annual reports required by this permit shall indicate not only the duration of data excluded from SIP compliance calculations but also the number of excess emissions as defined by federal rules.

SECTION IV. APPENDIX CEMS

CONTINUOUS EMISSIONS MONITORING SYSTEM (CEMS) REQUIREMENTS

20. Notification Requirements: The owner or operator shall notify the Compliance Authority within one working day of discovering any emissions that demonstrate noncompliance for a given averaging period. Within one working day of occurrence, the owner or operator shall notify the Compliance Authority of any malfunction resulting in the exclusion of CEMS data. For malfunctions, notification is sufficient for the owner or operator to exclude CEMS data.

ANNUAL EMISSIONS

21. CEMS Used for Calculating Annual Emissions: All valid data, as defined in Condition 12 of this appendix, shall be used when calculating annual emissions.
- Annual emissions shall include data collected during startup, shutdown and malfunction periods.
 - Annual emissions shall include data collected during periods when the emission unit is not operating but emissions are being generated (for example, when firing fuel to warm up a process for some period of time prior to the emission unit's startup).
 - Annual emissions shall not include data from periods of time where the monitor was functioning properly but was unable to collect data while conducting a mandated quality assurance/quality control activity such as calibration error tests, RATA, calibration gas audit or RAA. These periods of time shall be considered missing data for purposes of calculating annual emissions.
 - Annual emissions shall not include data from periods of time when emissions are in excess of the calibrated span of the CEMS. These periods of time shall be considered missing data for purposes of calculating annual emissions.
22. Accounting for Missing Data: All valid measurements collected during each hour shall be used to calculate a 1-hour block average. For each hour, the 1-hour block average shall be computed from at least two data points separated by a minimum of 15 minutes. If less than two such data points are available, the owner or operator shall account for emissions during that hour using site-specific data to generate a reasonable estimate of the 1-hour block average.
23. Emissions Calculation: Hourly emissions shall be calculated for each hour as the product of the 1-hour block average and the duration of pollutant emissions during that hour. Annual emissions shall be calculated as the sum of all hourly emissions occurring during the year.

SECTION 4. APPENDIX CF

CITATION FORMATS AND GLOSSARY OF COMMON TERMS

CITATION FORMATS

The following illustrate the formats used in the permit to identify applicable requirements from permits and regulations.

Old Permit Numbers

Example: Permit No. AC50-123456 or Permit No. AO50-123456

Where: “AC” identifies the permit as an Air Construction Permit
“AO” identifies the permit as an Air Operation Permit
“123456” identifies the specific permit project number

New Permit Numbers

Example: Permit Nos. 099-2222-001-AC, 099-2222-001-AF, 099-2222-001-AO, or 099-2222-001-AV

Where: “099” represents the specific county ID number in which the project is located
“2222” represents the specific facility ID number for that county
“001” identifies the specific permit project number
“AC” identifies the permit as an air construction permit
“AF” identifies the permit as a minor source federally enforceable state operation permit
“AO” identifies the permit as a minor source air operation permit
“AV” identifies the permit as a major Title V air operation permit

PSD Permit Numbers

Example: Permit No. PSD-FL-317

Where: “PSD” means issued pursuant to the preconstruction review requirements of the Prevention of Significant Deterioration of Air Quality
“FL” means that the permit was issued by the State of Florida
“317” identifies the specific permit project number

Florida Administrative Code (F.A.C.)

Example: [Rule 62-213.205, F.A.C.]

Means: Title 62, Chapter 213, Rule 205 of the Florida Administrative Code

Code of Federal Regulations (CFR)

Example: [40 CFR 60.7]

Means: Title 40, Part 60, Section 7

GLOSSARY OF COMMON TERMS

° F: degrees Fahrenheit

acfm: actual cubic feet per minute

ARMS: Air Resource Management System
(Department’s database)

SECTION 4. APPENDIX CF

CITATION FORMATS AND GLOSSARY OF COMMON TERMS

BACT: best available control technology	MSDS: material safety data sheets
Btu: British thermal units	MW: megawatt
CAM: compliance assurance monitoring	NESHAP: National Emissions Standards for Hazardous Air Pollutants
CEMS: continuous emissions monitoring system	NO_x: nitrogen oxides
cfm: cubic feet per minute	NSPS: New Source Performance Standards
CFR: Code of Federal Regulations	O&M: operation and maintenance
CO: carbon monoxide	O₂: oxygen
COMS: continuous opacity monitoring system	Pb: lead
DEP: Department of Environmental Protection	PM: particulate matter
Department: Department of Environmental Protection	PM₁₀: particulate matter with a mean aerodynamic diameter of 10 microns or less
dscfm: dry standard cubic feet per minute	PSD: prevention of significant deterioration
EPA: Environmental Protection Agency	psi: pounds per square inch
ESP: electrostatic precipitator (control system for reducing particulate matter)	PTE: potential to emit
EU: emissions unit	RACT: reasonably available control technology
F.A.C.: Florida Administrative Code	RATA: relative accuracy test audit
F.D.: forced draft	SAM: sulfuric acid mist
F.S.: Florida Statutes	scf: standard cubic feet
FGR: flue gas recirculation	scfm: standard cubic feet per minute
Fl: fluoride	SIC: standard industrial classification code
ft²: square feet	SNCR: selective non-catalytic reduction (control system used for reducing emissions of nitrogen oxides)
ft³: cubic feet	SO₂: sulfur dioxide
gpm: gallons per minute	TPH: tons per hour
gr: grains	TPY: tons per year
HAP: hazardous air pollutant	UTM: Universal Transverse Mercator coordinate system
Hg: mercury	VE: visible emissions
I.D.: induced draft	VOC: volatile organic compounds
ID: identification	
kPa: kilopascals	
lb: pound	
MACT: maximum achievable technology	
MMBtu: million British thermal units	

SECTION IV. APPENDIX CTR
COMMON TESTING REQUIREMENTS

Unless otherwise specified in the permit, the following testing requirements apply to all emissions units at the ETF facility.

COMPLIANCE TESTING REQUIREMENTS

1. Operating Rate During Testing: Testing of emissions shall be conducted with the emissions unit operating at permitted capacity. If it is impractical to test at permitted capacity, an emissions unit may be tested at less than the maximum permitted capacity; in this case, subsequent emissions unit operation is limited to 110 percent of the test rate until a new test is conducted. Once the unit is so limited, operation at higher capacities is allowed for no more than 15 consecutive days for the purpose of additional compliance testing to regain the authority to operate at the permitted capacity. Permitted capacity is defined as 90 to 100 percent of the maximum operation rate allowed by the permit. [Rule 62-297.310(2), F.A.C.]
2. Applicable Test Procedures - Opacity Compliance Tests. When either EPA Method 9 or DEP Method 9 is specified as the applicable opacity test method, the required minimum period of observation for a compliance test shall be sixty (60) minutes for emissions units which emit or have the potential to emit 100 tons per year or more of particulate matter, and thirty (30) minutes for emissions units which have potential emissions less than 100 tons per year of particulate matter and are not subject to a multiple-valued opacity standard. The opacity test observation period shall include the period during which the highest opacity emissions can reasonably be expected to occur. Exceptions to these requirements are as follows:
 - a. For batch, cyclical processes, or other operations which are normally completed within less than the minimum observation period and do not recur within that time, the period of observation shall be equal to the duration of the batch cycle or operation completion time.
 - b. The observation period for special opacity tests that are conducted to provide data to establish a surrogate standard pursuant to Rule 62-297.310(5)(k), F.A.C., Waiver of Compliance Test Requirements, shall be established as necessary to properly establish the relationship between a proposed surrogate standard and an existing mass emission limiting standard.
 - c. The minimum observation period for opacity tests conducted by employees or agents of the Department to verify the day-to-day continuing compliance of a unit or activity with an applicable opacity standard shall be twelve minutes.

[Rule 62-297.310(4), F.A.C.]

3. Determination of Process Variables
 - a. *Required Equipment*. The owner or operator of an emissions unit for which compliance tests are required shall install, operate, and maintain equipment or instruments necessary to determine process variables, such as process weight input or heat input, when such data are needed in conjunction with emissions data to determine the compliance of the emissions unit with applicable emission limiting standards.
 - b. *Accuracy of Equipment*. Equipment or instruments used to directly or indirectly determine process variables, including devices such as belt scales, weight hoppers, flow meters, and tank scales, shall be calibrated and adjusted to indicate the true value of the parameter being measured with sufficient accuracy to allow the applicable process variable to be determined within 10% of its true value.

[Rule 62-297.310(5), F.A.C.]

4. Frequency of Compliance Tests: The following provisions apply only to those emissions units that are subject to an emissions limiting standard for which compliance testing is required.
 - a. *General Compliance Testing*.

SECTION IV. APPENDIX CTR
COMMON TESTING REQUIREMENTS

1. The owner or operator of a new or modified emissions unit that is subject to an emission limiting standard shall conduct a compliance test that demonstrates compliance with the applicable emission limiting standard prior to obtaining an operation permit for such emissions unit.
2. The owner or operator of an emissions unit that is subject to any emission limiting standard shall conduct a compliance test that demonstrates compliance with the applicable emission limiting standard prior to obtaining a renewed operation permit. Emissions units that are required to conduct an annual compliance test may submit the most recent annual compliance test to satisfy the requirements of this provision. In renewing an air operation permit pursuant to sub-subparagraph 62-210.300(2)(a)3.b., c., or d., F.A.C., the Department shall not require submission of emission compliance test results for any emissions unit that, during the year prior to renewal:
 - (a) Did not operate; or
 - (b) In the case of a fuel burning emissions unit, burned liquid and/or solid fuel for a total of no more than 400 hours,
3. During each federal fiscal year (October 1 – September 30), unless otherwise specified by rule, order, or permit, the owner or operator of each emissions unit shall have a formal compliance test conducted for visible emissions, if there is an applicable standard.
4. The owner or operator shall notify the Department, at least 15 days prior to the date on which each formal compliance test is to begin, of the date, time, and place of each such test, and the test contact person who will be responsible for coordinating and having such test conducted for the owner or operator.
- b. *Special Compliance Tests.* When the Department, after investigation, has good reason (such as complaints, increased visible emissions or questionable maintenance of control equipment) to believe that any applicable emission standard contained in a Department rule or in a permit issued pursuant to those rules is being violated, it shall require the owner or operator of the emissions unit to conduct compliance tests which identify the nature and quantity of pollutant emissions from the emissions unit and to provide a report on the results of said tests to the Department.

[Rule 62-297.310(7), F.A.C.]

RECORDS AND REPORTS

5. Test Reports: The owner or operator of an emissions unit for which a compliance test is required shall file a report with the Department on the results of each such test. The required test report shall be filed with the Department as soon as practical but no later than 45 days after the last sampling run of each test is completed. The test report shall provide sufficient detail on the emissions unit tested and the test procedures used to allow the Department to determine if the test was properly conducted and the test results properly computed. As a minimum, the test report shall provide the following information.
 - a. The type, location, and designation of the emissions unit tested.
 - b. The facility at which the emissions unit is located.
 - c. The owner or operator of the emissions unit.
 - d. The normal type and amount of fuels used and materials processed, and the types and amounts of fuels used and material processed during each test run.
 - e. The means, raw data and computations used to determine the amount of fuels used and materials processed, if necessary to determine compliance with an applicable emission limiting standard.
 - f. The date, starting time and end time of the observation.

SECTION IV. APPENDIX CTR
COMMON TESTING REQUIREMENTS

- g. The test procedures used.
- h. The names of individuals who furnished the process variable data, conducted the test, and prepared the report.
- i. The applicable emission standard and the resulting maximum allowable emission rate for the emissions unit plus the test result in the same form and unit of measure.
- j. A certification that to the knowledge of the owner or his authorized agent, all data submitted are true and correct. The owner or his authorized agent shall certify that all data required and provided to the person conducting the test are true and correct to his knowledge.

[Rule 62-297.310(8), F.A.C.]

SECTION IV. APPENDIX FDCC

STANDARD OPERATING PROCEDURES FOR FUGITIVE DUST CONTROL DURING CONSTRUCTION ACTIVITIES

The construction at the EFT facility will involve activities that can create fugitive emissions. Certain practices, common in the lead and construction/demolition industries, can help mitigate these emissions. The intent of this plan is to spell out exactly what these practices are, how and when they will be used at EFT during the construction process, and who is responsible for insuring they are followed.

The Standard Operating Procedures (SOP) for the Control of Fugitive Dust Emissions (dated December 2006) under which the EFT facility is currently operating is provided at the end of this appendix. These procedures will by and large be followed during construction activities taking place at the EFT facility. Specifically, the wet dust suppression by sprinkling with water the roadways, parking lots and grounds and the vacuum sweeping of the roadways and parking lots will continue. These activities will be terminated as different portions of the facilities' footprint and emission units are covered over by the facility enclosure which will be under negative pressure. The ventilation from the facility enclosure will be ventilated to the Torit filter (EU ID 015) to control fugitive emissions from process upsets and other sources.

The EFT facility has been in operation for over 40 years on this site. Any structures that have been exposed to the lead recycling operation will have some lead deposited on surfaces (no matter how effective the on-going housekeeping program may be). These structures also include flooring (cement & asphalt) in the operations areas as well as paved areas within the fence line. When any of these materials are demolished and removed, fugitive lead emissions could potentially be released into the air. This plan addresses "best practices" designed to prevent fugitive air emissions from occurring.

The plan is broken down into "pre-demolition" tasks, tasks to control emissions during the activity, and finally, how these tasks will be coordinated. Overall compliance of this plan will be the responsibility of the Environmental Health & Safety Manager at EFT. These responsibilities will include the following:

- Insure that all EFT personnel and contractors are familiar with the contents of this plan and how it applies to them.
- Meet with contractor's on a set frequency when work is scheduled to be performed to coordinate pre-demolition tasks, emission control tasks, and so on.
- Insure that all EFT personnel and contractors comply with the requirements of this plan.
- Thoroughly document activities that could impact fugitive emissions, the controls that were utilized to minimize these emissions, and what weather conditions were present at those times.

PRE-DEMOLITION TASKS:

The following tasks must be performed prior to demolition:

The residual lead deposited on the surfaces of building structures, equipment, and flooring must be thoroughly cleaned prior to demolition. Depending on the location, this can involve pressure washing the structures prior to the demolition to remove the lead. In outside areas where pressure washing may not be feasible, use of the Tennant sweeper to clean the asphalt or cement thoroughly must be used.

These tasks need to be coordinated between EFT personnel and the contracting crews since most of this "pre-demolition" work will be performed by EFT personnel. Personnel performing the pressure washing of structures must insure that the cleaning is thorough. All horizontal surfaces where dust can accumulate must be cleaned first and then the vertical surfaces cleaned. The cleaning must start from the top of the structure working down towards the bottom for maximum cleaning effectiveness.

Flooring inside the building must be pressure washed prior to saw cutting/removal. Liquids will be contained inside the building and captured in floor sumps. Cement/asphalt outside of the buildings must be thoroughly swept with the Tennant sweeper.

SECTION IV. APPENDIX FDCC

STANDARD OPERATING PROCEDURES FOR FUGITIVE DUST CONTROL DURING CONSTRUCTION ACTIVITIES

All these activities will minimize the amount of lead dust/oxide that may be retained on the structure or flooring. It also insures that the lead dust/oxide removed during the cleaning process is captured either in the floor sumps or by the Tennant sweeper.

DEMOLITION/LOADING ACTIVITIES

The following tasks must be completed during the demolition and loading activities:

Once the pre-demolition cleaning tasks have been completed, the actual demolition can begin. Demolition can include removal of siding, roofing, steel structural supports, processing equipment and cement & asphalt surfaces. All these materials could potentially still retain some slight amount of lead on them so the control of dust during the removal and loading process is critical.

The EHS Manager is responsible for insuring that all demolition activities are done in conjunction with this procedure. The coordination of water control applications would normally be carried out by contractor personnel but overall compliance still remains with the EHS Manager.

An application of fine water spray must be applied to the structure/material during the removal and loading process. Drainage flow of the waste water stream must be either into the building including floor sumps or into the floor sumps located outdoors. When possible, flow into the building is the preferred method. The application of water should be sufficient to control the dusting while still minimizing the quantity of liquids generated. Effective control does not necessarily require large amounts of water – the key is applying the spray to specific locations.

Vehicles and equipment used for demolition and removal inside the buildings where lead dusts/oxides were present must have its tires pressure washed prior to exiting the building to insure that there would be no drag out of the dusts or oxides from the building.

Water controls must be used for all saw cutting activities. That operation is very dusty and the application of water will minimize the dusting. Water application must be used while breaking up cement/asphalt and while loading it into roll-offs, end dumps, etc. to minimize the dusting that is common when handling those types of materials.

Weather conditions must be evaluated prior to any demolition type work. Activities on very windy days must be minimized or possibly eliminated depending on the type of work and the structure to be removed. This decision will be made by the EHS Manager and communicated to the relevant contractors promptly.

EMISSION UNIT ENCLOSURES AND CONSTRUCTION ENCLOSURES

Before the blast furnace (EU ID 001), process fugitive emissions from the refining kettles and tapping and charging of the furnaces (EU ID 011), the battery breaking area (EU ID 021), the feed dryer (EU ID 022) and the reverb furnace (EU ID 023) emission units become operational, they must be within a enclosure under negative that is ventilated to the Torit filter of EU ID 015. Wherever possible, prior to demolition and loading activities an enclosure must be erected around the affected area to control fugitive dust emissions caused by these activities.

SECTION IV. APPENDIX FDCC

STANDARD OPERATING PROCEDURES FOR FUGITIVE DUST CONTROL DURING CONSTRUCTION ACTIVITIES

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

ENVIROFOCUS TECHNOLOGIES, LLC
1901 NORTH 66th STREET
TAMPA, FL 33619

REVISED DECEMBER 2006

SECTION IV. APPENDIX FDCC

STANDARD OPERATING PROCEDURES FOR FUGITIVE DUST CONTROL DURING CONSTRUCTION ACTIVITIES

INTRODUCTION

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

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

EFT is committed to the operation of its facility in a manner that will comply with applicable federal, state, and county environmental regulations and in harmony with the surrounding community. GCR has operated at its present location for more than forty (40) years, and EFT expects to continue operation well into this century. Regulatory compliance is a corporate commitment. This commitment is vigorously reinforced throughout the company, from the top down.

PURPOSE

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

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

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

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

Potential sources of fugitive emissions at the facility include:

- (1) Plant Roadways and Parking Areas
- (2) Battery Breaking
- (3) Blast Furnace Area
- (4) Refining and Casting Area
- (5) Materials Storage and Handling Area (Group Pile)
- (6) Unpaved Outside Areas

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STANDARD OPERATING PROCEDURES FOR FUGITIVE DUST CONTROL DURING CONSTRUCTION ACTIVITIES

OPERATING PROCEDURES

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

Plant Roadways and Parking Areas

Vehicular traffic areas are all paved and are periodically wetted down by an eleven (11) zone automatic sprinkler system. Each zone is setup with a timer and control valve that cycles the zone on several times a day. The timers are electronic programmable timers in lockable cases. Sprinkler operation will be noted on the Sprinkler Operation Log form on a daily basis. A copy of the form is included as Attachment 1. The sprinkler zones, approximate number of sprinkler heads, and on and off times are as follows:

<u>Zone</u>	<u>Location</u>	<u># Sprinklers</u>	<u>On/Off Time</u>
1	North Parking Lot Fence	11	3 Min./12 Min.
2	Maintenance Shop and Fuel	3	3 Min./12 Min.
3	Pig Warehouse and N.E. Comer of Furnace	3	3 Min./12 Min.
4	Furnace Baghouses	4	3 Min./12 Min.
5	S.E. Wall Section	9	3 Min./12 Min.
6	S.W. Wall Section	15	3 Min./12 Min.
7	Wastewater Treatment Plant	4	3 Min./12 Min.
8	West Pavement Perimeter	7	3 Min./12 Min.
9	Northwest Pavement Perimeter	4	3 Min./12 Min.
10	Refining Area & Refining Warehouse	4	3 Min./12 Min.
11	Hygiene Building & Covered Parking	6	3 Min./12 Min.

The sprinklers cycle according to the following table. After the first fifteen minutes at least two zones will be on at all times.

ZONE 1--3 minutes			
ZONE 2--3 minutes			
ZONE 3--3 minutes			
ZONE 4--3 minutes			
ZONE 45--3 minutes			
ZONE 6--3 minutes	ZONE 1--3 minutes		
ZONE 7--3 minutes	ZONE 2--3 minutes		
ZONE 8--3 minutes	ZONE 3--3 minutes		
ZONE 9--3 minutes	ZONE 4--3 minutes		
ZONE 10--3 minutes	ZONE 5--3 minutes		
ZONE 11--3 minutes	ZONE 6--3 minutes	ZONE 1--3 minutes	
	ZONE 7--3 minutes	ZONE 2--3 minutes	
	ZONE 8--3 minutes	ZONE 3--3 minutes	
	ZONE 9--3 minutes	ZONE 4--3 minutes	
	ZONE 10--3 minutes	ZONE 5--3 minutes	

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STANDARD OPERATING PROCEDURES FOR FUGITIVE DUST CONTROL DURING CONSTRUCTION ACTIVITIES

	ZONE 11--3 minutes	ZONE 6--3 minutes	ZONE 1--3 minutes
		ZONE 7--3 minutes	ZONE 2--3 minutes
		ZONE 8--3 minutes	ZONE 3--3 minutes
		ZONE 9--3 minutes	ZONE 4--3 minutes
		ZONE 10--3 minutes	ZONE 5--3 minutes
		ZONE 11--3 minutes	ZONE 6--3 minutes

Traffic paths shall be vacuumed three (3) times each day with a Tennant, or equivalent, vacuum sweeper, except when rain occurs or when areas are sufficiently wetted by the pavement sprinkler system. The employee parking lots will be vacuumed a minimum of three (3) times each week, unless prohibited by prolonged periods of rainfall. Records of the areas swept shall be included in documentation of sweeper operation. Sweeper operation will be noted on the Sweeper Operation Log form. Copies of the form are included as Attachment 2.

Battery Breaking Area

Partial walls surround this area on three (3) sides. The walls extend down from the roofline to approximately ten (10) feet from the top of the curbing that is around the entire floor area. Approximately three quarters of the east wall (the fourth wall) is directly adjacent to the west wall of the Materials Storage and Handling Area that provides a wall from the roof to the floor. Any wash-down water or process water from the operation gravity flows to a collection sump on the north side of the building. Water collected in the sump is pumped to the on-site wastewater treatment plant for treatment. The battery breaking area is washed down at least two times each day. The directed wash-down is noted on the daily operation log form and signed by the operator. A copy of the form is included as Attachment 3. Equipment leaving the roofed area are pressure washed or washed.

Blast Furnace Area

The Blast Furnace Area is partially enclosed with walls on the south, east and west sides that extend down from the roof to approximately fourteen (14') feet from the floor. The furnace is bordered on the south by the baghouses that are walled in and is bordered on the west (approximately 30 feet away) by the Materials Storage and Handling Area building. The furnace work area is washed/hosed down at least two times each day. Each wash-down will be noted on a shift operation form and signed by the operator. A copy of the form is included as Attachment 4. The wash-down water in the furnace area gravity flows to one of two floor sumps. The sumps are located on the east and west sides of the Blast Furnace Area. Water collected in these sumps will be pumped to the wastewater treatment plant for treatment. Equipment leaving the roofed area are pressure washed or washed.

Enclosures and hoods that are vented to a baghouse control potential process fugitive emissions in the blast furnace operation. The blast furnace slag tapping enclosure, the lead tapping hood and the blast furnace charging enclosure are vented to the furnace hygiene baghouse. Dust from the baghouses is conveyed via covered screws to a tank where it is weighed, slurried with water, and pumped to a reactor in the battery breaking area for desulfurization. The openings or faces of these hoods and enclosures meet the MACT face velocity requirements when access doors are in their normal operating position.

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STANDARD OPERATING PROCEDURES FOR FUGITIVE DUST CONTROL DURING CONSTRUCTION ACTIVITIES

Refining and Casting Area

The Refining and Casting Area is also partially enclosed. The work area is washed/hosed down at least two (2) times each day. Each wash-down is noted on the daily operation form and signed by the operator. A copy of the form is included as Attachment 5. Wash-down water in the refining area is collected in a floor sump and pumped to the wastewater treatment plant for treatment. Equipment leaving the roofed area are pressure washed or washed.

Potential process fugitive emissions in the Refining and Casting Area are controlled by hoods over each of the four refining kettles and by enclosures for the dross receptacles. The hoods and enclosures are vented to a baghouse. The kettle hoods meet the MACT face velocity requirements when the access doors are in their normal operating position.

Molten lead is pumped from the kettles to one of two casting machines. A pre-set amount of lead is delivered to the pig molds through a star ladle at the front end of the casting machines. The star ladles are kept hot by a gas flame. A hood is provided over each star ladle to capture potential emissions. The face of the hood meets the MACT face velocity requirement.

Materials Storage and Handling Area (Group Pile)

The Materials Storage and Handling Area has walls from the roof to the floor on a four sides. There is an approximately 24' x 14' equipment access opening on the west side of the area. There is an approximately 12' x 13' loading/unloading ramp access opening on the north side of the area. Accumulated water in this area gravity flows to one of two floor sumps. There is a collection sump on the east wall near the southeast corner of the area and one sump on the north side of the area. Water collected in the sumps is pumped to the wastewater treatment plant for treatment. The pathways within this area will be wetted down as needed to prevent the generation of dust. The materials stored in this area are washed and wetted prior to storage and will remain moist even after long-term storage. Additional wetting of the stored material will be provided, if necessary, to prevent the generation of dust; however, it is not anticipated that additional wetting will be necessary.

The main entrance/exit to the Materials Storage and Handling Area is under a contiguous roof that provides covered access for equipment moving between the materials storage and handling, blast furnace, and refining areas. Forklifts and front-end loaders leaving the roofed area are pressure washed or washed. The form used to document the washing of the equipment is included as Attachment 6.

Unpaved Outside Areas

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

SECTION IV. APPENDIX FDCO

STANDARD OPERATING PROCEDURES FOR FUGITIVE DUST CONTROL DURING OPERATIONAL ACTIVITIES

INTRODUCTION

EnviroFocus Technologies, LLC (EFT), formerly Gulf Coast Recycling, Inc. (GRC), is a secondary lead smelter. The facility applied for a PSD construction permit on August 7, 2008 to expand the capacity of the plant. As part of the PSD permit application process, EFT is required to enclosing all process operations, such as battery breaking, material drying, material handling, smelting, refining, and casting and to direct the ventilation from these areas through air pollution control devices. Additionally, EFT is required to control fugitive emissions from paved and unpaved surfaces at the site. These procedures describe these sources of fugitive emissions and the controls that shall be employed upon completion of the expansion project.

OPERATING PROCEDURES

Plant Roadways and Parking Areas

Vehicular traffic areas will be paved and periodically wetted down by an eight (8) zone automatic sprinkler system (see drawing and end of appendix). The system will be controlled by a time that cycles the zones on several times a day. The timer will be an electronic programmable timer in a lockable case. Sprinkler operation will be noted on a Sprinkler Operation Log form on a daily basis. The sprinkler timer will operate on the following schedule, except when rain occurs:

Day Time (9AM to 7PM)

May through September

Each zone shall run 3.75 minutes per cycle and run two 30-minute cycles per hour (continuous)

November through April

Each zone shall run 3.75 minutes per cycle for one 30-minute cycle per hour

Night Time (7PM to 9AM)

May through September

Each zone shall run 3.75 minutes per cycle for one 30-minute cycle per hour

November through April

Each zone shall run 3.75 minutes per cycle for one 30-minute cycle every other hour

In addition to wetting, traffic paths shall be shall be vacuumed three (3) times each day with a Tennant, or equivalent, vacuum sweeper, except when rain occurs or when areas are sufficiently wetted by the pavement sprinkler system. Employee parking lots will be vacuumed a minimum of three (3) times each week, unless prohibited by prolonged periods of rainfall. Records of the areas swept shall be included in documentation of sweeper operation. Sweeper operation will be noted on a Sweeper Operation Log form.

Finally, vehicle wash stations will be installed in the process area enclosure at locations adjacent to building openings through which vehicles may exit the process area (see attached drawing). Dust and accumulated materials will be removed from the wheels and underside of all vehicles at the vehicle wash stations to prevent the transfer of lead contaminated material to another area of the smelter or to the paved surfaces outside the enclosure. Each wash down will be noted on a Vehicle Wash Log form.

Unpaved Outside Areas

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

SECTION IV. APPENDIX GC

GENERAL CONDITIONS

The permittee shall comply with the following general conditions from Rule 62-4.160, F.A.C.

1. The terms, conditions, requirements, limitations, and restrictions set forth in this permit are "Permit Conditions" and are binding and enforceable pursuant to Sections 403.161, 403.727, or 403.859 through 403.861, Florida Statutes. The permittee is placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of these conditions.
2. This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.
3. As provided in Subsections 403.087(6) and 403.722(5), Florida Statutes, the issuance of this permit does not convey and vested rights or any exclusive privileges. Neither does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations. This permit is not a waiver or approval of any other Department permit that may be required for other aspects of the total project which are not addressed in the permit.
4. This permit conveys no title to land or water, does not constitute State recognition or acknowledgment of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the State. Only the Trustees of the Internal Improvement Trust Fund may express State opinion as to title.
5. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, or plant life, or property caused by the construction or operation of this permitted source, or from penalties therefore; nor does it allow the permittee to cause pollution in contravention of Florida Statutes and Department rules, unless specifically authorized by an order from the Department.
6. The permittee shall properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed or used by the permittee to achieve compliance with the conditions of this permit, as required by Department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by Department rules.
7. The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, upon presentation of credentials or other documents as may be required by law and at a reasonable time, access to the premises, where the permitted activity is located or conducted to:
 - a. Have access to and copy and records that must be kept under the conditions of the permit;
 - b. Inspect the facility, equipment, practices, or operations regulated or required under this permit, and,
 - c. Sample or monitor any substances or parameters at any location reasonably necessary to assure compliance with this permit or Department rules.

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

8. If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately provide the Department with the following information:
 - a. A description of and cause of non-compliance; and
 - b. The period of noncompliance, including dates and times; or, if not corrected, the anticipated time the non-compliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the non-compliance.

SECTION IV. APPENDIX GC

GENERAL CONDITIONS

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

9. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source which are submitted to the Department may be used by the Department as evidence in any enforcement case involving the permitted source arising under the Florida Statutes or Department rules, except where such use is prescribed by Sections 403.73 and 403.111, Florida Statutes. Such evidence shall only be used to the extent it is consistent with the Florida Rules of Civil Procedure and appropriate evidentiary rules.
10. The permittee agrees to comply with changes in Department rules and Florida Statutes after a reasonable time for compliance, provided, however, the permittee does not waive any other rights granted by Florida Statutes or Department rules.
11. This permit is transferable only upon Department approval in accordance with Florida Administrative Code Rules 62-4.120 and 62-730.300, F.A.C., as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the Department.
12. This permit or a copy thereof shall be kept at the work site of the permitted activity.
13. This permit also constitutes:
 - a. Determination of Best Available Control Technology (X);
 - b. Determination of Prevention of Significant Deterioration (X);
 - c. Compliance with National Emission Standards for Hazardous Air Pollutants (X); and
 - d. Compliance with New Source Performance Standards (X).
14. The permittee shall comply with the following:
 - a. Upon request, the permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records will be extended automatically unless otherwise stipulated by the Department.
 - b. The permittee shall hold at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation) required by the permit, copies of all reports required by this permit, and records of all data used to complete the application or this permit. These materials shall be retained at least three years from the date of the sample, measurement, report, or application unless otherwise specified by Department rule.
 - c. Records of monitoring information shall include:
 - 1) The date, exact place, and time of sampling or measurements;
 - 2) The person responsible for performing the sampling or measurements;
 - 3) The dates analyses were performed;
 - 4) The person responsible for performing the analyses;
 - 5) The analytical techniques or methods used; and
 - 6) The results of such analyses.
15. When requested by the Department, the permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the permittee becomes aware that relevant facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be corrected promptly.

SECTION IV. APPENDIX GP

NSPS SUBPART A AND NESHAP SUBPART A - IDENTIFICATION OF GENERAL PROVISIONS

NSPS - SUBPART A, IDENTIFICATION OF GENERAL PROVISIONS

The provisions of this Subpart may be provided in full upon request. Emissions units subject to a New Source Performance Standard of 40 CFR 60 are also subject to the applicable requirements of Subpart A, the General Provisions, including:

- § 60.1 Applicability.
- § 60.2 Definitions.
- § 60.3 Units and abbreviations.
- § 60.4 Address.
- § 60.5 Determination of construction or modification.
- § 60.6 Review of plans.
- § 60.7 Notification and Record Keeping.
- § 60.8 Performance Tests.
- § 60.9 Availability of information.
- § 60.10 State Authority.
- § 60.11 Compliance with Standards and Maintenance Requirements.
- § 60.12 Circumvention.
- § 60.13 Monitoring Requirements.
- § 60.14 Modification.
- § 60.15 Reconstruction.
- § 60.16 Priority List.
- § 60.17 Incorporations by Reference.
- § 60.18 General Control Device Requirements.
- § 60.19 General Notification and Reporting Requirements.

Individual subparts may exempt specific equipment or processes from some or all of these requirements. The general provisions may be provided in full upon request.

NESHAP - SUBPART A, IDENTIFICATION OF GENERAL PROVISIONS

The provisions of this Subpart may be provided in full upon request. Emissions units subject to a National Emission Standards for Hazardous Air Pollutants of 40 CFR 63 are also subject to the applicable requirements of Subpart A, the General Provisions, including:

- § 63.1 Applicability.
- § 63.2 Definitions.
- § 63.3 Units and abbreviations.
- § 63.4 Prohibited Activities and Circumvention.
- § 63.5 Preconstruction Review and Notification Requirements.
- § 63.6 Compliance with Standards and Maintenance Requirements.

SECTION IV. APPENDIX GP

NSPS SUBPART A AND NESHAP SUBPART A - IDENTIFICATION OF GENERAL PROVISIONS

§ 63.7 Performance Testing Requirements.

§ 63.8 Monitoring Requirements.

§ 63.9 Notification Requirements.

§ 63.10 Recordkeeping and Reporting Requirements.

§ 63.11 Control Device Requirements.

§ 63.12 State Authority and Delegations.

§ 63.13 Addresses of State Air Pollution Control Agencies and EPA Regional Offices.

§ 63.14 Incorporation by Reference.

§ 63.15 Availability of Information and Confidentiality.

Individual subparts may exempt specific equipment or processes from some or all of these requirements. The general provisions may be provided in full upon request.

SECTION IV. APPENDIX III

NSPS, SUBPART III - STATIONARY COMPRESSION IGNITION INTERNAL COMBUSTION ENGINES

A nominal 500 kW emergency generator (EU ID 026) is proposed for the EFT facility and is subject to the applicable requirements of 40 CFR 60, Subpart III--Standards of Performance for Stationary Compression Ignition Internal Combustion Engines. The provisions of this Subpart may be provided in full upon request and are also available at the following link:

[Link to Subpart III](#)

SECTION IV. APPENDIX L
NSPS, SUBPART L - SECONDARY LEAD SMELTERS

The blast furnace (EU ID 001) and reverb furnace (EU ID 023) located at the EFT facility are subject to all applicable provisions of 40 CFR 60, Subpart L -- Standards of Performance for Secondary Lead Smelters. The provisions of this Subpart are given below in their entirety:

§ 60.120 Applicability and designation of affected facility.

- (a) The provisions of this subpart are applicable to the following affected facilities in secondary lead smelters: Pot furnaces of more than 250 kg (550 lb) charging capacity, blast (cupola) furnaces, and reverberatory furnaces.
- (b) Any facility under paragraph (a) of this section that commences construction or modification after June 11, 1973, is subject to the requirements of this subpart.

[42 FR 37937, July 25, 1977]

§ 60.121 Definitions.

As used in this subpart, all terms not defined herein shall have the meaning given them in the Act and in subpart A of this part.

- (a) *Reverberatory furnace* includes the following types of reverberatory furnaces: stationary, rotating, rocking, and tilting.
- (b) *Secondary lead smelter* means any facility producing lead from a lead bearing scrap material by smelting to the metallic form.
- (c) *Lead* means elemental lead or alloys in which the predominant component is lead.
- (d) *Blast furnace* means any furnace used to recover metal from slag.

[39 FR 9317, Mar. 8, 1974; 39 FR 13776, Apr. 17, 1974, as amended at 65 FR 61756, Oct. 17, 2000]

§ 60.122 Standard for particulate matter.

- (a) On and after the date on which the performance test required to be conducted by §60.8 is completed, no owner or operator subject to the provisions of this subpart shall discharge or cause the discharge into the atmosphere from a blast (cupola) or reverberatory furnace any gases which:
 - (1) Contain particulate matter in excess of 50 mg/dscm (0.022 gr/dscf).
 - (2) Exhibit 20 percent opacity or greater.
- (b) On and after the date on which the performance test required to be conducted by §60.8 is completed, no owner or operator subject to the provisions of this subpart shall discharge or cause the discharge into the atmosphere from any pot furnace any gases which exhibit 10 percent opacity or greater.

[39 FR 9317, Mar. 8, 1974, as amended at 40 FR 46259, Oct. 6, 1975]

§ 60.123 Test methods and procedures.

- (a) In conducting the performance tests required in §60.8, the owner or operator shall use as reference methods and procedures the test methods in appendix A of this part or other methods and procedures as specified in this section, except as provided in §60.8(b).
- (b) The owner or operator shall determine compliance with the particulate matter standards in §60.122 as follows:
 - (1) Method 5 shall be used to determine the particulate matter concentration during representative periods of furnace operation, including charging and tapping. The sampling time and sample volume for each run shall be at least 60 minutes and 0.90 dscm (31.8 dscf).
 - (2) Method 9 and the procedures in §60.11 shall be used to determine opacity.

SECTION IV. APPENDIX ZZZZ

NESHAP SUBPART ZZZZ - STATIONARY RECIPROCATING INTERNAL COMBUSTION ENGINES

A nominal 500 kW emergency generator (EU ID 026) is proposed for the EFT facility is a reciprocating internal combustion engine (RICE) and is subject to the requirements of 40 CFR 63, Subpart ZZZZ--National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines.

The complete provisions of Subpart ZZZZ may be provided in full upon request and are also available beginning at Section 63.6580 at:

[Link to Subpart ZZZZ](#)

SECTION IV. APPENDIX X

NESHAP, SUBPART X—SECONDARY LEAD SMELTERS

The blast furnace (EU ID 001) , facility grounds and roads (EU ID 009), process fugitive emissions from the refining kettles and tapping and charging of the furnaces (EU ID 011), the kettle combustors (EU ID 013), building ventilation (EU ID 015), the battery breaking area (EU ID 021), the feed dryer (EU ID 022) and the reverb furnace (EU ID 023) located at the EFT facility are subject to all applicable provisions of 40 CFR 63, Subpart X - National Emission Standards for Hazardous Air Pollutants from Secondary Lead Smelting.

[Link to Subpart X](#)

The applicable provisions of 40 CFR 63, Subpart X are given below.

Title 40: Protection of Environment, Part 63, Subpart X—National Emission Standards for Hazardous Air Pollutants from Secondary Lead Smelting

Source: 62 FR 32216, June 13, 1997, unless otherwise noted.

§ 63.541 Applicability.

- (a) The provisions of this subpart apply to the following affected sources at all secondary lead smelters: blast, reverberatory, rotary, and electric smelting furnaces; refining kettles; agglomerating furnaces; dryers; process fugitive sources; and fugitive dust sources. The provisions of this subpart do not apply to primary lead smelters, lead refiners, or lead remelters.
- (b) Table 1 of this subpart specifies the provisions of subpart A that apply and those that do not apply to owners and operators of secondary lead smelters subject to this subpart.

Table 1—General Provisions Applicability to Subpart X

Reference	Applies to subpart X	Comment
63.1	Yes	
63.2	Yes	
63.3	Yes	
63.4	Yes	
63.5	Yes	
63.6 (a), (b), (c), (e), (f), (g), (i) and (j)	Yes	
63.6 (d) and (h)	No	No opacity limits in rule.
63.7	Yes	
63.8	Yes	
63.9 (a), (b), (c), (d), (e), (g), (h)(1–3), (h)(5–6), and (j)	Yes	
63.9 (f) and (h)(4)	No	No opacity or visible emission limits in subpart X.
63.10	Yes	
63.11	No	Flares will not be used to comply with the emission limits.
63.12 to 63.15	Yes	

(c) [Condition already satisfied]

SECTION IV. APPENDIX X
NESHAP, SUBPART X –SECONDARY LEAD SMELTERS

§ 63.542 Definitions.

Terms used in this subpart are defined in the Act, in subpart A of this part, or in this section as follows:

Bag leak detection system means an instrument that is capable of monitoring particulate matter (dust) loadings in the exhaust of a baghouse in order to detect bag failures. A bag leak detection system includes, but is not limited to, an instrument that operates on triboelectric, light scattering, transmittance or other effect to monitor relative particulate matter loadings.

Battery breaking area means the plant location at which lead-acid batteries are broken, crushed, or disassembled and separated into components.

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

Blast furnace charging location means the physical opening through which raw materials are introduced into a blast furnace.

Collocated blast furnace and reverberatory furnace 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.

Dryer means a chamber that is heated and that is used to remove moisture from lead-bearing materials before they are charged to a smelting furnace.

Dryer transition piece means the junction between a dryer and the charge hopper or conveyor, or the junction between the dryer and the smelting furnace feed chute or hopper located at the ends of the dryer.

Enclosure hood means a hood that covers a process fugitive emission source on the top and on all sides, with openings only for access to introduce or remove materials to or from the source and through which an induced flow of air is ventilated.

Fugitive dust source means a stationary source of hazardous air pollutant emissions at a secondary lead smelter that is not associated with a specific process or process fugitive vent or stack. Fugitive dust sources include, but are not limited to, roadways, storage piles, materials handling transfer points, materials transport areas, storage areas, process areas, and buildings.

Furnace and refining/casting area means any area of a secondary lead smelter in which:

- (1) Smelting furnaces are located; or
- (2) Refining operations occur; or
- (3) Casting operations occur.

High efficiency particulate air (HEPA) filter means a filter that has been certified by the manufacturer to remove 99.97 percent of all particles 0.3 micrometers and larger.

Lead alloy means an alloy in which the predominant component is lead.

Materials storage and handling area means any area of a secondary lead smelter in which lead-bearing materials (including, but not limited to, broken battery components, reverberatory 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. Materials storage and handling area does not include areas used exclusively for storage of blast furnace slag.

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Partial enclosure means a structure comprised of walls or partitions on at least three sides or three-quarters of the perimeter surrounding stored materials or process equipment to prevent the entrainment of particulate matter into the air.

Pavement cleaning means the use of vacuum equipment, water sprays, or a combination thereof to remove dust or other accumulated material from the paved areas of a secondary lead smelter.

Plant roadway means any area of a secondary lead smelter that is subject to vehicle traffic, including traffic by forklifts, front-end loaders, or vehicles carrying whole batteries or cast lead ingots. Excluded from this definition are employee and visitor parking areas, provided they are not subject to traffic by vehicles carrying lead-bearing materials.

Pressurized dryer breaching seal means a seal system connecting the dryer transition pieces which is maintained at a higher pressure than the inside of the dryer.

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

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

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

Secondary lead smelter means any facility at which lead-bearing scrap material, primarily, but not limited to, lead-acid batteries, is recycled into elemental lead or lead alloys by 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, reverberatory furnaces, rotary furnaces, and electric furnaces.

Total enclosure means a roofed and walled structure with limited openings to allow access and egress for people and vehicles that meets the requirements of 40 CFR 265.1101(a)(1), (a)(2)(i), and (c)(1)(i).

Vehicle wash means a device for removing dust and other accumulated material from the wheels, body, and underside of a vehicle to prevent the inadvertent transfer of lead contaminated material to another area of a secondary lead smelter or to public roadways.

Wet suppression means the use of water, water combined with a chemical surfactant, or a chemical binding agent to prevent the entrainment of dust into the air from fugitive dust sources.

[62 FR 32216, June 13, 1997, as amended at 63 FR 45011, Aug. 24, 1998]

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§ 63.543 Standards for process sources.

- (a) No owner or operator of a secondary lead smelter shall discharge or cause to be discharged into the atmosphere from any existing, new, or reconstructed blast, reverberatory, rotary, or electric smelting furnace any gases that contain lead compounds in excess of 2.0 milligrams of lead per dry standard cubic meter (mg/dscm).
- (b) [Reserved]
- (c) No owner or operator of a secondary lead smelter with a collocated blast furnace and reverberatory furnace shall discharge or cause to be discharged into the atmosphere from any existing, new, or reconstructed blast furnace or reverberatory furnace any gases that contain total hydrocarbons in excess of 20 parts per million by volume, expressed as propane corrected to 4 percent carbon dioxide (ppmvd as propane @4% CO₂), except as allowed under Paragraphs (c)(1) and (c)(2) of this section.
- (d) No owner or operator of a secondary lead smelter with a collocated blast furnace and reverberatory furnace shall discharge or cause to be discharged into the atmosphere from any existing blast furnace any gases that contain total hydrocarbons in excess of 360 ppmvd as propane @4% CO₂, during periods when the reverberatory furnace is not operating.
 - (1) No owner or operator of a secondary lead smelter with a collocated blast furnace and reverberatory furnace shall discharge or cause to be discharged into the atmosphere from any blast furnace that commences construction or reconstruction after June 9, 1994, any gases that contain total hydrocarbons in excess of 70 ppmvd as propane @4% CO₂, during periods when the reverberatory furnace is not operating.
- (e) [Not applicable]
- (f) [Not applicable]
- (g) [Not applicable]
- (h) If the owner or operator of a blast furnace or a collocated blast furnace and reverberatory furnace does not combine the blast furnace charging process fugitive emissions with the blast furnace process emissions and discharges such emissions to the atmosphere through separate emission points, then exhaust shall not contain total hydrocarbons in excess of 20 parts per million by volume, expressed as propane.
- (i) Except as provided in paragraph (i) of this section, following the initial test to demonstrate compliance with paragraph (a) of this section, the owner or operator of a secondary lead smelter shall conduct a compliance test for lead compounds on an annual basis (no later than 12 calendar months following the previous compliance test).
- (j) [Not applicable]
- (k) The standards for process sources are summarized in table 2.

Table 2—Summary of Standards for Process Sources Collocated blast furnace and reverberatory furnace:

Furnace configuration	Lead compounds (mg/dscm)	Total hydrocarbons	Citation
When both furnaces operating	2.0	20 ppmvd ¹	§63.543(a),(c).
When reverberatory furnace not operating	2.0	360 ppmvd ¹ (existing)	§63.543(a),(c)(1).
		70 ppmvd ¹ (new) ²	§63.543(a),(c)(2).

¹Total hydrocarbons emission limits are as propane at 4 percent carbon dioxide to correct for dilution, based on a 3-hour average.

²New sources include those furnaces that commence construction or reconstruction after June 9, 1994.

§ 63.544 Standards for process fugitive sources.

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- (a) Each owner or operator of a secondary lead smelter shall control the process fugitive emission sources listed in paragraphs (a)(1) through (a)(6) of this section in accordance with the equipment and operational standards presented in paragraphs (b) and (c) of this section.
 - (1) Smelting furnace and dryer charging hoppers, chutes, and skip hoists;
 - (2) Smelting furnace lead taps, and molds during tapping;
 - (3) Smelting furnace slag taps, and molds during tapping;
 - (4) Refining kettles;
 - (5) Dryer transition pieces; and
 - (6) [Not applicable]
- (b) Process fugitive emission sources shall be equipped with an enclosure hood meeting the requirements of paragraphs (b)(1), (b)(2), or (b)(3) of this section, or be located in a total enclosure subject to general ventilation that maintains the building at a lower than ambient pressure to ensure in-draft through any doorway opening.
 - (1) All process fugitive enclosure hoods except those specified for refining kettles and dryer transition pieces shall be ventilated to maintain a face velocity of at least 300 feet per minute (fpm) at all hood openings.
 - (2) Process fugitive enclosure hoods required for refining kettles in paragraph (a) of this section shall be ventilated to maintain a face velocity of at least 250 fpm.
 - (3) Process fugitive enclosure hoods required over dryer transition pieces in paragraph (a) of this section shall be ventilated to maintain a face velocity of at least 350 fpm.
- (c) Ventilation air from all enclosure hoods and total enclosures shall be conveyed to a control device. Gases discharged to the atmosphere from these control devices shall not contain lead compounds in excess of 2.0 mg/dscm.
- (d) All dryer emission vents shall be ventilated to a control device that shall not discharge to the atmosphere any gases that contain lead compounds in excess of 2.0 mg/dscm.
- (e) Following the date of the initial test to demonstrate compliance with paragraphs (c) and (d) of this section, the owner or operator of a secondary lead smelter shall conduct a compliance test for lead compounds on an annual basis (no later than 12 calendar months following the previous compliance test).
- (f) [Not applicable]
- (g) [Not applicable]
- (h) The standards for process fugitive sources are summarized in table 3.

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Table 3—Summary of Standards for Process Fugitive Sources

Fugitive emission source	Control device lead compound emission limit (mg/dscm)	Enclosed hood or doorway face velocity (fpm)	Citation
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).
Agglomerating furnace process vents and product taps	2.0	300 ¹	§63.544 (b), (c).
Control Option II			
Enclosed building ventilated to a control device	2.0		§63.544 (b), (c).
Applicable to Both Control Options			
Dryer and agglomerating furnace emission vents	2.0		§63.544(d).

¹Enclosure hood face velocity applicable to those process fugitive sources not located in an enclosed building ventilated to a control device.

[62 FR 32216, June 13, 1997, as amended at 63 FR 45011, Aug. 24, 1998]

§ 63.545 Standards for fugitive dust sources.

- (a) Each owner or operator of a secondary lead smelter shall prepare and at all times operate according to a standard operating procedures manual that describes in detail the measures that will be put in place to control fugitive dust emission sources within the areas of the secondary lead smelter listed in paragraphs (a)(1) through (a)(5) of this section.
 - (1) Plant roadways;
 - (2) Battery breaking area;
 - (3) Furnace area;
 - (4) Refining and casting area; and
 - (5) Materials storage and handling area.
- (b) The standard operating procedures manual shall be submitted to the Administrator or delegated authority for review and approval.

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- (c) The controls specified in the standard operating procedures manual shall at a minimum include the requirements of paragraphs (c)(1) through (c)(5) of this section, unless the owner or operator satisfies the requirements in paragraph (f) of this section.
 - (1) Plant roadways—paving of all areas subject to vehicle traffic and pavement cleaning twice per day of those areas, except on days when natural precipitation makes cleaning unnecessary or when sand or a similar material has been spread on plant roadways to provide traction on ice or snow.
 - (2) Battery breaking area—total enclosure of the battery breaking area.
 - (3) Furnace area—total enclosure and ventilation of the enclosure to a control device.
 - (4) Refining and casting area—total enclosure and ventilation of the enclosure to a control device.
 - (5) Materials storage and handling area—total enclosure of the area and ventilation of the enclosure to a control device, and a vehicle wash at each exit.
- (d) The standard operating procedures manual shall require that daily records be maintained of all wet suppression, pavement cleaning, and vehicle washing activities performed to control fugitive dust emissions.
- (e) No owner or operator of a secondary lead smelter shall discharge or cause to be discharged into the atmosphere from any building or enclosure ventilation system any gases that contain lead compounds in excess of 2.0 mg/dscm.
- (f) [Not applicable]

[62 FR 32216, June 13, 1997, as amended at 68 FR 37350, June 23, 2003]

§ 63.546 Compliance dates.

- (a) Each owner or operator of an existing secondary lead smelter shall achieve compliance with the requirements of this subpart no later than December 23, 1997. Existing sources wishing to apply for an extension of compliance pursuant to section §63.6(i) of this part must do so no later than June 23, 1997.
- (b) Each owner or operator of a secondary lead smelter that commences construction or reconstruction after June 9, 1994, shall achieve compliance with the requirements of this subpart by June 13, 1997 or upon startup of operations, whichever is later.

[62 FR 32216, June 13, 1997, as amended at 64 FR 4572, Jan. 29, 1999]

§ 63.547 Test methods.

- (a) The following test methods in appendix A of part 60 listed in paragraphs (a)(1) through (a)(5) of this section shall be used to determine compliance with the emission standards for lead compounds under §§ 63.543(a), 63.544 (c), and (d), and 63.545(e):
 - (1) Method 1 shall be used to select the sampling port location and the number of traverse points.
 - (2) Method 2 shall be used to measure volumetric flow rate.
 - (3) Method 3 shall be used for gas analysis to determine the dry molecular weight of the stack gas.
 - (4) Method 4 shall be used to determine moisture content of the stack gas.
 - (5) Method 12 shall be used to determine compliance with the lead compound emission standards. The minimum sample volume shall be 0.85 dry standard cubic meters (30 dry standard cubic feet) and the minimum sampling time shall be 60 minutes for each run. Three runs shall be performed and the average of the three runs shall be used to determine compliance.

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- (b) The following tests methods in appendix A of part 60 listed in paragraphs (b)(1) through (b)(4) of this section shall be used, as specified, to determine compliance with the emission standards for total hydrocarbons §63.543(c), (d), (e), and (g).
- (1) Method 1 shall be used to select the sampling port location to determine compliance under §63.543(c), (d), (e), and (g).
 - (2) The Single Point Integrated Sampling and Analytical Procedure of Method 3B shall be used to measure the carbon dioxide content of the stack gases to determine compliance under §63.543(c), (d), and (e).
 - (3) Method 4 shall be used to measure moisture content of the stack gases to determine compliance under §63.543(c), (d), (e), and (g).
 - (4) Method 25A shall be used to measure total hydrocarbon emissions to determine compliance under §63.543(c), (d), (e), and (g). The minimum sampling time shall be 1 hour for each run. A minimum of three runs shall be performed. A 1-hour average total hydrocarbon concentration shall be determined for each run and the average of the three 1-hour averages shall be used to determine compliance. The total hydrocarbon emissions concentrations for determining compliance under §63.543(c), (d), and (e) shall be expressed as propane and shall be corrected to 4 percent carbon dioxide, as described in paragraph (c) of this section.
- (c) For the purposes of determining compliance with the emission limits under §63.543 (c), (d), and (e), the measured total hydrocarbon concentrations shall be corrected to 4 percent carbon dioxide as listed in paragraphs (c)(1) through (c)(2) of this section in the following manner:
- (1) If the measured percent carbon dioxide is greater than 0.4 percent in each compliance test, the correction factor shall be determined by using equation (1).

$$F = \frac{4.0}{CO_2} \quad (1)$$

where:

F = correction factor (no units)

CO₂= percent carbon dioxide measured using Method 3B, where the measured carbon dioxide is greater than 0.4 percent.

- (2) If the measured percent carbon dioxide is equal to or less than 0.4 percent, then a correction factor (F) of 10 shall be used.
 - (3) The corrected total hydrocarbon concentration shall be determined by multiplying the measured total hydrocarbon concentration by the correction factor (F) determined for each compliance test.
- (d) Compliance with the face velocity requirements under §63.544(b) for process fugitive enclosure hoods shall be determined by the following test methods in paragraphs (d)(1) or (d)(2) of this section.
- (1) Owners and operators shall calculate face velocity using the procedures in paragraphs (d)(1)(i) through (d)(1)(iv) of this section.
 - (i) Method 1 shall be used to select the sampling port location in the duct leading from the process fugitive enclosure hood to the control device.
 - (ii) Method 2 shall be used to measure the volumetric flow rate in the duct from the process fugitive enclosure hood to the control device.

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- (iii) The face area of the hood shall be determined from measurement of the hood. If the hood has access doors, then face area shall be determined with the access doors in the position they are in during normal operating conditions.
- (iv) Face velocity shall be determined by dividing the volumetric flow rate determined in paragraph (d)(1)(ii) of this section by the total face area for the hood determined in paragraph (d)(1)(iii) of this section.
- (2) The face velocity shall be measured directly using the procedures in paragraphs (d)(2)(i) through (d)(2)(v) of this section.
 - (i) A propeller anemometer or equivalent device shall be used to measure hood face velocity.
 - (ii) The propeller of the anemometer shall be made of a material of uniform density and shall be properly balanced to optimize performance.
 - (iii) The measurement range of the anemometer shall extend to at least 1,000 fpm.
 - (iv) A known relationship shall exist between the anemometer signal output and air velocity, and the anemometer must be equipped with a suitable readout system.
 - (v) Hood face velocity shall be determined for each hood open during normal operation by placing the anemometer in the plane of the hood opening. Access doors shall be positioned consistent with normal operation.
- (e) Owners and operators shall determine compliance with the doorway in-draft requirement for enclosed buildings in §63.544(b) using the procedures in paragraphs (e)(1) or (e)(2) of this section.
 - (1)
 - (i) Owners and operators shall use a propeller anemometer or equivalent device meeting the requirements of paragraphs (d)(2)(ii) through (d)(2)(iv) of this section.
 - (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 with all remaining doorways in the position they are in during normal operation.
 - (2)
 - (i) Owners and operators shall install a differential pressure gage on the leeward wall of the building to measure the pressure difference between the inside and outside of the building.
 - (ii) The pressure gage shall be certified by the manufacturer to be capable of measuring pressure differential in the range of 0.02 to 0.2 millimeters of mercury (mm Hg).
 - (iii) Both the inside and outside taps shall be shielded to reduce the effects of wind.
 - (iv) Owners and operators 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.

[62 FR 32216, June 13, 1997, as amended at 63 FR 45011, Aug. 24, 1998]

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§ 63.548 Monitoring requirements.

- (a) Owners and operators of secondary lead smelters shall prepare, and at all times operate according to, a standard operating procedures manual that describes in detail procedures for inspection, maintenance, and bag leak detection and corrective action plans for all baghouses (fabric filters) that are used to control process, process fugitive, or fugitive dust emissions from any source subject to the lead emission standards in §§63.543, 63.544, and 63.545, including those used to control emissions from building ventilation. This provision shall not apply to process fugitive sources that are controlled by wet scrubbers.
- (b) The standard operating procedures manual for baghouses required by paragraph (a) of this section shall be submitted to the Administrator or delegated authority for review and approval.
- (c) The procedures specified in the standard operating procedures manual for inspections and routine maintenance shall, at a minimum, include the requirements of paragraphs (c)(1) through (c)(9) of this section.
 - (1) Daily monitoring of pressure drop across each baghouse cell.
 - (2) Weekly confirmation that dust is being removed from hoppers through visual inspection, or equivalent means of ensuring the proper functioning of removal mechanisms.
 - (3) Daily check of compressed air supply for pulse-jet baghouses.
 - (4) An appropriate methodology for monitoring cleaning cycles to ensure proper operation.
 - (5) Monthly check of bag cleaning mechanisms for proper functioning through visual inspection or equivalent means.
 - (6) Monthly check of bag tension on reverse air and shaker-type baghouses. Such checks are not required for shaker-type baghouses using self-tensioning (spring loaded) devices.
 - (7) Quarterly confirmation of the physical integrity of the baghouse through visual inspection of the baghouse interior for air leaks.
 - (8) Quarterly inspection of fans for wear, material buildup, and corrosion through visual inspection, vibration detectors, or equivalent means.
 - (9) Except as provided in paragraphs (g) and (h) of this section, continuous operation of a bag leak detection system.
- (d) The procedures specified in the standard operating procedures manual for maintenance shall, at a minimum, include a preventative maintenance schedule that is consistent with the baghouse manufacturer's instructions for routine and long-term maintenance.
- (e) The bag leak detection system required by paragraph (c)(9) of this section, shall meet the specification and requirements of paragraphs (e)(1) through (e)(8) of this section.
 - (1) The bag leak detection system must be certified by the manufacturer to be capable of detecting particulate matter emissions at concentrations of 10 milligram per actual cubic meter (0.0044 grains per actual cubic foot) or less.
 - (2) The bag leak detection system sensor must provide output of relative particulate matter loadings.
 - (3) The bag leak detection system must be equipped with an alarm system that will alarm when an increase in relative particulate loadings is detected over a preset level.

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- (4) The bag leak detection system shall be installed and operated in a manner consistent with available written guidance from the U.S. Environmental Protection Agency or, in the absence of such written guidance, the manufacturer's written specifications and recommendations for installation, operation, and adjustment of the system.
 - (5) The initial adjustment of the system shall, at a minimum, consist of establishing the baseline output by adjusting the sensitivity (range) and the averaging period of the device, and establishing the alarm set points and the alarm delay time.
 - (6) Following initial adjustment, the owner or operator shall not adjust the sensitivity or range, averaging period, alarm set points, or alarm delay time, except as detailed in the approved SOP required under paragraph (a) of this section. In no event shall the sensitivity be increased by more than 100 percent or decreased more than 50 percent over a 365 day period unless such adjustment follows a complete baghouse inspection which demonstrates the baghouse is in good operating condition.
 - (7) For negative pressure, induced air baghouses, and positive pressure baghouses that are discharged to the atmosphere through a stack, the bag leak detector must be installed downstream of the baghouse and upstream of any wet acid gas scrubber.
 - (8) Where multiple detectors are required, the system's instrumentation and alarm may be shared among detectors.
- (f) The standard operating procedures manual required by paragraph (a) of this section shall include a corrective action plan that specifies the procedures to be followed in the case of a bag leak detection system alarm. The corrective action plan shall include, at a minimum, the procedures used to determine and record the time and cause of the alarm as well as the corrective actions taken to correct the control device malfunction or minimize emissions as specified in paragraphs (f)(1) and (f)(2) of this section.
- (1) The procedures used to determine the cause of the alarm must be initiated within 30 minutes of the alarm.
 - (2) The cause of the alarm must be alleviated by taking the necessary corrective action(s) which may include, but not be limited to, paragraphs (f)(2)(i) through (f)(2)(vi) of this section.
 - (i) Inspecting the baghouse for air leaks, torn or broken filter elements, or any other malfunction that may cause an increase in emissions.
 - (ii) Sealing off defective bags or filter media.
 - (iii) Replacing defective bags or filter media, or otherwise repairing the control device.
 - (iv) Sealing off a defective baghouse compartment.
 - (v) Cleaning the bag leak detection system probe, or otherwise repairing the bag leak detection system.
 - (vi) Shutting down the process producing the particulate emissions.
- (g) Baghouses equipped with HEPA filters as a secondary filter used to control process, process fugitive, or fugitive dust emissions from any source subject to the lead emission standards in §63.543, 63.544, or 63.545 are exempt from the requirement in §63.548(c)(9) of this section to be equipped with a bag leak detector. The owner or operator of an affected source that uses a HEPA filter shall monitor and record the pressure drop across the HEPA filter system daily. If the pressure drop is outside the limit(s) specified by the filter manufacturer, the owner or operator must take appropriate corrective measures, which may include but not be limited to those given in paragraphs (g)(1) through (g)(4) of this section.
- (1) Inspecting the filter and filter housing for air leaks and torn or broken filters.

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- (2) Replacing defective filter media, or otherwise repairing the control device.
- (3) Sealing off a defective control device by routing air to other control devices.
- (4) Shutting down the process producing the particulate emissions.
- (h) Baghouses that are used exclusively for the control of fugitive dust emissions from any source subject to the lead emissions standard in §63.545 are exempt from the requirement in §63.548(c)(9) of this section to be equipped with a bag leak detector.
- (i) The owner or operator of a secondary lead smelter that uses a wet scrubber to control particulate matter and metal hazardous air pollutant emissions from a process fugitive source shall monitor and record the pressure drop and water flow rate of the wet scrubber during the initial test to demonstrate compliance with the lead emission limit under §63.544(c) and (d). Thereafter, the owner or operator shall monitor and record the pressure drop and water flow rate at least once every hour and shall maintain the pressure drop and water flow rate no lower than 30 percent below the pressure drop and water flow rate measured during the initial compliance test.
- (j) The owner or operator of a blast furnace or collocated blast furnace and reverberatory furnace subject to the total hydrocarbon standards in §63.543 (c), (d), or (e), must comply with the requirements of either paragraph (j)(1) or (j)(2) of this section, to demonstrate continuous compliance with the total hydrocarbon emission standards.
 - (1) *Continuous temperature monitoring.*
 - (i) The owner or operator of a blast furnace or a collocated blast furnace and reverberatory furnace subject to the total hydrocarbon emission standards in §63.543 (c), (d), or (e) shall install, calibrate, maintain, and continuously operate a device to monitor and record the temperature of the afterburner or the combined blast furnace and reverberatory furnace exhaust streams consistent with the requirements for continuous monitoring systems in subpart A, General Provisions.
 - (ii) Prior to or in conjunction with the initial compliance test to determine compliance with §63.543 (c), (d), or (e), the owner or operator shall conduct a performance evaluation for the temperature monitoring device according to §63.8(e) of the General Provisions. The definitions, installation specifications, test procedures, and data reduction procedures for determining calibration drift, relative accuracy, and reporting described in Performance Specification 2, 40 CFR part 60, appendix B, sections 2, 3, 5, 7, 8, 9, and 10 shall be used to conduct the evaluation. The temperature monitoring device shall meet the following performance and equipment specifications:
 - (A) The recorder response range must include zero and 1.5 times the average temperature identified in paragraph (j)(1)(iii) of this section.
 - (B) The monitoring system calibration drift shall not exceed 2 percent of 1.5 times the average temperature identified in paragraph (j)(1)(iii) of this section.
 - (C) The monitoring system relative accuracy shall not exceed 20 percent.
 - (D) The reference method shall be an National Institute of Standards and Technology calibrated reference thermocouple-potentiometer system or an alternate reference, subject to the approval of the Administrator.
 - (iii) The owner or operator of a blast furnace or a collocated blast furnace and reverberatory furnace subject to the total hydrocarbon emission standards shall monitor and record the temperature of the afterburner or the combined blast furnace and reverberatory furnace exhaust streams every 15 minutes during the total hydrocarbon compliance test and determine an arithmetic average for the recorded temperature measurements.

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(iv) To remain in compliance with the standards for total hydrocarbons, the owner or operator must maintain an afterburner or combined exhaust temperature such that the average temperature in any 3-hour period does not fall more than 28 °C (50 °F) below the average established in paragraph (j)(1)(iii) of this section. An average temperature in any 3-hour period that falls more than 28 °C (50 °F) below the average established in paragraph (j)(1)(iii) of this section, shall constitute a violation of the applicable emission standard for total hydrocarbons under §63.543 (c), (d), or (e).

(2) Continuous monitoring of total hydrocarbon emissions.

- (i) The owner or operator of a secondary lead smelter shall install, operate, and maintain a total hydrocarbon continuous monitoring system and comply with all of the requirements for continuous monitoring systems found in subpart A, General Provisions.
- (ii) Prior to or in conjunction with the initial compliance test to determine compliance with §63.543 (c), (d), or (e), the owner or operator shall conduct a performance evaluation for the total hydrocarbon continuous monitoring system according to §63.8(e) of the General Provisions. The monitor shall meet the performance specifications of Performance Specification 8, 40 CFR part 60, appendix B.
- (iii) Allowing the 3-hour average total hydrocarbon concentration to exceed the applicable total hydrocarbon emission limit under §63.543 shall constitute a violation of the applicable emission standard for total hydrocarbons under §63.543 (c), (d), or (e).
- (k) The owner or operator of a secondary lead smelter who uses pressurized dryer breaching seals in order to comply with the requirements of §63.544(g) shall equip each seal with an alarm that will “sound” or “go off” if the pressurized dryer breaching seal malfunctions.

[62 FR 32216, June 13, 1997, as amended at 63 FR 45011, Aug. 24, 1998]

§ 63.549 Notification requirements.

- (a) The owner or operator of a secondary lead smelter shall comply with all of the notification requirements of §63.9 of subpart A, General Provisions.
- (b) The owner or operator of a secondary lead smelter shall submit the fugitive dust control standard operating procedures manual required under §63.545(a) and the standard operating procedures manual for baghouses required under §63.548(a) to the Administrator or delegated authority along with a notification that the smelter is seeking review and approval of these plans and procedures. Owners or operators of existing secondary lead smelters shall submit this notification no later than July 23, 1997. The owner or operator of a secondary lead smelter that commences construction or reconstruction after June 9, 1994, shall submit this notification no later than 180 days before startup of the constructed or reconstructed secondary lead smelter, but no sooner than June 13, 1997. An affected source that has received a construction permit from the Administrator or delegated authority on or before June 23, 1995, shall submit this notification no later than July 23, 1997.

§ 63.550 Recordkeeping and reporting requirements.

- (a) The owner or operator of a secondary lead smelter shall comply with all of the recordkeeping requirements under §63.10 of the General Provisions. In addition, each owner or operator of a secondary lead smelter shall maintain for a period of 5 years, records of the information listed in paragraphs (a)(1) through (a)(6) of this section.
 - (1) An identification of the date and time of all bag leak detection system alarms, their cause, and an explanation of the corrective actions taken.

SECTION IV. APPENDIX X

NESHAP, SUBPART X –SECONDARY LEAD SMELTERS

- (2) If an owner or operator chooses to demonstrate continuous compliance with the total hydrocarbon emission standards under §63.543 (c), (d), or (e) by employing the method allowed in §63.548(j)(1), the records shall include the output from the continuous temperature monitor, an identification of periods when the 3-hour average temperature fell below the minimum established under §63.548(j)(1), and an explanation of the corrective actions taken.
- (3) If an owner or operator chooses to demonstrate continuous compliance with the total hydrocarbon emission standard under §63.543 (c), (d), or (e) by employing the method allowed in §63.548(j)(2), the records shall include the output from the total hydrocarbon continuous monitoring system, an identification of the periods when the 3-hour average total hydrocarbon concentration exceeded the applicable standard and an explanation of the corrective actions taken.
- (4) Any recordkeeping required as part of the practices described in the standard operating procedures manual required under §63.545(a) for the control of fugitive dust emissions.
- (5) Any recordkeeping required as part of the practices described in the standard operating procedures manual for baghouses required under §63.548(a).
- (6) Records of the pressure drop and water flow rate for wet scrubbers used to control metal hazardous air pollutant emissions from process fugitive sources.
 - (b) The owner or operator of a secondary lead smelter shall comply with all of the reporting requirements under §63.10 of the General Provisions. The submittal of reports shall be no less frequent than specified under §63.10(e)(3) of the General Provisions. Once a source reports a violation of the standard or excess emissions, the source shall follow the reporting format required under §63.10(e)(3) until a request to reduce reporting frequency is approved.
 - (c) In addition to the information required under §63.10 of the General Provisions, reports required under paragraph (b) of this section shall include the information specified in paragraphs (c)(1) through (c)(6) of this section.
 - (1) The reports shall include records of all alarms from the bag leak detection system specified in §63.548(e).
 - (2) The reports shall include a description of the procedures taken following each bag leak detection system alarm pursuant to §63.548(f) (1) and (2).
 - (3) The reports shall include the information specified in either paragraph (c)(3)(i) or (c)(3)(ii) of this section, consistent with the monitoring option selected under §63.548(h).
 - (i) A record of the temperature monitor output, in 3-hour block averages, for those periods when the temperature monitored pursuant to §63.548(j)(1) fell below the level established in §63.548(j)(1).
 - (ii) A record of the total hydrocarbon concentration, in 3-hour block averages, for those periods when the total hydrocarbon concentration being monitored pursuant to §63.548(j)(2) exceeds the relevant limits established in §63.543 (c), (d), and (e).
 - (4) The reports shall contain a summary of the records maintained as part of the practices described in the standard operating procedures manual for baghouses required under §63.548(a), including an explanation of the periods when the procedures were not followed and the corrective actions taken.
 - (5) The reports shall contain an identification of the periods when the pressure drop and water flow rate of wet scrubbers used to control process fugitive sources dropped below the levels established in §63.548(i), and an explanation of the corrective actions taken.

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NESHAP, SUBPART X—SECONDARY LEAD SMELTERS

- (6) The reports shall contain a summary of the fugitive dust control measures performed during the required reporting period, including an explanation of the periods when the procedures outlined in the standard operating procedures manual pursuant to §63.545(a) were not followed and the corrective actions taken. The reports shall not contain copies of the daily records required to demonstrate compliance with the requirements of the standard operating procedures manuals required under §§63.545(a) and 63.548(a).

§ 63.551 Implementation and enforcement.

- (a) This subpart can be implemented and enforced by the U.S. EPA, or a delegated authority such as the applicable State, local, or Tribal agency. If the U.S. EPA Administrator has delegated authority to a State, local, or Tribal agency, then that agency, in addition to the U.S. EPA, has the authority to implement and enforce this subpart. Contact the applicable U.S. EPA Regional Office to find out if this subpart is delegated to a State, local, or Tribal agency.
- (b) In delegating implementation and enforcement authority of this subpart to a State, local, or Tribal agency under subpart E of this part, the authorities contained in paragraph (c) of this section are retained by the Administrator of U.S. EPA and cannot be transferred to the State, local, or Tribal agency.
- (c) The authorities that cannot be delegated to State, local, or Tribal agencies are as specified in paragraphs (c)(1) through (4) of this section.
- (i) Approval of alternatives to the requirements in §§63.541, 63.543 through 63.544, 63.545(a) and (c) through (e), and 63.546.
- (ii) Approval of major alternatives to test methods for under §63.7(e)(2)(ii) and (f), as defined in §63.90, and as required in this subpart.
- (iii) Approval of major alternatives to monitoring under §63.8(f), as defined in §63.90, and as required in this subpart.
- (iv) Approval of major alternatives to recordkeeping and reporting under §63.10(f), as defined in §63.90, and as required in this subpart.

[68 FR 37350, June 23, 2003]

**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

(Revised) August 12, 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.
August 10	Received preliminary comments from EFT.
August 12	Revised 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.

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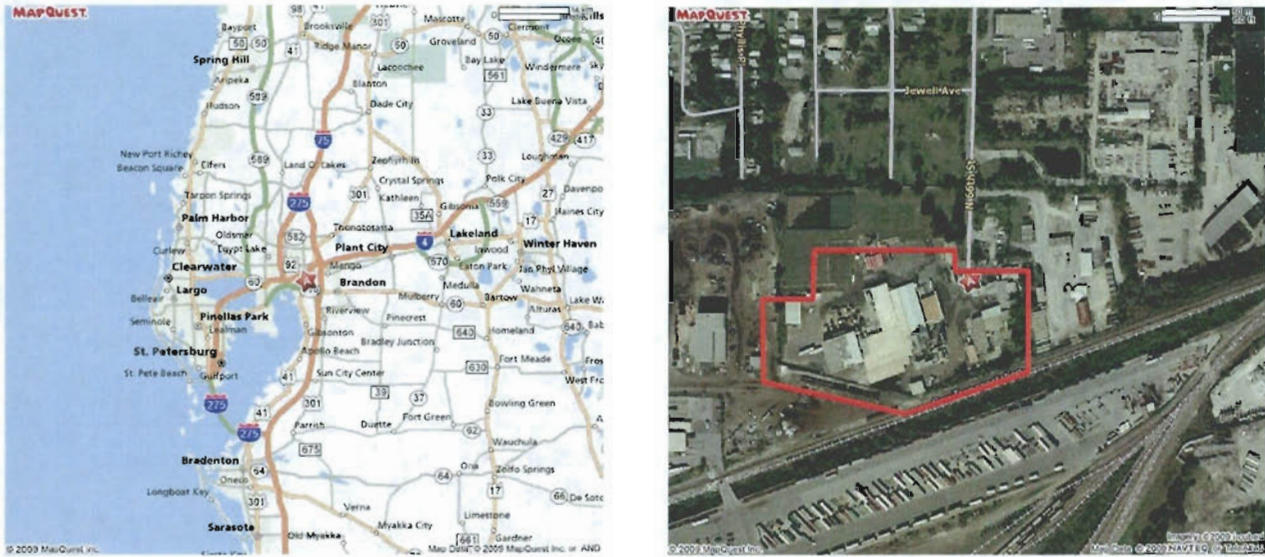


Figure 1. EFT facility location in Tampa and an aerial view of the facility and environs.



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 the National 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/PM₁₀/PM_{2.5}), sulfur dioxide (SO₂), 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

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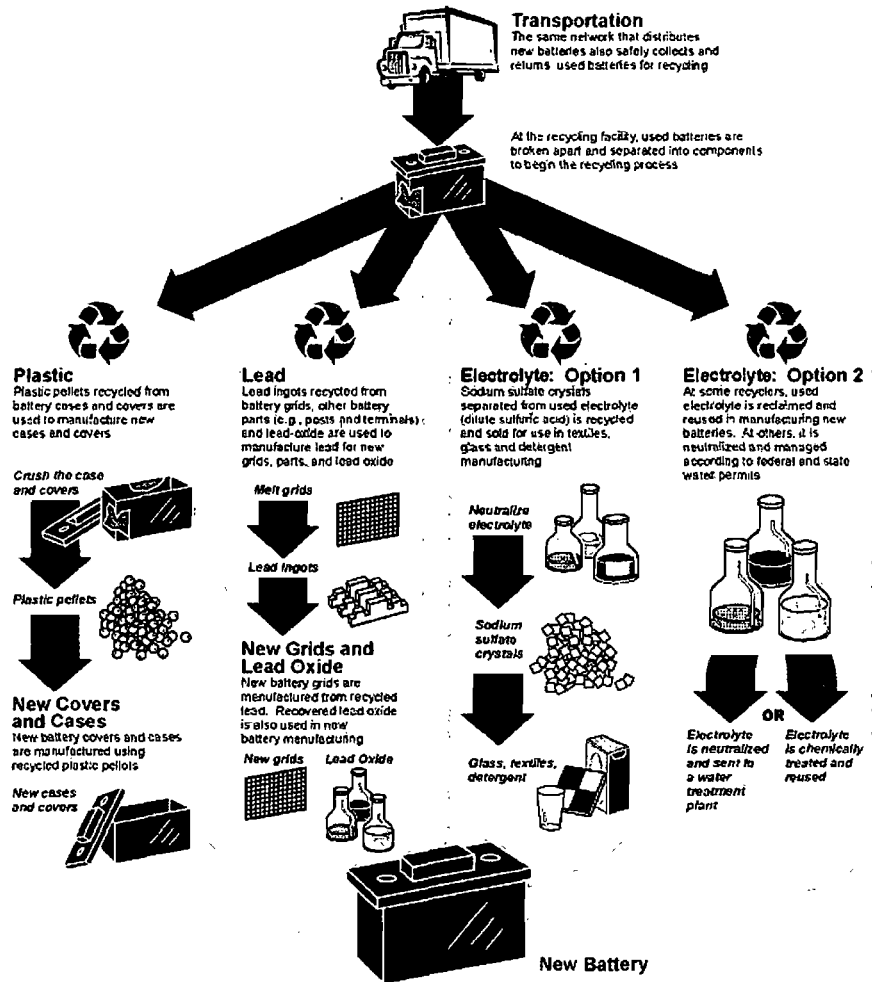


Figure 4. Lead-acid battery recycling process.

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.

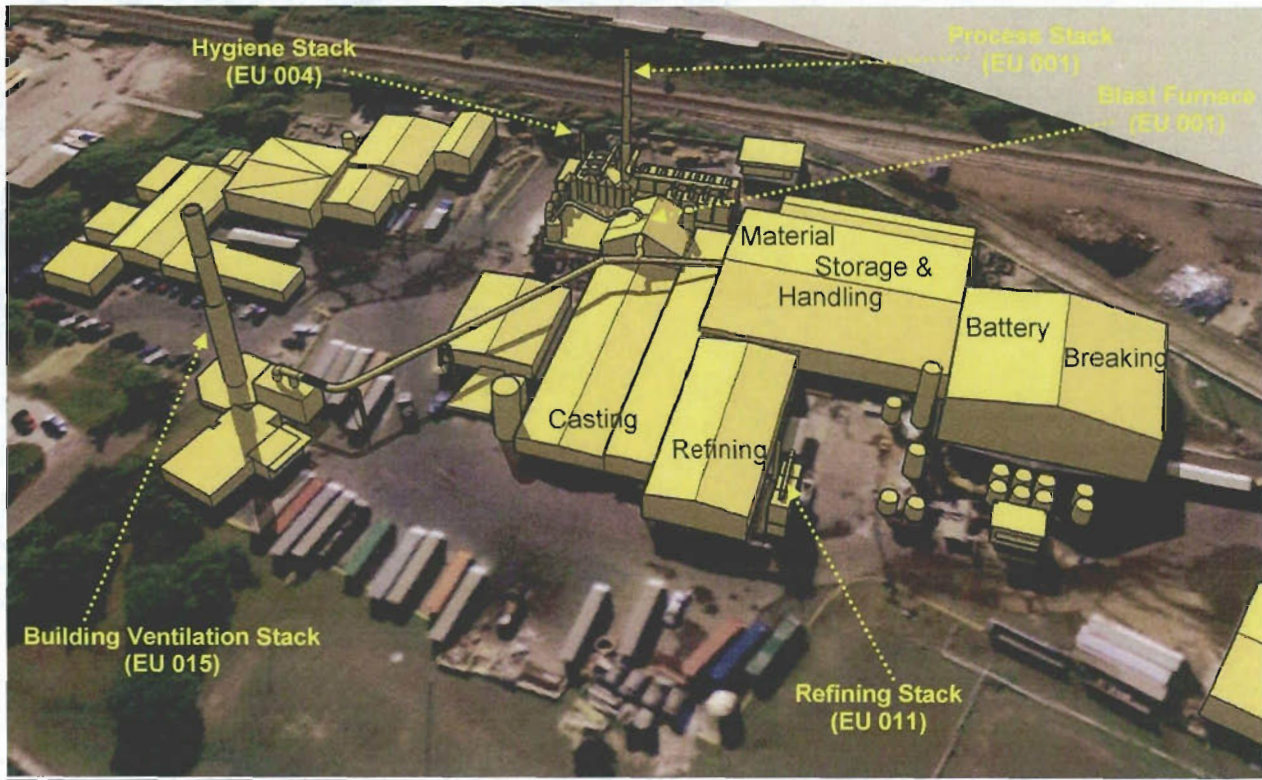


Figure 5. Aerial view of present operation at EFT from the north towards CSX railroad yard.

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/PM₁₀ 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 gasses to the large 65,000 acfm cartridge collector (based on nano-filtration 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.

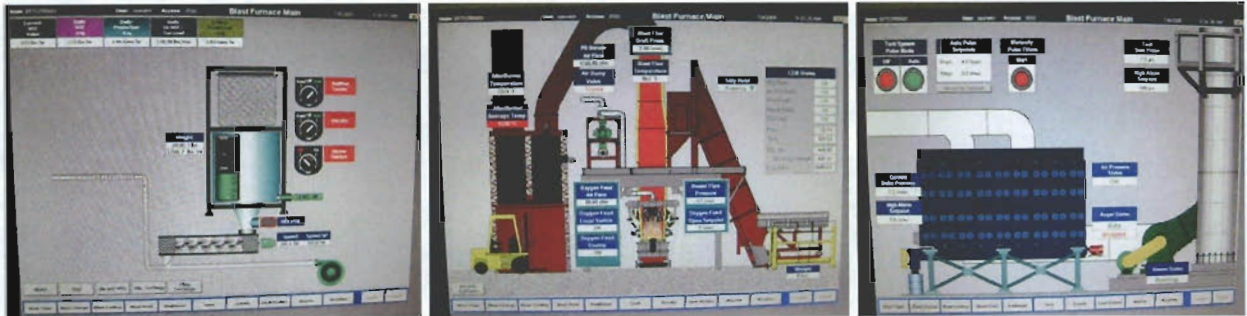


Figure 15. Screens for bicarbonate injection, blast furnace, negative pressure air filtration.

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/PM₁₀ 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 SO₂ 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.

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- 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 slurring 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.

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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.

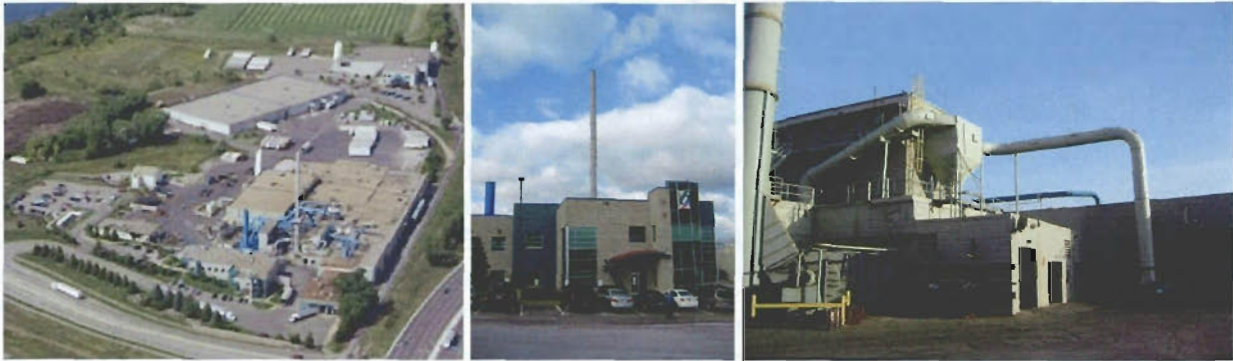


Figure 17. Overview of GRC, office building, enclosed operation, good ducts and baghouses.

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/PM₁₀/PM_{2.5}, SAM, Pb.

MSHA: PM/PM₁₀/PM_{2.5}, Pb.

Feed dryer: PM/PM₁₀/PM_{2.5}, Pb, NO_x, CO.

Smelting: PM/PM₁₀/PM_{2.5}, Pb, CO, VOC, NO_x, SO₂, other metal HAP.

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Refining, tapping and charging (process fugitive emission sources*): PM/PM₁₀/PM_{2.5}, Pb, NO_x, SO₂, other metal HAP.

Building ventilation: PM/PM₁₀/PM_{2.5}, Pb.

Natural gas burners: PM/PM₁₀/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	<u>Battery breaking area</u> including a 50 ton per hour (TPH) hammer mill, separation equipment, plastics plant, wet impingement scrubber and a new 130 ft stack.
022	<u>Feed dryer</u> 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	<u>Collocated blast furnace</u> . Direct emissions controlled by common afterburner, common wet SO ₂ scrubber, common process baghouse and combined 130-ft process stack.
023	<u>Collocated reverb furnace</u> . Direct emissions controlled by common afterburner, common wet SO ₂ scrubber, common process baghouse and combined 130-ft process stack.
011	<u>Furnace tapping, charging and lead refining</u> . 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	<u>Soda ash silos</u> . (3) with bin filters and stacks.
009	<u>Facility grounds and roadways</u> . Controlled by wet suppression, vacuum sweeping and wheel wash station.
013	<u>Combustion gases from (10) natural gas burners</u> 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	<u>Building ventilation</u> 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	<u>Plastics plant pellet silos</u> (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	<u>Propane vaporizer</u> (1) and <u>soda ash slurry heaters</u> (2).
026	<u>Emergency generator</u> 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	56	-4.0	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 CS₂ 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 reverberatory 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% CO₂) 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).

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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/PM₁₀/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;*

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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/PM₁₀/PM_{2.5} BACT Determination

A summary of the BACT proposal for PM/PM₁₀/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/PM₁₀/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/PM₁₀/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.

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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.

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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 on 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 (NH₃) causing injection of greater than stoichiometric amounts of NH₃ and causing additional slip and salts formation;
- Salt formation in the wet scrubber;
- Introduction of significant amounts of NH₃ 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 NH₃ 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

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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 (O₂) 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 O₂ 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/PM₁₀/PM_{2.5} and NO_x, at levels in excess of the respective SER. PM₁₀ 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.

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Table 13. Largest Sources of NO_x (2007)

<u>Owner</u>	<u>Site Name</u>	<u>TPY</u>
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/PM₁₀ (2007)

<u>Owner</u>	<u>Site Name</u>	<u>TPY</u>
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 SO₂ (2007)

<u>Owner</u>	<u>Site Name</u>	<u>TPY</u>
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)

<u>Owner</u>	<u>Site Name</u>	<u>TPY</u>
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 SO₂ and NO_x Emission Trends

To put the emissions from the EFT project into perspective, the Department graphed the SO₂ 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.

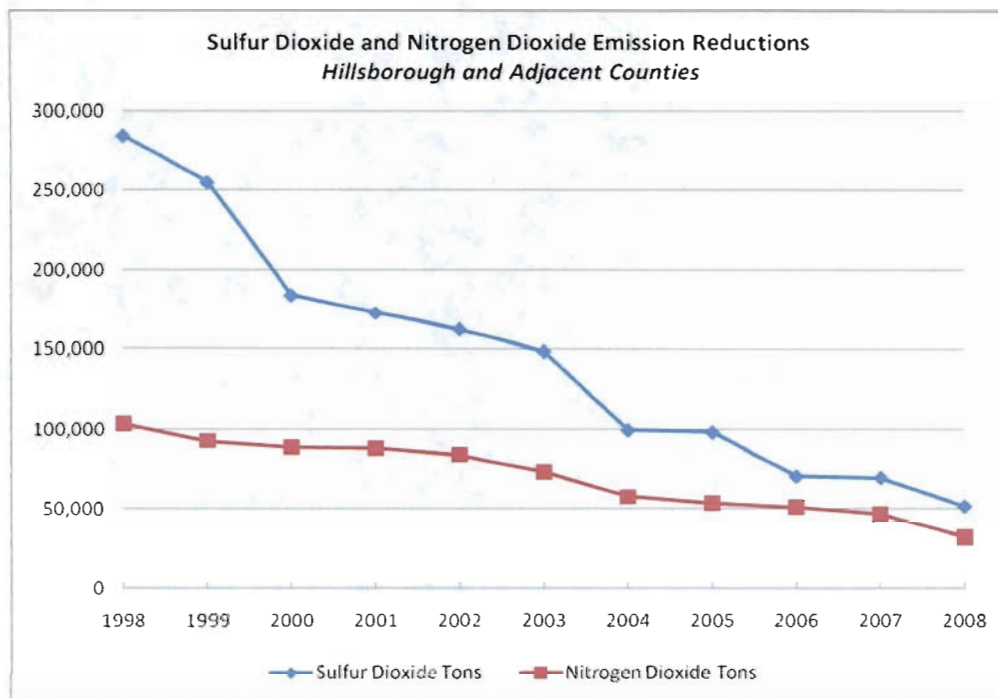


Figure 19. Stationary source SO₂ and NO_x emissions in Hillsborough and adjacent counties.

During the period 1998-2008 there was a *decrease* from 284,318 to 51,632 TPY (~82%) in SO₂ 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 SO₂ 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, PM₁₀, PM_{2.5} (also called PM_{fine}), ozone, CO, nitrogen dioxide (NO₂) and SO₂ as shown in Figure 20. Of special significance are the monitors associated with measurement of ambient Pb concentrations near EFT.

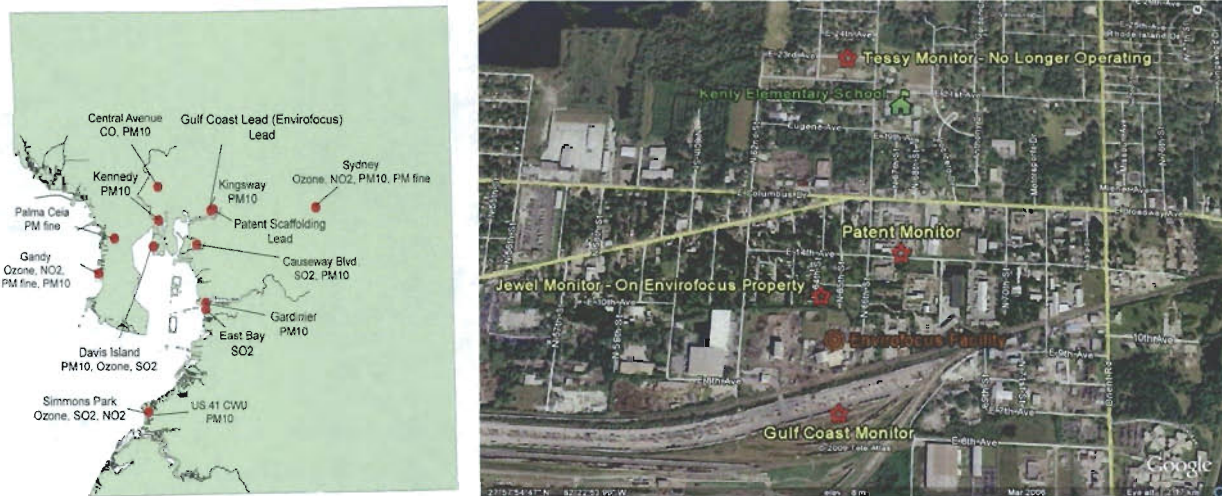


Figure 20. EPCHC air monitoring network, Pb monitors in the vicinity of the EFT site.

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 PM₁₀ 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 (Tessa) 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.

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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	µg/m ³
		Annual			23	50 ^c	µg/m ³
PM _{2.5}	Sydney	24-hour	20	19		35 ^d	µg/m ³
		Annual			8	15 ^e	µg/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
		4 th highest high			75	75 ^g	ppb
Pb	Gulf Coast	Highest 3-month rolling (2006-2008)			1.77	0.15 ^h	µg/m ³
		quarterly			0.62	1.5 ^h	µg/m ³
	Patent	Highest 3-month rolling (2006-2008)			0.40	0.15 ^h	µg/m ³
		quarterly			0.40	1.5 ^h	µg/m ³

- a. Units are in: micrograms per cubic meter (µg/m³); 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 µg/m³ on a quarterly basis to 0.15 µg/m³ 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 NO₂ 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.

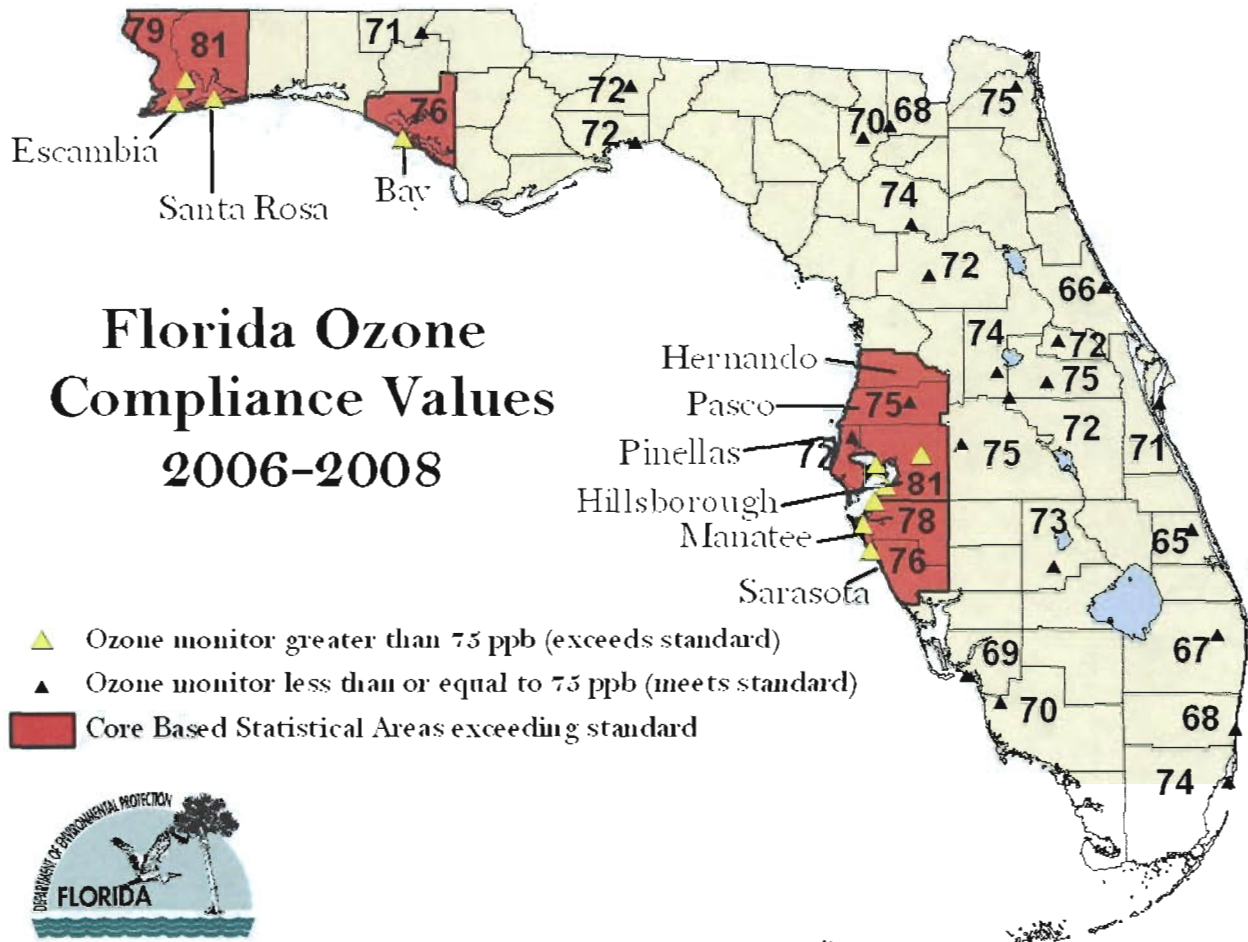


Figure 21. Florida ozone compliance values based on data reported during 2006-2008.

It is noteworthy that while ambient ozone concentrations are occasionally high, NO₂ (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 $\mu\text{g}/\text{m}^3$ on a quarterly basis to 0.15 $\mu\text{g}/\text{m}^3$ 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.

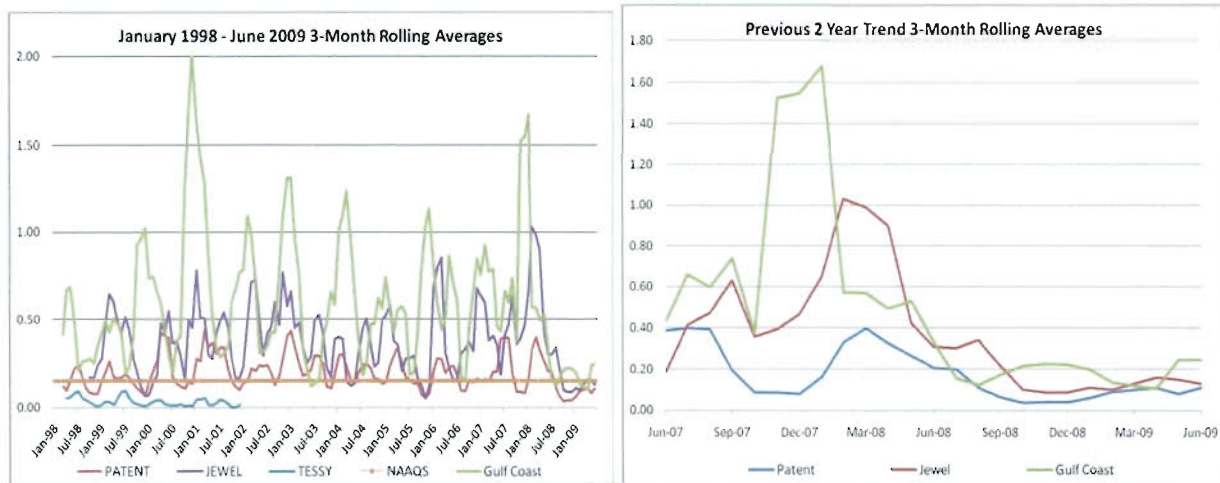


Figure 22. Ambient Pb monitoring data near EFT from 1998 through May 2009 $\mu\text{g}/\text{m}^3$.

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

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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 ($\mu\text{g}/\text{m}^3$, 3-month rolling averages).

Month, Year	Site Name, Number			
	Gulf Coast Lead		Patent	Jewel
	<u>139A</u>	<u>139B (QA)</u>	<u>144</u>	<u>146 (NR)</u>
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 $0.15 \mu\text{g}/\text{m}^3$ on a 3-month rolling average.

G. Air Quality Impact Analysis

Significant Impact Analysis (SIA) – PSD Pollutants

SIL are defined for PM/PM₁₀, 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.

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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 PM₁₀, the receptor grid consisted of 100 meter spaced receptors which extended out to approximately 1.5 kilometers. The largest concentrations for PM₁₀ 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/PM₁₀ 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 (µg/m ³)	Significant Impact Level (µg/m ³)	2008 Baseline Concentrations (µg/m ³)	Ambient Air Standards (µg/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/PM₁₀, and NO_x.

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

Pollutant	Averaging Time	Max Predicted Impact ($\mu\text{g}/\text{m}^3$)	De Minimis Level ($\mu\text{g}/\text{m}^3$)	2008 Baseline Concentrations ($\mu\text{g}/\text{m}^3$)	Impact Greater Than De Minimis?
PM ₁₀	24-hour	14	10	~75	YES
NO ₂	Annual	17	14	~11	YES

There are six PM₁₀ 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 NO₂ 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 NO₂ 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 NO₂) 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, SO₂ 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 Tessa 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 PM₁₀ and NO₂ 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 PM₁₀, the results were within 0.7 µg/m³ except for 2005 when the Tampa surface data was more conservative by over 1 µg/m³. 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.

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Table 21. PSD Class II Increment Analysis

Pollutant	Averaging Time	Max Predicted Impact ($\mu\text{g}/\text{m}^3$)	Allowable Increment ($\mu\text{g}/\text{m}^3$)	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

- 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 $\mu\text{g}/\text{m}^3$ for the 24 hour and annual averaging time frames for PM₁₀ Increment.
- 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:

- Any ambient air quality standard in any air quality control region; or*
- 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) PM₁₀.

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

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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 PM₁₀ 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 PM₁₀ 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 (µg/m ³)	Background Conc. 2003- 2007 (µg/m ³)	Total Impact (µg/m ³)	Total Impact Greater Than AAQS?	Florida AAQS (µg/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 µg/m³ for the 24 hour and annual averaging time frames for PM₁₀ 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.

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

The background concentration was estimated at $0.05 \mu\text{g}/\text{m}^3$ 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 Tessa 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 ($\mu\text{g}/\text{m}^3$)	Background Concentration ($\mu\text{g}/\text{m}^3$)	Total Impact ($\mu\text{g}/\text{m}^3$)	Total Impact Greater Than AAQS?	Florida AAQS ($\mu\text{g}/\text{m}^3$)
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/PM₁₀ 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.

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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 SO₂ due to power plant pollution control projects and the progressive reduction in sulfur levels in diesel fuel. For example, SO₂ 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, SO₂ 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.

Walker, Elizabeth (AIR)

From: Tapper, John [John.Tapper@grcmn.com]
Sent: Wednesday, August 12, 2009 2:43 PM
To: Walker, Elizabeth (AIR)
Subject: RE: ENVIROFOCUS TECHNOLOGIES, LLC; 0570057-020-AC

Thanks again for you assistants, message received.

John Tapper

Chief Operating Officer
Gopher Resource Corporation
EnviroFocus Technologies LLC
3385 South Hwy. 149
Eagan Minnesota 55121
651-405-2203 direct
612-961-3075 cell
651-405-6403 fax

From: Walker, Elizabeth (AIR) [mailto:Elizabeth.Walker@dep.state.fl.us]
Sent: Wednesday, August 12, 2009 1:38 PM
To: Tapper, John
Cc: Linero, Alvaro; Read, David; abrams.heather@epamail.epa.gov; Campbell, Jerry; rkemp@environcorp.com; Gibson, Victoria; Livingston, Sylvia
Subject: ENVIROFOCUS TECHNOLOGIES, LLC; 0570057-020-AC

Dear Sir/ Madam:

Attached is the official revised **Notice of Intent to Issue** for the project referenced below. Click on the link displayed below to access the permit project documents and send a "reply" message verifying receipt of the document(s) provided in the link; this may be done by selecting "Reply" on the menu bar of your e-mail software, noting that you can view the documents, and then selecting "Send".

Note: We must receive verification that you are able to access the documents. Your immediate reply will preclude subsequent e-mail transmissions to verify accessibility of the document(s).

Click on the following link to access the permit project documents:

http://ARM-PERMIT2K.dep.state.fl.us/adh/prod/pdf_permit_zip_files/0570057.020.AC.R_pdf.zip

Owner/Company Name: ENVIROFOCUS TECHNOLOGIES, LLC
Facility Name: ENVIROFOCUS TECHNOLOGIES, LLC
Project Number: 0570057-020-AC
Permit Status: REVISED DRAFT
Permit Activity: CONSTRUCTION
Facility County: HILLSBOROUGH

The Bureau of Air Regulation is issuing electronic documents for permits, notices and other correspondence in lieu of hard copies through the United States Postal System, to provide greater service to the applicant and the engineering community. Access these documents by clicking on the

link provided above, or search for other project documents using the "Air Permit Documents Search" website at <http://www.dep.state.fl.us/air/emission/apds/default.asp>

Permit project documents are addressed in this email may require immediate action within a specified time frame. Please open and review the document(s) as soon as possible, and verify that they are accessible. Please advise this office of any changes to your e-mail address or that of the Engineer-of-Record. If you have any problems opening the documents or would like further information, please contact the Florida Department of Environmental Protection, Bureau of Air Regulation.

Elizabeth Walker

Bureau of Air Regulation

Division of Air Resource Management (DARM)

(850)921-9505

The Department of Environmental Protection values your feedback as a customer. DEP Secretary Michael W. Sole is committed to continuously assessing and improving the level and quality of services provided to you. Please take a few minutes to comment on the quality of service you received. Simply click on [this link to the DEP Customer Survey](#). Thank you in advance for completing the survey.

Walker, Elizabeth (AIR)

From: Tapper, John [John.Tapper@grcmn.com]
To: Walker, Elizabeth (AIR)
Sent: Wednesday, August 12, 2009 2:42 PM
Subject: Read: ENVIROFOCUS TECHNOLOGIES, LLC; 0570057-020-AC

Your message

To: John.Tapper@grcmn.com
Subject:

was read on 8/12/2009 2:42 PM.

Walker, Elizabeth (AIR)

From: Exchange Administrator
Sent: Wednesday, August 12, 2009 2:38 PM
To: Walker, Elizabeth (AIR)
Subject: Delivery Status Notification (Relay)
Attachments: ATT866537.txt; ENVIROFOCUS TECHNOLOGIES, LLC; 0570057-020-AC

This is an automatically generated Delivery Status Notification.

Your message has been successfully relayed to the following recipients, but the requested delivery status notifications may not be generated by the destination.

jtapper@gopherresource.com

Walker, Elizabeth (AIR)

From: Exchange Administrator
Sent: Wednesday, August 12, 2009 2:38 PM
To: Walker, Elizabeth (AIR)
Subject: Delivery Status Notification (Relay)
Attachments: ATT866504.txt; ENVIROFOCUS TECHNOLOGIES, LLC; 0570057-020-AC

This is an automatically generated Delivery Status Notification.

Your message has been successfully relayed to the following recipients, but the requested delivery status notifications may not be generated by the destination.

rkemp@environcorp.com

Walker, Elizabeth (AIR)

From: Russell Kemp [rkemp@environcorp.com]
Sent: Wednesday, August 12, 2009 2:38 PM
To: Walker, Elizabeth (AIR)
Subject: Out of Office AutoReply: ENVIROFOCUS TECHNOLOGIES, LLC; 0570057-020-AC

I am currently out of the office. I will be back in on Friday August 14. If you need to reach me urgently, you may try my cellphone at 404-374-7836.