FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
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JONATHAN P. STEVERSON
SECRETARY

April 3, 2015

Tom Messer, Plant Manager
Suwannee American Cement, Branford Plant
Post Office Box 410
Branford, Florida 32008-0410

Re: Suwannee American Cement, Branford Plant
Facility ID No. 1210465
Cement Kiln (Emissions Unit No. 004)
Request for Portland Cement MACT Compliance Date Extension

Dear Mr. Messer:

On March 17, 2015, the Department of Environmental Protection (Department) received Suwanee American Cement's (SAC) initial request[1] for an extension of the Portland Cement MACT Rule compliance date for the cement kiln at the SAC Branford Plant (Emissions Unit No. 004).[2] Specifically, SAC requested an extension from September 9, 2015, to September 9, 2016, for compliance with the mercury (Hg) emissions limit for the kiln. Federal regulations allow for up to a one-year extension to comply with MACT standards for purpose of installing controls.[3] The authority to grant such an extension is delegated to the Department, which operates an approved Title V air operation permit program.[4]

SAC's extension request provides that SAC intends to comply with the mercury provisions of the Portland Cement MACT through a combination of dust shuttling and raw material source management. Dust shuttling involves removing a portion of the solids captured in the kiln baghouse, typically when the raw mill is not operating, and conveying those solids to the cement finish mill rather than back to the kiln. This practice reduces Hg emissions from the kiln stack in a more economical manner than alternatives such as activated carbon injection coupled with an additional baghouse. In the 2006 Cement MACT for new kilns, the U.S. Environmental Protection Agency recognized dust shuttling as a valid emissions control method and floor standard for the control of mercury.[5]

On February 28, 2013, SAC obtained an air construction permit (Permit No. 1210465-026-AC) authorizing the construction, installation, and implementation of a dust shuttle system to reduce mercury emissions from the kiln system and capture the mercury in the final cement product. Dust shuttling was introduced at SAC during 2013 and

[1] Suwannee American Cement initial extension request dated 3/17/2015. http://arm-permit2k.dep.state.fl.us/psd/1210465/U0002459.pdf

[2] The Maximum Achievable Control Technology (MACT) standards are specified in the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Major Sources: Portland Cement Manufacturing Industry. See Title 40, Part 63, Subpart LLL of the Code of Federal Regulations adopted and incorporated at Rule 62-204.800(11)(b)48., F.A.C.

[3] See the NESHAP General Provisions at 40 CFR 63.6(i), adopted and incorporated at Rule 62-204.800(11)(d)1., F.A.C.

[4] See the NESHAP General Provisions at 40 CFR 63.6(i)(4)(i)(A), adopted and incorporated at Rule 62-204.800(11)(d)1, F.A.C.

[5] See the 2006 Cement MACT preamble at 71 FR 76523. Note that the new kilns category addressed under the 2006 Cement MACT did not apply to SAC.

2014, up to a 1% maximum concentration of shuttled dust in the final cement product. SAC estimates that it has achieved approximately 50% mercury removal with 1% dust shuttling. SAC indicates, however, that it will need to achieve 63% mercury removal, or greater, to continuously comply with the Portland Cement MACT standard, which corresponds to shuttling approximately 1.5% to 2.8% of dust to product. SAC indicated in its request that this control method will not result in additional waste streams, as would the installation of add-on exhaust gas control devices such as carbon injection or a wet scrubber. SAC has communicated to the Department its need for additional time to complete implementation and optimization of the dust shuttling control strategy and to demonstrate that cement containing the desired percentage of shuttled dust will meet American Association of State Highway and Transportation Officials/ASTM requirements, while also meeting SAC company product quality control requirements. To that end, SAC must conduct an extensive program of testing and certification to the Florida Department of Transportation (DOT). SAC may also need to complete physical modifications to the dust shutting transfer system.

Under the extension, SAC will continue to operate EU No. 004 under its existing Hg emission standard of 97 pounds per year, together with the associated material balance compliance methods that were included in the original facility construction permit 1210465-001-AC (PSD-FL-259) and subsequent revisions thereto. SAC will also use a "process Hg measurement system" to optimize the timing, duration, and quantity of dust removed from the kiln baghouse to minimize Hg emissions and the quantity of inorganic process additions in the finished product.

Attachment A of this extension letter includes key testing and project milestones.

Given the information detailed above, the Department finds that SAC's request meets the criteria for obtaining an extension of the compliance date from September 9, 2015, to September 9, 2016, for mercury emissions from the kiln. The Department will incorporate this extension, together with key milestones and the proposed conditions in Attachment A, into SAC's Title V air operation permit for the Branford Plant.

If you have any questions regarding this matter, please contact me at 850-717-9083.

Sincerely,

David L. Read, P.E.
2015.04.03 13:46:39
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For:

Jeffery F. Koerner, Deputy Director
Division of Air Resource Management

cc:
Tom Messer, Suwannee American Cement (tomm@suwanneecement.com)
Max Lee, Koogler and Associates (mlee@kooglerassociates.com)
Krishna Cole, Suwannee American Cement (krishnac@suwanneecement.com)
Richard Rachal, DEP Northeast District (Richard.Rachal@dep.state.fl.us)

ATTACHMENT A

Proposed Conditions for Draft Title V Operation Permit

1. Compliance Date Extension: For the kiln (Emissions Unit No. 004), the Portland Cement MACT compliance date with the mercury (Hg) emission standard and Hg monitoring requirements (sorbent trap or continuous emissions monitoring system), referenced in 40 CFR 63.1351(c), is extended from September 9, 2015, to September 9, 2016. [40 CFR 63.6(i); and Rule 62-204.800(11)(d)1., F.A.C.]

2. Key Milestones: The permittee shall meet the following schedule for completing the installation of the control equipment and demonstrating compliance with the Cement MACT mercury requirements for the kiln.

Key Milestones	Target Completion Dates
Arrange Project with External Lab	4/27/2015
Gather, Ship, and Analyze Samples	5/18/2015
Obtain and Review Sample Results	6/15/2015
Put Up Concrete Mix/Batch and Specimens	7/13/2015
Age Concrete	10/12/2015
Analyze Aged Concrete Data	11/23/2015
Begin Using >1% Shuttled Dust in Cement Production (as allowed per testing)	1/25/2016
Complete Optimization of Dust Shuttling – Compliance Date	9/9/2016
Progress Reports	Quarterly

The permittee shall provide advance notice to the Division and copy the Compliance Authority if it is unable to meet a target in the above schedule and shall identify a new completion date. The Compliance Date cannot be extended beyond the date in the above schedule under this provision. [40 CFR 63.6(i)(10) and (11), Rule 62-204.800(11)(d)1., F.A.C., and Rule 62-4.070, F.A.C.]

3. Progress Reports: By September 9, 2015, the permittee shall provide a written report to the Division and the Compliance Authority that summarizes the work completed to date and the work remaining on dust shuttling improvement, cement testing, and concrete testing. Thereafter, the permittee shall provide quarterly written progress reports within 30 days following each calendar quarter and an updated schedule if necessary to the Division and the Compliance Authority. These reports shall also include an estimate of cumulative mercury emissions prevented by dust shuttling. [40 CFR 63.6(i)(10) and (11), Rule 62-204.800(11)(d)1., F.A.C., and Rule 62-4.070, F.A.C.]

4. Initial Compliance: After September 9, 2016, the permittee shall operate a mercury continuous emissions monitoring system (CEMS) or sorbent trap monitoring system in accordance with the requirements of the Cement MACT. Initial compliance with the mercury emissions standard shall be determined based on the first 30 operating days the permittee operates a mercury CEMS or sorbent trap monitoring system after September 9, 2016. [40 CFR 63.1348(a)(5) and 63.1349(b)(5)]