FINAL DETERMINATION

Air Construction Permit
EnviroFocus Technologies, LLC
Lead-Acid Battery Recycling Facility
DEP File No. 0570057-020-AC (PSD-FL-404)

PERMITTEE

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

PERMITTING AUTHORITY

Florida Department of Environmental Protection (Department)
Division of Air Resource Management
Bureau of Air Regulation, Special Projects Section
2600 Blair Stone Road, MS #5505
Tallahassee, Florida 32399-2400

PROJECT

DEP File No. 0570057-020-AC (PSD-FL-404)
EnviroFocus Lead-Acid Battery Recycling Facility
Facility Upgrade and Production Increase
Hillsborough County

The project required a review under the rules for the Prevention of Significant Deterioration (PSD) of Air Quality and determinations of Best Available Control Technology (BACT) for nitrogen oxides (NO_X) and particulate matter (PM/PM_{10}). The key changes comprising the facility upgrade project and the associated production increase from 32,000 to 150,000 tons per year (TPY) of lead 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.

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 completely enclosed, placed under negative pressure and exhausted via an expanded building ventilation system through a cartridge collector and stack.

NOTICE AND PUBLICATION

The Department distributed a major modification air construction (PSD) permit package on August 7, 2009. The applicant filed a request for extension of time to file a petition for an administrative hearing on August 11 to resolve several provisions that in their opinion warranted clarification or correction. The Department withdrew the draft and distributed a revised permit package version on August 12.

The applicant published the Public Notice of Intent to Issue Air Construction Permit in The Tampa Tribune on August 17. The Department received the proof of publication on August 31.

COMMENTS

No written comments on the draft permit were received from the public or the Environmental Protection Commission of Hillsborough County (EPCHC). Written comments were received from the applicant and from the EPA Region 4 Office.

Applicant

On September 16, 2009 the Department received comments from the applicant. The following summarizes the comments and the Department's response.

1. EnviroFocus Comment 1: Section 3.B., Conditions 14 and 15. EnviroFocus requests that the combined carbon monoxide (CO) and sulfur dioxide (SO_2) emission limits for the furnaces be expressed as 12-month rolling totals in terms of tons within the 12-month period rather than as 30-day pounds per hour (lb/hr) averages. In the event that the Department will not change the limits as 12-month rolling total tons, the applicant *"requests confirmation of its interpretation that the 30-day rolling average lb/hr emissions rate should be computed as the total pounds emitted in that 30-day period divided by 30x24 = 720 hours"*.

   Department response: The Department will maintain the form of the limits for CO and SO_2 (the pollutants that did not trigger PSD) as proposed in the public-noticed draft permit.

   Averaging in zero emissions for hours when the facility is down would be a substantial change from the public noticed permit limits and would present a different perception of the performance of the pollution control equipment.

2. EnviroFocus Comment 2: Section 3.C., Condition 14. With respect to SO_2 and NO_X hygiene stack testing, EnviroFocus requests removal of the reference to development of a factor used to convert parts per million measurements to lb/hr.

   Department response: The Department agrees because the continuous emissions monitoring systems (CEMS) include software and a flow meter that together make the appropriate conversion. The Department will revise the referenced condition as follows:

   14. SO_2 and NO_X Compliance Tests: The hygiene stack exhaust shall be tested to demonstrate initial compliance with the SO_2 and NO_X standards no later than 180 days after the initial startup of this emissions unit ~~in order to establish a conversion factor for the purpose of converting SO_2 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.]

EPA Region 4 Office

On September 18, 2009 the Department received comments from the EPA Region 4 Office. The following summarizes the comments and the Department's response.

1. EPA Comment 1: *"In reviewing the draft permit and preliminary determination, Region 4 finds that the permitting authority has not provided an adequate rationale to support the use of the PM_{10} surrogate approach for this project. The preliminary determination should contain an analysis as to whether or not PM_{10} is a reasonable surrogate for $PM_{2.5}$ under the facts and circumstances of the specific project at issue and not proceed with the general presumption that PM_{10} is always a reasonable surrogate for $PM_{2.5}$."*

   Department response: On September 16, 1997, EPA revised the national ambient air quality standards (AAQS) for particulate matter, which includes a new AAQS for $PM_{2.5}$. Florida implemented an ambient monitoring program for $PM_{2.5}$. As EPA mentioned in its guidance dated

October 23, 1997, there are significant technical difficulties with respect to $PM_{2.5}$ monitoring, emissions estimation and modeling.

This guidance recommended the use of PM_{10} as a surrogate for $PM_{2.5}$ in meeting new source review (NSR) requirements under the Clean Air Act, including the permit programs for PSD. Meeting these measures in the interim will serve as a surrogate approach for reducing $PM_{2.5}$ emissions and protecting air quality. Florida is in the process of revising its State Implementation Plan to address the new $PM_{2.5}$, AAQS, PSD significant emissions rates and ambient air quality impact thresholds for modeling analyses as required by EPA for approved states by 2011. Until state regulations support PSD preconstruction review for $PM_{2.5}$ emissions, limiting PM_{10} emissions and precursors of $PM_{2.5}$ (e.g., sulfuric acid mist (SAM), SO_2, ammonia, and NO_X) will be used as a surrogate as suggested by EPA's guidance memoranda.

For this project, there are no expected increases in actual emissions of SO_2 or SAM, which are precursors of $PM_{2.5}$. Furthermore a BACT determination was conducted for NO_X which is a precursor of $PM_{2.5}$. Ammonia emissions will be minimal due to wastewater pretreatment requirements for scrubber water.

Finally, the complete enclosure of the facility and use of a negative air system coupled with cartridge filtration devices will directly minimize PM emissions as its purpose is to minimize emissions of lead (Pb) in order to comply with a recent ambient air quality standard that is 10 percent of the previous standard.

In conclusion, the Department does not expect the project to cause adverse impacts related to $PM_{2.5}$ emissions.

CONCLUSION

The final action of the Department is to issue the permit with the changes, corrections and clarifications as described above.