



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

April 30, 2021

Ms. Lillian Deprimo
Sr. Director, Environmental
CEMEX Construction Materials Atlantic, LLC
Knoxville Cement Plant
6212 Cement Plant Road
Knoxville, Tennessee 37924

Dear Ms. Deprimo:

This is in response to your letter, dated March 12, 2021, to the U.S. Environmental Protection Agency (EPA) (Request Letter), “requesting an applicability determination for the applicable operating limit for the coal mill emissions where diverted kiln gases are used for coal drying and exhaust through a separate stack.” The coal mill thermal dryer is located at CEMEX Construction Materials Atlantic’s Knoxville Cement Plant (CEMEX) in Knoxville, Tennessee. We requested additional information from you on March 19, 2021, and received the information on April 22, 2021, and April 23, 2021. Based on the information you have provided, and information provided by the Knox County Department of Air Quality Management (KCDAQM), we have determined that it is necessary for CEMEX to demonstrate compliance with the emissions limits specified in Title 40 CFR Part 60, Subpart Y – Standards of Performance for Coal Preparation Plants and Processing Plants (NSPS Subpart Y) and Title 40 CFR Part 63, Subpart LLL – National Emission Standards for Hazardous Air Pollutants From the Portland Cement Manufacturing Industry (NESHAP Subpart LLL). The details of our applicability determination (AD) are explained in the remainder of this letter.

Description of the Coal Mill Thermal Drying Process

Flue gas, resulting from the combustion of coal and processing of feed within the kiln, the combustion of coal and processing of feed in the pre-calciner, and kiln clinker product air cooling (clinker air cooler), exit the top of a four-stage preheater to enter a gas flow diversion unit-operation, referred to as the “funny box”. Flue gas flow from the funny box is processed to the coal mill for direct contact drying of pulverized coal.

CEMEX’s Basis of Proposed 40 CFR 60 Subpart Y Non-Applicability

Your Request Letter reasons that the particulate matter (PM) emissions limit of NSPS Subpart Y is not applicable to the coal-mill/thermal dryer vent because the coal mill is regulated under provisions of NESHAP Subpart LLL. Specifically, you assert that “with the implementation of the revised CFR Part 63, Subpart LLL (“PCMACT”) regulations in September 2015, the coal mill emissions *are no longer subject* to the PM standards for thermal dryers as defined in 40 CFR 60.252(a).” Letter at 2. You reference the definition of “indirect thermal dryer” in §60.251, which provides: “If the source of heat

(the source of combustion or furnace) is subject to another subpart of this part, then the furnace and the associated emissions are not part of the affected facility....” *Id.* (quoting 40 C.F.R. §60.251(j))¹. You also assert that the EPA has stated that “Subpart Y standards do not apply to coal mills at cement facilities whose only heat source is kiln exhaust.” *Id.* (quoting 77 FR 42384). Further, you note the EPA’s statement that “coal mill stacks will be required to meet annual PM performance testing and combine the measured emissions with PM emissions from the separated alkali stack, bypass stack, and/or main kiln as required in sections 60.62(b)(3), 63.1349 and 63.1350 of this rule.” *Id.* at 3 (quoting 78 FR 10012). Based on the premise that PM emissions from the coal mill are no longer regulated under the Subpart Y NSPS, your Request Letter asks the EPA for clarification on how the NESHAP Subpart LLL requirements should apply to the coal mill.

40 CFR Part 60, Subpart Y Definitions, Applicability, and Emissions Standards

Under definitions in §60.251: (e) coal preparation and processing plant means “any facility (excluding underground mining operations) which prepares coal by one or more of the following processes: breaking, crushing, screening, wet or dry cleaning, and thermal drying”, (r)(1) thermal dryer means “for units constructed, reconstructed, or modified on or before May 27, 2009, any facility in which the moisture content of bituminous coal is reduced by contact with a heated gas stream which is exhausted to the atmosphere”, and (j) indirect thermal dryer indirect thermal dryer means “a thermal dryer that reduces the moisture content of coal through indirect heating of the coal through contact with a heat transfer medium. If the source of heat (the source of combustion or furnace) is subject to another subpart of this part, then the furnace and the associated emissions are not part of the affected facility. However, if the source of heat is not subject to another subpart of this part, then the furnace and the associated emissions are part of the affected facility.”

Under §60.250(b), for thermal dryers in coal preparation and processing plants that process more than 200 tons of coal per day, the provisions of §§60.251, 60.252(a), 60.253(a), 60.254(a), 60.255(a), and 60.256(a) of this subpart are applicable to thermal dryers that commenced construction, reconstruction or modification after October 27, 1974, *and on or before April 28, 2008*.

Under §60.252(a), an owner or operator of a thermal dryer *constructed, reconstructed, or modified on or before April 28, 2008*, subject to the provisions of this subpart shall not cause to be discharged into the atmosphere from the thermal dryer any gases which contain PM in excess of 0.031 grains per dry standard cubic feet (gr/dscf) and any gases which exhibit 20 percent opacity or greater.

40 CFR Part 63, Subpart LLL Definitions, Applicability, and Emissions Standards

Under definitions of §63.1341, in-line coal mill means “those coal mills using kiln exhaust gases in their process.” Kiln means “a device, including any associated preheater or precalciner devices, inline raw mills, inline coal mills or alkali bypasses that produces clinker by heating limestone and other materials for subsequent production of portland cement.”

Under §63.1340(a), Subpart LLL applies to each new and existing portland cement plant which is a major source as defined in §63.2. Under §63.1340(b), and relevant to this request, affected sources

¹ The Request Letter incorrectly quotes this regulatory definition as stating, “If the source of heat (the source of combustion or furnace) is subject to another subpart of *the* part,” Request Letter at 2 (emphasis added). The regulatory definition refers to “*this* part.” 40 CFR §60.251(j) (emphasis added).

subject to this subpart include each kiln, including alkali bypasses and inline coal mills at any portland cement plant.

Under §63.1343(b)(1), emissions limits [PM, Dioxin/Furans, Mercury, Total Hydrocarbon, and Hydrogen Chloride] and work practices for existing and new source kilns, clinker coolers, raw material dryers, raw mills, and finish mills are listed in Table 1. Alternatively, and under §63.1343(b)(2), “when there is an alkali bypass and/or an inline coal mill with a separate stack associated with a kiln, the combined PM emissions from the kiln and the alkali bypass stack and/or the inline coal mill stack are subject to the total PM emissions limit. Existing kilns that combine the clinker cooler exhaust and/or alkali bypass and/or coal mill exhaust with the kiln exhaust and send the combined exhaust to the PM control device as a single stream may meet an alternative PM emissions limit.” The alternative PM limit is calculated using Equation 1 of §63.1343.

EPA’s Applicability Determination

The EPA disagrees with your suggestion that the coal mill is no longer subject to NSPS Subpart Y. Based on the information you have provided, and information provided by the KCDAQM, the coal mill is an existing affected facility (thermal dryer) regulated under the provisions of §60.252(a).² The bases of the EPA’s determination are provided below:

1. Under applicability of §60.250(a), the thermal dryer is an affected facility because the dryer processes more than 200 tons of coal per day.
2. §60.252(a) is applicable to thermal dryers constructed, reconstructed, or modified after October 21, 1974, but before April 28, 2008. The CEMEX Knoxville operates a thermal dryer constructed during this time-period.
3. Because of the date of construction, the thermal dryer is characterized by the definition of §60.251(r)(1). CEMEX has not modified or reconstructed the thermal dryer since the original construction ended in 1979.
4. NSPS Subpart Y does not contain language stating that applicability under NESHAP Subpart LLL is a basis for an exemption from the PM limit for thermal dryers under Subpart Y.
5. The definition of “indirect thermal dryer” in §60.252(j) is irrelevant because the definition is for dryers where drying occurs through a heat transfer medium. Drying of coal in the mill at the Knoxville facility occurs by direct contact of kiln flue gas and coal.
6. The exemption provided within 40 CFR 60.251(j) is irrelevant because it only applies to *sources of heat* that are “subject to another subpart of this part”—*i.e.*, another NSPS subpart in part 60 (not a NESHAP subpart in part 63). The Knoxville facility’s thermal dryer is not subject to another NSPS subpart.
7. The preamble discussions cited by CEMEX from the NSPS Subpart F and NESHAP Subpart LLL rules are not relevant to the NSPS Subpart Y regulations that apply to pre-2008 coal mills, and do not supersede the regulatory text related to applicability within NSPS Subpart Y.

The EPA agrees with your determination that NESHAP Subpart LLL applies to the coal mill thermal dryer and that compliance with emissions standards of §63.1343(b)(1 or 2), as applicable, must also be demonstrated.³

² The Request Letter, in acknowledging that the coal mill has historically been subject to Subpart Y, implicitly concedes that it is, in fact, a “thermal dryer” as defined in that rule, and in any case does not attempt to rebut this fact.

³ From the Request Letter, it appears uncontested that the coal mill at the CEMEX Knoxville plant is subject to subpart LLL.

This AD was coordinated with Region 4's Enforcement and Compliance Assurance Division, the EPA's Office of Enforcement and Compliance Assurance, and the EPA's Office of Air Quality Planning and Standards. If you have any questions about this AD, please contact Tracy Watson at (404) 562-8998, or by email at watson.marion@epa.gov.

Sincerely,

**KENNETH
MITCHELL**

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For Caroline Y. Freeman
Director
Air and Radiation Division

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