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July 25, 2024

Katie Eagleson
Air Toxics Permitting Engineer
Oregon Department of Environmental Quality
700 E Multnomah Street, Suite 600
Portland, Oregon 97232

Re: Submittal of Cleaner Air Oregon Emissions Inventory and Supplemental Materials

Dear Katie Eagleson:

By letter dated April 26, 2024, the Oregon Department of Environmental Quality (DEQ) provided written notice to Mutual Materials Company (Mutual Materials) that the facility located at 2300 Southeast Hogan Street, Gresham, Oregon 97080 (the facility) was being called in to the Cleaner Air Oregon (CAO) permitting program. Per Oregon Administrative Rule 340 245 0030(1)(a)(A), the first technical step of the CAO permitting process is to submit an emissions inventory no later than 90 days after receiving the written notice from the DEQ.

MFA is pleased to submit this timely CAO emissions inventory to the DEQ for review and approval on behalf of Mutual Materials. The CAO emissions inventory AQ520 form, containing estimates of each toxic air contaminant emitted by the facility, is being provided electronically along with this letter. Background materials are attached to this letter to assist the DEQ during their review process.

Mutual Materials manufactures clay bricks and concrete pavers. Clay is excavated on-site and stored outside under a covered area adjacent to the production building. Although this covered area is open on all four sides, MFA assumed there are no fugitive toxic air contaminant (TAC) emissions from the clay storage area due to the high moisture content of the clay. The clay, with the addition of material from rejected bricks, is sent to the grinding and screening area to assure the correct particle size. The hammermill grinding and screening take place in an enclosed area. It is assumed there are no TAC emissions to atmosphere due to the enclosure and the moisture of the raw clay. Acceptable material is stored in silos in the main manufacturing building. Material from the silos is combined with water to achieve the proper consistency, colorants are added, and the wet material is formed, extruded, and cut to brick size.

The bricks are sent to a dryer, where they are pre-dried before firing in the kiln. The kiln is a natural gas-fired tunnel kiln with a heating section and cooling section. Process gases from the heating section are released through a stack on the roof of the brick production building. Waste heat from the cooling section of the kiln is routed to the dryer to pre-dry the bricks before firing in the kiln. The dryer only uses waste heat from the tunnel kiln and does not use any fuel for combustion. Waste heat from the drying area is released through three stacks adjacent to the clay production building. TACs are generated in the kiln, therefore AQ520 lists the kiln toxic emission unit (TEU) as the source of the TACs and uses the full AP-42 or source test emission factor to calculate emissions for the kiln TEU. Table 8 in the Emissions Inventory (Attachment A) shows how the emissions for the significant toxic emission units will be attributed to each release point for the risk assessment.

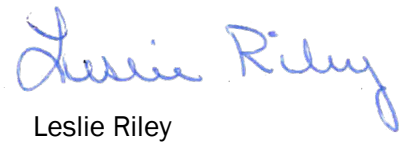
Emissions from the kiln were calculated using emission factors from AP-42, with the exception of hydrogen fluoride, which was calculated using an emission factor from site-specific source testing. Mutual Materials adds a manganese surface treatment to a portion of the bricks, so a portion of annual production was calculated using the AP-42 emission factor for manganese surface treatment. As a conservative estimate, 100 percent of daily production has been calculated as fired tons with manganese surface treatment to result in the most conservative acute risk scenario. TAC emissions from clay additives were calculated using a percentage of particulate matter emissions based on information in safety data sheets. Safety data sheets are included as Attachment E.

Concrete paver production takes place in a fully enclosed building. After review, MFA determined that the only sources of TAC emissions are from the operation of the material handling silos. Each silo is equipped with a SILOTOP™ dust collector for control of particulate matter and metal TACs. TAC emissions for Silo filling were calculated using AP-42 emission factors for cement silo filling with filter control. The specification sheet for the filters in included as Attachment F.

Mutual Materials looks forward to working with the DEQ throughout the CAO permitting process. Please contact James Smith at jcsmith@mutualmaterials.com or Leslie Riley at lriley@maulfoster.com if you have any comments or require clarifying information.

Sincerely,

Maul Foster & Alongi, Inc.



Leslie Riley
Senior Air Quality Specialist

Attachments

A—Emissions Inventory

B—Process Flow Diagrams

C— CATEU Form

D—2014 Source Test

E—Safety Data Sheets

F—Silo Filter Specification