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B-327488

November 10, 2015

The Honorable Jim Inhofe
Chairman
The Honorable Barbara Boxer
Ranking Member
Committee on Environment and Public Works
United States Senate

The Honorable Fred Upton
Chairman
The Honorable Frank Pallone, Jr.
Ranking Member
Committee on Energy and Commerce
House of Representatives

Subject: *Environmental Protection Agency: NESHAP for Brick and Structural Clay Products Manufacturing; and NESHAP for Clay Ceramics Manufacturing*

Pursuant to section 801(a)(2)(A) of title 5, United States Code, this is our report on a major rule promulgated by the Environmental Protection Agency (EPA) entitled “NESHAP for Brick and Structural Clay Products Manufacturing; and NESHAP for Clay Ceramics Manufacturing” (RIN: 2060-AP69). We received the rule on October 14, 2015. It was published in the *Federal Register* as a final rule on October 26, 2015. 80 Fed. Reg. 65,470.

The final rule establishes national emission standards for hazardous air pollutants (NESHAP) for Brick and Structural Clay Products (BSCP) Manufacturing and NESHAP for Clay Ceramics Manufacturing. All major sources in these categories must meet maximum achievable control technology standards for mercury, non-mercury metal hazardous air pollutants (HAP) (or particulate matter (PM) surrogate) and dioxins/furans (Clay Ceramics only); health-based standards for acid gas HAP; and work practice standards, where applicable. According to EPA, the final rule, which was informed by input from industry (including small businesses), environmental groups, and other stakeholders, protects air quality and promotes public health by reducing emissions of HAP listed in section 112 of the Clean Air Act (CAA).

Enclosed is our assessment of EPA’s compliance with the procedural steps required by section 801(a)(1)(B)(i) through (iv) of title 5 with respect to the rule. Our review of the procedural steps taken indicates that EPA complied with the applicable requirements.

If you have any questions about this report or wish to contact GAO officials responsible for the evaluation work relating to the subject matter of the rule, please contact Shirley A. Jones, Assistant General Counsel, at (202) 512-8156.

signed

Robert J. Cramer
Managing Associate General Counsel

Enclosure

cc: Nicole Owens
Director, Regulatory Management Division
Environmental Protection Agency

REPORT UNDER 5 U.S.C. § 801(a)(2)(A) ON A MAJOR RULE
ISSUED BY THE
ENVIRONMENTAL PROTECTION AGENCY
ENTITLED
“NESHAP FOR BRICK AND STRUCTURAL CLAY PRODUCTS
MANUFACTURING; AND NESHAP FOR
CLAY CERAMICS MANUFACTURING”
(RIN: 2060-AP69)

(i) Cost-benefit analysis

EPA prepared an analysis of the potential costs and benefits associated with this action. This analysis is contained in “Regulatory Impact Analysis: Final Brick and Structural Clay Products NESHAP.” A copy of the analysis is available in the docket for the Brick and Structural Clay Products (BSCP) Manufacturing national emission standards for hazardous air pollutants (NESHAP) (Docket ID No. EPA-HQ-OAR-2013-0291), and the analysis was briefly summarized in the final rule.

EPA’s study estimates that affected BSCP facilities will incur total annualized costs of \$24.6 million (2011 dollars) under the BSCP Manufacturing NESHAP, including costs of emission controls, testing, and monitoring, along with recordkeeping and reporting costs for facilities that have testing and monitoring. EPA states that it gathered information on firm sales and overall industry profitability for firms owning affected BSCP facilities. EPA estimated that two to four BSCP manufacturing facilities are at significant risk of closure under the final standards. EPA also conducted an assessment of the benefits of the final rule. According to EPA, these estimates reflect the monetized human health benefits of reducing cases of morbidity and premature mortality among populations exposed to PM_{2.5} reduced by this rule. Data, resource, and methodological limitations prevented EPA from monetizing the benefits from several important benefit categories, including benefits from reducing exposure to 375 tons of hazardous air pollutants (HAP) each year for the promulgated standards, as well as ecosystem effects and visibility impairment. In addition to reducing emissions of PM precursors such as sulfur dioxide this rule will, according to EPA, reduce several non-mercury HAP metals emissions (i.e., arsenic, cadmium, chromium, lead, manganese, nickel, and selenium) each year. EPA estimates the total monetized co-benefits to be \$83 million to \$190 million (2011 dollars) at a 3 percent discount rate and \$75 million to \$170 million (2011 dollars) at a 7 percent discount rate on a yearly average in 2018 for the promulgated standards. Based on EPA’s examination of costs and benefits of the final BSCP Manufacturing NESHAP, EPA stated that it believes that the benefits of the BSCP Manufacturing NESHAP will exceed the costs. EPA stated that it also examined the costs and economic impacts associated with the Clay Ceramics Manufacturing NESHAP. The remaining firm with major sources is estimated to incur costs as a result of the Clay Ceramics Manufacturing final rule and the firm only incurs costs associated with testing, monitoring, recordkeeping, and reporting. According to EPA, total annualized costs are \$92,400 (2011 dollars) and the firm’s estimated costs of complying with the Clay Ceramics Manufacturing NESHAP are less than 0.002 percent of sales.

(ii) Agency actions relevant to the Regulatory Flexibility Act (RFA), 5 U.S.C. §§ 603-605, 607, and 609

EPA states that it prepared an Initial Regulatory Flexibility Analysis (IRFA) that examines the impact of the proposed rule on small entities along with regulatory alternatives that could minimize that impact. The complete IRFA is available for review in the docket and was summarized in the final rule. EPA convened a Small Business Advocacy Review Panel to obtain advice and recommendations from small entity representatives that potentially would be subject to the rule’s requirements. Summaries of the IRFA and Panel recommendations are included at 79 Fed. Reg. 75,669–75,671. EPA prepared a final regulatory flexibility analysis (FRFA) for the final rule. The FRFA addresses the issues raised by public comments on the IRFA for the proposed rule. The complete FRFA is included in section 5 of “Regulatory Impact Analysis: Final Brick and Structural Clay Products NESHAP,” available for review in the docket (Docket ID No. EPA-HQ-OAR-2013-0291), and is summarized in the rule. EPA states that of 44 parent companies owning BSCP facilities, 36 parent companies are small businesses. EPA stated that it

computed the ratio of estimated compliance costs to company sales (cost-to-sales ratio) to measure the magnitude of potential impacts on small companies. Under the final standards, EPA estimated that two to three small BSCP manufacturing facilities (two to four BSCP manufacturing facilities overall) are at significant risk of closure.

(iii) Agency actions relevant to sections 202-205 of the Unfunded Mandates Reform Act of 1995 (UMRA), 2 U.S.C. §§ 1532-1535

According to EPA, the final rule does not contain an unfunded mandate of \$100 million or more as described in UMRA, 2 U.S.C. 1531–1538, and does not significantly or uniquely affect small governments. This action imposes no enforceable duty on any state, local, or tribal governments or the private sector.

(iv) Other relevant information or requirements under acts and executive orders

Administrative Procedure Act, 5 U.S.C. §§ 551 et seq.

EPA states that pursuant to CAA section 112(c)(5), EPA was originally required to promulgate standards for the BSCP Manufacturing and Clay Ceramics Manufacturing source categories by November 2000. EPA initially promulgated standards for these categories in 2003. 68 Fed. Reg. 26,690 (May 16, 2003). Those standards were challenged and subsequently vacated by the United States Court of Appeals for the District of Columbia Circuit in 2007. *Sierra Club v. EPA*, 479 F.3d 875, 876 (D.C. Cir. 2007). In 2008, Sierra Club filed suit in the United States Court of Appeals for the District of Columbia Circuit under CAA section 304(a)(2), alleging that EPA had a continuing mandatory duty to promulgate standards for these categories under CAA section 112 based on the 2000 deadline under CAA section 112(c)(5). EPA states in the final rule that it challenged that claim in a motion to dismiss, arguing that the mandatory duty to act by the 2000 deadline was satisfied by the 2003 rule and that the 2007 vacatur of the 2003 rule did not recreate the statutory duty to act by the 2000 deadline. EPA explained that the Court found that the vacatur of the 2003 rule recreated the mandatory duty to set standards by 2000 and held that Sierra Club's claims could continue. *Sierra Club v. EPA*, 850 F.Supp.2d 300 (D.D.C. 2012). According to EPA, it and Sierra Club then negotiated a consent decree to settle the litigation and establish proposal and promulgation deadlines for establishing standards for these categories. Following the 2007 vacatur of the 2003 rule, EPA states that it began efforts to collect additional data to support new standards for the BSCP and clay ceramics industries. EPA states that it conducted an initial information collection effort in 2008 to update information on the inventory of affected units, known as the 2008 EPA survey. EPA states it next conducted a second information collection effort in 2010 to obtain additional emissions data and information on each facility's startup, shutdown, and malfunction procedures, known as the 2010 EPA survey. The information collected as part of these surveys, and not claimed as confidential business information by respondents, is available in Docket ID Nos. EPA–HQ–OAR–2013–0290 and EPA–HQ–OAR–2013–0291. In addition, the dockets A–99–30 and OAR–2002–0054 are incorporated by reference for BSCP. The dockets A–2000–48, OAR–2002–0055, and EPA–HQ–OAR–2006–0424 are incorporated by reference for clay ceramics.

On December 18, 2014, EPA proposed NESHAP for BSCP Manufacturing and NESHAP for Clay Ceramics Manufacturing. 79 Fed. Reg. 75,622 (December 18, 2014). In response to a request from industry, EPA extended the public comment period for the proposed action from February 17, 2015, to March 19, 2015. 79 Fed. Reg. 78,768 (December 31, 2014).

Paperwork Reduction Act (PRA), 44 U.S.C. §§ 3501-3520

The information collection activities in the BSCP Manufacturing NESHAP and Clay Ceramics Manufacturing NESHAP have been submitted for approval to the Office of Management and Budget (OMB) under PRA. The information collection request (ICR) document that EPA prepared for the BSCP Manufacturing NESHAP has been assigned EPA ICR number 2509.01. The ICR document that EPA prepared for the Clay Ceramics Manufacturing NESHAP has been assigned EPA ICR number 2510.01. According to EPA, copies of the ICRs are found in the dockets for the BSCP Manufacturing NESHAP and Clay Ceramics Manufacturing NESHAP, and they are summarized in this report. The information

collection requirements are not enforceable until OMB approves them. The OMB control numbers for EPA's regulations in 40 C.F.R. are listed in 40 C.F.R. part 9. When OMB approves this ICR, EPA will announce that approval in the *Federal Register* and publish a technical amendment to 40 C.F.R. part 9 to display the OMB control number for the approved information collection activities contained in this final rule.

According to EPA, the information collected from respondents will be used by EPA enforcement personnel to: (1) identify new, modified, reconstructed, and existing sources subject to the standards; (2) ensure that maximum achievable control technology is being properly applied; and (3) ensure that the air pollution control devices are being properly operated and maintained on a continuous basis. In addition, records and reports are necessary to enable EPA to identify facilities that may not be in compliance with the standards. Based on the reported information, EPA can decide which facilities should be inspected and what records or processes should be inspected at these facilities. The records that facilities maintain will indicate to EPA whether the owners and operators are in compliance with the emission limitations (including emission limits, operating limits) and work practice standards. Much of the information EPA would need to determine compliance would be recorded and retained onsite at the facility. Such information would be reviewed by enforcement personnel during an inspection and would not need to be routinely reported to the EPA. EPA states in the final rule that all information submitted to EPA for which a claim of confidentiality is made will be safeguarded according to published EPA policies.

According to EPA, potential respondents to the information collection requirements in the BSCP Manufacturing NESHAP are owners and operators of new and existing sources at BSCP manufacturing facilities. A BSCP facility manufactures brick, including face brick, structural brick, brick pavers, or other brick and/or structural clay products including clay pipe; roof tile; extruded floor and wall tile; or other extruded, dimensional clay products. The BSCP facilities typically form, dry, and fire bricks and shapes that are composed primarily of clay and shale. Kilns are used to fire BSCP. The rule applies to all new and existing tunnel and periodic kilns at BSCP facilities.

According to EPA, potential respondents to the information collection requirements in the Clay Ceramics Manufacturing NESHAP are owners and operators of new and existing sources at clay ceramics manufacturing facilities. A clay ceramics facility manufactures pressed floor tile, pressed wall tile, or sanitaryware (e.g., sinks and toilets). Clay ceramics facilities typically form, dry, and fire tile or sanitaryware products that are composed of clay, shale, and various additives. Spray dryers are used during the forming process at tile facilities to process the ceramic mix into a powder to allow tile pressing. Dryers are used to reduce the moisture content of the ceramic products prior to firing. Glazes are applied to some tile and sanitaryware products, with glaze spraying accounting for all glazing emissions. Kilns are used to fire the ceramic products and include ceramic tile roller kilns and sanitaryware tunnel and shuttle kilns. The rule applies to all existing, new and reconstructed affected sources, which include the kilns, glaze spray operations, ceramic tile spray dryers and floor tile press dryers. (Wall tile press dryers and sanitaryware dryers, with no measurable emissions, are not covered.)

According to EPA, the information requirements are based on notification, recordkeeping, and reporting requirements in the NESHAP General Provisions (40 C.F.R. part 63, subpart A), which are mandatory for all operators subject to national emissions standards. The recordkeeping and reporting requirements are specifically authorized by CAA.

In addition to the notification, recordkeeping, and reporting requirements in the NESHAP General Provisions, the final rule includes paperwork requirements associated with initial and 5-year repeat testing for selected process equipment, electronic reporting of performance test results, parameter monitoring, preparation of an operation, maintenance and monitoring plan, maintenance and inspection of process and control equipment, compliance with work practice standards and periods of malfunction. Collection of data will begin after the effective date of the final BSCP Manufacturing NESHAP and Clay Ceramics Manufacturing NESHAP. The compliance date for existing sources is 3 years after the effective date. The compliance date for new or reconstructed sources is the effective date if the source startup date is before the effective date, or upon startup if the startup date is on or after the effective date. The schedule for notifications and reports required by the rule was summarized.

EPA states that there are 90 BSCP facilities that are currently major sources of HAP, 84 of which have at least one tunnel kiln. An estimated 21 of these facilities are projected to become synthetic area sources by promulgation rather than comply with the BSCP standards. The remaining 69 facilities (63 of which have a tunnel kiln) are expected to be subject to the BSCP Manufacturing NESHAP. For these 69 facilities, the annual recordkeeping and reporting burden associated with the BSCP standards (averaged over the first 3 years after the effective date of the standards) is estimated to be 20,963 labor hours per year, at a cost of \$1,113,105 per year. Burden is defined at 5 C.F.R. 1320.3(b). No capital costs associated with monitoring, testing, recordkeeping, or reporting are expected to be incurred during this period. The annual operation and maintenance costs are estimated to be \$682 per year. The total burden for the federal government (averaged over the first 3 years after the effective date of the standards) was estimated to be 71 labor hours per year, at a total labor cost of \$3,698 per year. (All costs are in 2011 dollars.)

According to EPA, there are three clay ceramics facilities that are currently major sources of HAP and are expected to be subject to the Clay Ceramics Manufacturing NESHAP. For these three facilities, the annual recordkeeping and reporting burden associated with the Clay Ceramics standards (averaged over the first 3 years after the effective date of the standards) was estimated to total 996 labor hours per year at a cost of \$52,674 year. As with the BSCP standards, no capital costs associated with monitoring, testing, recordkeeping, or reporting are expected to be incurred during this period. The annual operation and maintenance costs were estimated to be \$44 per year.

The total burden for the federal government (averaged over the first 3 years after the effective date of the standards) was estimated to be 4.6 labor hours per year, at a total labor cost of \$239 per year. (All costs are in 2011 dollars.) Because BSCP and clay ceramics facilities are not required to come into full compliance with the standards until 3 years after promulgation, much of the respondent burden (e.g., performance tests, inspections, notification of compliance status, compliance reports, records of compliance data, and malfunctions) does not occur until the fourth year following promulgation.

For the BSCP Manufacturing NESHAP, EPA estimated an average annual recordkeeping and reporting burden of 48,674 labor hours per year, at a cost of \$2,702,447 per year, for years 4 through 6. EPA also estimated annualized capital costs of \$606,760 per year and annual operating and maintenance costs of \$206,872 per year over this period, for a total annualized cost of \$813,632 per year. EPA estimated that the average annual burden for the federal government for years 4 through 6 is estimated to be 3,891 labor hours per year, at a total labor cost of \$204,550 per year. (All costs are in 2011 dollars.) For the Clay Ceramics Manufacturing NESHAP, EPA estimated an average annual recordkeeping and reporting burden of 2,323 labor hours per year, at a cost of \$122,786 per year, for years 4 through 6. EPA also estimated annualized capital costs of \$72,050 per year and annual operating and maintenance costs of \$27,069 per year over this period, for a total annualized cost of \$99,119 per year. The average annual burden for the federal government for years 4 through 6 is estimated to be 180 labor hours per year, at a total labor cost of \$9,448 per year. (All costs are in 2011 dollars.)

Statutory authorization for the rule

EPA states that section 112(d) of the Clean Air Act (CAA) requires EPA to set emissions standards for HAP emitted by sources in each source category and subcategory listed under section 112(c).

Executive Order No. 12,866 (Regulatory Planning and Review)

EPA states that the final rule is an economically significant regulatory action that was submitted to the Office of Management and Budget (OMB) for review. EPA states that any changes made in response to OMB recommendations have been documented in the dockets for this action.

Executive Order No. 13,132 (Federalism)

EPA states that this final rule does not have federalism implications. EPA states that the rule will not have substantial direct effects on the states, on the relationship between the national government and the states, or on the distribution of power and responsibilities among the various levels of government.

Executive Order No. 13175 (Consultation and Coordination with Indian Tribal Governments)

EPA states that the final rule does not have tribal implications, as specified in the Order. EPA states that the rule will not have substantial direct effects on tribal governments, on the relationship between the federal government and Indian tribes, or on the distribution of power and responsibilities between the federal government and Indian tribes, as specified in the Order. EPA states that the action imposes requirements on owners and operators of BSCP and clay ceramics manufacturing facilities and not tribal governments. Thus, EPA concluded that this Order does not apply to this action.

Executive Order 13045 (Protection of Children from Environmental Health Risks and Safety Risks)

EPA states that the final rule is not subject to this Order because the EPA does not believe the environmental health risks or safety risks addressed by this action present a disproportionate risk to children. The final rule's health and risk assessments are contained in the memoranda "Risk Assessment to Determine a Health-Based Emission Limitation for Acid Gases for the Brick and Structural Clay Products Manufacturing Source Category," Docket Item No. EPA-HQ-OAR-2013-0291-0132 and "Risk Assessment to Determine a Health-Based Emission Limitation for Acid Gases for the Clay Ceramics Manufacturing Source Category," Docket Item No. EPA-HQ-OAR-2013-0290-0213.

Executive Order 13211 (Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use)

EPA concluded that the final rule is not a "significant energy action" because it is not likely to have a significant adverse effect on the supply, distribution, or use of energy. EPA states that the final rule will not adversely directly affect productivity, competition, or prices in the energy sector.

National Technology Transfer and Advancement Act (NTTAA) and 1 C.F.R. Part 51

EPA states that this final rule involves technical standards. EPA said that it has decided to use the four voluntary consensus standards as acceptable alternatives to EPA test methods for the purpose of this rule, and summarized and explained those standards.

Executive Order 12898 (Federal Actions To Address Environmental Justice in Minority Populations and Low-Income Populations)

EPA states that it believes the human health or environmental risk addressed by this action will not have potential disproportionately high and adverse human health or environmental effects on minority, low-income, or indigenous populations because it does not affect the level of protection provided to human health or the environment. As EPA explained in the December 2014 proposal (79 Fed. Reg. 75,672), it determined that this final rule will not have disproportionately high and adverse human health or environmental effects on minority or low-income populations, because it increases the level of environmental protection for all affected populations without having any disproportionately high and adverse human health or environmental effects on any population, including any minority or low-income population. Additionally, EPA has conducted a proximity analysis for this rulemaking, which is located in the docket. (See "EJ Screening Report for Brick and Structural Clay," Docket Item No. EPA-HQ-OAR-2013-0291-0102, and "EJ Screening Report for Clay Ceramics," Docket Item No. EPA-HQ-OAR-2013-0290-0241.)