



February 27, 2017

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Submitted Electronically at Regulations.gov

**RE: 40 CFR Part 62 [EPA-HQ-OAR-2016-0664; FRL-9957-11- OAR] RIN 2060-
AT28 Federal Plan Requirements for Commercial and Industrial Solid Waste
Incineration Units Proposed Rule**

Dear Dr. Fischer:

The Cement Kiln Recycling Coalition (CKRC) is a national trade association representing cement manufacturers in the U.S. that recycle the value in energy-bearing secondary materials by using them as fuel in kilns that produce Portland cement. CKRC also represents companies that collect, process, manage, and market alternative fuels for use in cement kilns. We have an absolute interest in the rules EPA proposed on June 4, 2010 and promulgated in February 2013: *Standards of Performance for New Stationary Sources and Emission Guidelines for Existing Sources: Commercial and Industrial Solid Waste Incineration Units* (Docket ID: EPA-HQ-OAR-2003-0119) (hereinafter the “CISWI” rule). CKRC, along with the primary cement manufacturing trade association, the Portland Cement Association (PCA), participated in the development of the final rule by providing comments on the proposal. And, the members of the CKRC appreciate the opportunity to positively impact the implementation of the final rulemaking by providing additional comments on the Federal Plan Requirements for Commercial and Industrial Solid Waste Incineration Units Proposed Rule (hereinafter the “CISWI FIP” proposal) published in the Federal Register on January 17, 2017.

Introduction and Historical Perspective

CKRC and its members look forward to working cooperatively with EPA on the implementation of this final rule. Further, we appreciate the opportunity to communicate with the Agency about the nature of the cement manufacturing process and the beneficial use of alternative fuels, a significant sustainability component incorporated in cement manufacturing operations throughout the U.S. and worldwide. Each year, the United States generates millions of tons of secondary materials that have significant energy value. To recover this energy and avoid wasting it, the cement industry uses very substantial quantities of these materials as alternative fuel, which replaces a portion of the non-renewable traditional fossil fuels used to provide energy for the cement manufacturing process.

The U.S. uses over 90 million tons of cement every year, a rate of use that grows when the economy strengthens. Cement is the active ingredient in concrete, the most widely used construction material in the world. Cement is produced in huge rotary kilns by heating a mixture of minerals to over 2600°F. This is a very energy intensive process and cement manufacturers have developed technology that allows them to use energy-rich secondary materials created by other industrial processes to replace non-renewable fossil fuels. These non-hazardous alternative fuels can be a wide variety (or mixture) of energy-bearing materials such as tires and similar rubber-related materials, paper and plastics, fibers and fabrics, and much more.

The benefits of energy recovery are important for the environment. When cement kilns use alternative fuels derived from secondary materials, substances that would otherwise be regarded as waste are removed from the environment and handled and re-used in a safe and responsible manner. In addition, the amount of fossil fuels needed to produce cement is reduced, thereby conserving non-renewable energy resources and reducing emissions of greenhouse gases. For example, as EPA has noted, “both GHG and PM emissions have been reduced as a co-benefit of the use of secondary materials.” “For example, the GHG rate associated with the combustion of scrap tires is approximately 0.081 MTCO₂E per MMBtu of scrap tires combusted, while the GHG emissions rate for coal is approximately 0.094 MTCO₂E per MMBtu. Combined with the avoided extraction and processing emissions 0.006 MTCO₂E/MMBtu for coal, the total avoided GHG is 0.019 MTCO₂E per MMBtu.” EPA has also noted additional benefits: “The use of secondary materials, such as use as a fuel in industrial processes may also result in other benefits. These may include reduced fuel imports, reducing negative environmental impacts caused by previous dumping (*e.g.*, tires), and reduced methane gas generation from landfills.”¹

The complexities associated with a manufacturing facility operating under the requirements and associated terminology of an “incinerator rule” is an experience very familiar to CKRC and its members. When initially considered in the 1980s, the Resource Conservation and Recovery Act (RCRA) requirements for the use of hazardous waste-derived fuel were conceived based on incinerator knowledge, practices and terminology. As the RCRA Boilers and Industrial Furnace (BIF) regulations evolved over the 1990s, CKRC members provided EPA with technical information and data to help the Agency understand the cement manufacturing process and develop protective standards through rulemakings that recognize and address the differences among the various types of facilities being regulated under the BIF rule. That knowledge base and appreciation for the sustainability component that energy recovery plays in the manufacturing process continued to grow over the mid to late 1990s during the development of the Hazardous Waste Combustor (HWC) National Emissions Standards for Hazardous Air Pollutants (NESHAP) rules. Appropriately, these rulemaking efforts were promulgated with subcategorization and separate requirements addressing the unique aspects of cement manufacturing operations compared to those of hazardous waste incinerators.

¹ Proposed Rule, Identification of Non-Hazardous Secondary Materials That Are Solid Waste, 75 FR 31844, 31849 (June 4, 2010).

Over the last 30 years, engineers, combustion and testing specialists, risk assessors, and technicians have worked together to develop significant resources to understand the complex combustion and emissions control opportunities accomplished while producing a vital product. As a result of the above rulemaking developments, both the cement kiln combustion system process emissions and the use of alternative fuel in the process have been stringently regulated under the CAA. Kiln operators have gained significant experience conducting extensive emissions testing to demonstrate compliance and have performed detailed studies that have documented the efficacy of using secondary materials as fuel in cement kilns. Agency review of these efforts has concluded that the use of alternative fuel does not pose an unacceptable risk to human health and the environment, and that the regulatory process is in place to support this conclusion.

The significant studies conducted, data and information gathered, rulemakings developed, clarifications sought, and implementation solutions conceived over the years has amassed a tremendous wealth of knowledge that will be valuable as the CISWI requirements are implemented at some cement manufacturing facilities. Cement companies that have kiln systems that will be subject to this federal plan or a related state plan are committed to continue working with the agencies to apply lessons learned as the compliance date approaches. We look forward to achieving compliance through implementation of solutions that effectively balance the regulatory requirements and the manufacturing process parameters necessary to efficiently produce the clinker product.

As we continue to work toward implementation of the CISWI rule, the CISWI-regulated cement manufacturers are finding subtle language inconsistencies due to applying an incinerator rule once again to a manufacturing unit. We are providing the comments below in areas that we believe can benefit from further clarification, and appreciate the opportunity to have a dialogue with EPA during the final implementation process. We are confident the background knowledge of decades of regulated alternative fuel use in our industry will be beneficial in working with EPA through the final implementation steps to achieve compliance under the rule.

CISWI IMPLEMENTATION ISSUES

CKRC is providing comments on three areas in the CISWI rulemaking that we believe would benefit from technical clarification. We welcome the opportunity to work with EPA and put our industry's experience to use in an effort to reach needed implementation solutions. The areas of concern are:

- the existence of potential regulatory timing uncertainties;
- needed recognition of terminology nuances unique to the cement industry when compared to traditional incineration systems; and
- an understanding of alternative fuels use in the cement manufacturing process and associated operational considerations.

I. Regulatory Timing Topics for Clarification.

- A. Performance Test Timing.** The proposed rule includes a provision under 40 CFR §62.14535 on the timing of compliance, which inadvertently includes a reference to performing initial performance testing within 90 days after the compliance date (§62.14535(a)(4)).² Meanwhile, Part 60 Subpart A and the rest of the performance testing language throughout the CISWI CCCC/DDDD and FIP proposed rules include the common Section 129 testing requirement of “within 180 days.” 40 CFR §62.14665(a)³ and §62.14820 (b).⁴ We understand the 90-day reference may be a transcription error and respectfully request that it be revised for consistency.
- B. Performance Evaluation Test Timing.** The proposed rule has a number of references to the timing of performance evaluation activities that may benefit from confirmation or further clarification to further explain the implementation timeline.⁵

CEMS:

- The regulatory language at §62.14660 declares the need to conduct a performance evaluation within 60 days of installation of a monitoring system. With the regulatory requirement for instruments to be installed by the compliance date of February 7, 2018, it is possible that the performance evaluation could be conducted up to 60 days after the compliance date.
- The monitoring plan is due 60 days prior to the CEMS performance evaluation, thus 60 days before the compliance date at the earliest, or 60 days before the performance evaluation whichever is later.⁶
- The CEMS performance evaluation results are to be submitted within 60 days after the performance evaluation per §62.14755(b)(2)⁷. Performance test results are to be

² §62.14535(a)(4) You must conduct the initial performance test within 90 days after the date when you are required to achieve final compliance under paragraph (a)(3) of this section.

³ §62.14665 By what date must I conduct the initial performance test? (a) The initial performance test must be conducted no later than 180 days after your final compliance date. Your final compliance date is February 7, 2018, or the date you restart your CISWI unit if later than February 7, 2018.

⁴ §62.14820 How must I monitor opacity for air curtain incinerators? (a) Use Method 9 of 40 CFR part 60, appendix A to determine compliance with the opacity limitation. (b) Conduct an initial test for opacity as specified in § 60.8 no later than 180 days after your final compliance date.

⁵ §62.14635(b) You must meet the operating limits established during the initial performance test on the date the initial performance test is required or completed (whichever is earlier). You must conduct an initial performance evaluation of each continuous monitoring system and continuous parameter monitoring system within 60 days of installation of the monitoring system.

⁶ §62.14670(l) For each CMS required in this section, you must develop and submit to the EPA Administrator for approval a site-specific monitoring plan according to the requirements of this paragraph (l) that addresses paragraphs (l)(1)(i) through (vi) of this section: (1) You must submit this site-specific monitoring plan at least 60 days before your initial performance evaluation of your continuous monitoring system:

⁷ §62.14755(b) Submit results of each performance test and CEMS performance evaluation required by this subpart as follows: (2) Within 60 days after the date of completing each continuous emissions monitoring system

submitted within 60 days after the test is completed per §62.14750(b)(1)⁸. We understand that these two sets of results – CEMS performance evaluation and performance testing – can be submitted separately depending on the timing of each type of test. However, the language in the rule can be read to mean that the CEMS performance evaluation results must be submitted together with the performance test results, which we do not think is the intent. We request clarification that the two sets of results may be submitted separately. As one final item, we request that in the situation where performance evaluation of instrumentation is conducted on different days, that the rule clarify that the results can be submitted together up to 60 days after all performance evaluations are completed as one option.

CPMS:

- The language in 14635(b) indicates that a facility must set the operating limits during the initial performance test as noted in 14635(b). In practical terms, to properly set operating limits based on that test, there is an interim period of time where a facility must send the test samples to a laboratory for analysis, await the results from the laboratory and quality assure the test results. Further, the facility has to extract relevant process data recorded during the test to set applicable operating limits. Thus, setting operating limits does entail some process, and the operating limits are not set instantaneously upon the performance testing having been completed.
- As noted for CEMS, the facility has up to 60 days following installation, thus up to 60 days after the compliance date to conduct the performance evaluation at the latest.
- In this situation, the monitoring plan would be submitted 60 days prior to the performance evaluation (which is performed by the compliance date, or within 60 days of installation), and the results would also be submitted 60 days after the performance evaluation is completed for all instruments. We request the same clarification, that the performance evaluation results can be submitted together once all instrumentation evaluation is completed, since the CPMS results are typically presented in the same document as the CEMS noted above.
- The operating limits established during the performance testing would be submitted as part of the performance test report (60 days after performance testing), with performance testing required at the latest by 180 days after the compliance date. The report that includes the newly established operating limits thus has a submittal due date of 240 days after the compliance date at the latest (*e.g.*, by 60 days after the latest performance test date).

performance evaluation you must submit the results of the performance evaluation following the procedure specified in either paragraph (c)(1) or (c)(2) of this section:

⁸ §62.14755(b) Submit results of each performance test and CEMS performance evaluation required by this subpart as follows: (1) Within 60 days after the date of completing each performance test (*see* §60.8) required by this subpart, you must submit the results of the performance test following the procedure specified in either paragraph (b)(1)(i) or (b)(1)(ii) of this section:

C. **APCD Inspection Timing.** As in the situation with the CEMS performance evaluation, we understand that APCD inspections must be accomplished within 60 days after the initial compliance date⁹ for any equipment installed before the compliance date, with the provision allowing up to 180 days after the compliance date of February 7, 2018.

II. ***CKRC and the PCA have previously commented on terminology nuances for cement manufacturing. We appreciate EPA previously recognizing these differences and request additional clarification for the following three topics.***

A. **Use of the term “ash” in the rule.** EPA recognizes that the term “ash” as used in the regulatory language is not applicable to cement kiln systems, as noted in the preamble on 82 FR 3561 in Section D.1., where EPA correctly recognizes that kilns do not have ash handling systems.¹⁰ However, there are several regulatory references to ash and ash handling systems in the rule, such as in the Operator Training and Qualification training topics and documentation requirements^{11,12,13} and the definition of “CISWI unit”¹⁴ that we are concerned may have the potential to be misconstrued over time. We note the kiln definition and Table 7 correctly do not include the ash language. In order to avoid future confusion, we request EPA further clarify this distinction by expanding the definition of “CISWI unit” to specifically include the clarifying preamble statement on cement kilns to avoid future misinterpretations. We also request that the Operator Training and Qualification training topics and documentation requirements as referenced above include language that will clarify that ash-handling training is not required for cement kiln systems.

⁹ §62.14666(a) The initial air pollution control device inspection must be conducted within 60 days after installation of the control device and the associated CISWI unit reaches the charge rate at which it will operate, but no later than 180 days after the final compliance date for meeting the amended emission limitations

¹⁰ Preamble 82 FR 3561 1. Performance Testing and Monitoring. The proposed federal plan requires all CISWI units to demonstrate initial and continuous compliance with the final CISWI EG emission limits. These provisions require initial and annual performance tests and initial and annual inspections of scrubbers, fabric filters (FF), and other air pollution control devices that are used to meet the emission limits. In addition, a Method 22 (40 CFR part 60, appendix A-7) visible emissions test of the ash handling operations is required during the initial and annual compliance test for ***all subcategories except waste-burning kilns, which do not have ash handling systems.***

¹¹ §62.14595(c) Training must be obtained by completing an incinerator operator training course that includes, at a minimum, the three elements described in paragraphs (c)(1) through (3) of this section. (1) Training on the eleven subjects listed in paragraphs (c)(1)(i) through (xi) of this section. ...***(viii) Bottom and fly ash characteristics and handling procedures.***

¹² §62.14610 To maintain qualification, you must complete an annual review or refresher course covering, at a minimum, the five topics described in paragraphs (a) through (e) of this section...(b) Incinerator operation, including startup and shutdown procedures, waste charging, and ***ash handling.***

¹³ §62.14620(a) Documentation must be available at the facility and readily accessible for all CISWI unit operators that addresses the ten topics described in paragraphs (a)(1) through (10) of this section. You must maintain this information and the training records required by paragraph (c) of this section in a manner that they can be readily accessed and are suitable for inspection upon request. ...***(9) Procedures for handling ash.***

¹⁴ §62.14840 ***Commercial and industrial solid waste incineration (CISWI) unit...*** While not all CISWI units will include all of the following components, a CISWI unit includes, but is not limited to, the solid waste feed system, grate system, flue gas system, waste heat recovery equipment, if any, and ***bottom ash system.***

- B. Use of the term “bypass” versus “alkali bypass” in the rule.** We recognize the differentiation between an incinerator bypass stack and an alkali bypass component of a cement kiln system has already been included in the CISWI rule.^{15,16,17} However, there are some additional references that we are concerned could be misconstrued in the future. For example, the term alkali bypass is definitely part of the kiln regulatory definition in §62.14840¹⁸, and there is a separate bypass definition for incinerators. However, if misconstrued, the unintended outcome could be the expectation that cement kilns incorrectly report use of their alkali bypass as a deviation (§62.14740 (c)(2))¹⁹, which is not the regulatory intention for alkali bypass systems. A further example is if the use of an alkali bypass during testing is questioned by an agency due to the restriction on the use of an incinerator bypass during testing. In order to avoid future confusion, we request that EPA further clarify this distinction by expanding the definition of “bypass stack” to specifically exclude an alkali bypass associated with a cement kiln system.
- C. Use of the term “charge rate” in the rule.** Throughout the CISWI rule, charge rate, a typical term for the charging operation of an incinerator, is used when referring to the solid waste feed. This term does not adequately represent the utilization of solid waste as a fuel stream in the cement manufacturing process. The solid waste fuel stream, in combination with traditional fuel streams, are continuously fed to the cement manufacturing process. There is not a single charging activity, but a solid waste fuel feed rate that is typically combined with other fuel feed rates to achieve the operating conditions necessary to produce a quality cement product. Although the solid fuel feed rate and charge rate may be used synonymously, we note that provisions such as in §62.14700(b)(1)²⁰ appear more applicable to intermittently charged units. Accordingly, we request that EPA clarify the differences in terminology to recognize the inherent operations and associated terminology necessary to discuss and document regulatory

¹⁵ §62.14840 *Kiln* means an oven or furnace, including any associated preheater or precalciner devices, in-line raw mills, in-line coal mills or alkali bypasses used for processing a substance by burning, firing or drying. Kilns include cement kilns that produce clinker by heating limestone and other materials for subsequent production of Portland Cement. Because the *alkali bypass*, inline raw mill and in-line coal mill are considered an integral part of the kiln, the kiln emissions limits also apply to the exhaust of the *alkali bypass*, in-line raw mill and in-line coal mill.

¹⁶ §63.14670(y) When there is an *alkali bypass* and/or an in-line coal mill that exhaust emissions through a separate stack(s), the combined emissions are subject to the emission limits applicable to waste-burning kilns.

¹⁷ §62.14840 *Bypass stack* means a device used for discharging combustion gases to avoid severe damage to the air pollution control device or other equipment.

¹⁸ See footnote 15.

¹⁹ §62.14740 What must I include in the deviation report? In each report required under § 62.14735, for any pollutant or parameter that deviated from the emission limitations or operating limits specified in this subpart, include the four items described in paragraphs (a) through (d) of this section...(c) Duration and causes of the following: (1) Each deviation from the emission limitations or operating limits and your corrective actions; and (2) *Bypass events* and your corrective actions.

²⁰ §62.14700 What records must I keep? You must maintain the items (as applicable) as specified in paragraphs (a), (b), and (e) through (w) of this section for a period of at least 5 years: (a) Calendar date of each record. (b) Records of the data described in paragraphs (b)(1) through (6) of this section: (1) The CISWI unit *charge* dates, times, weights, and hourly *charge rates*;

topics for cement kilns operating under the CISWI rules by distinguishing between an incinerator “charge rate” and a manufacturing unit continuous fuel feed stream rate.

III. Alternative Fuels Use in the Cement Manufacturing Process and Operational Considerations

U.S. cement plants have a long history of utilizing non-hazardous waste as alternative fuel. Plants with units that will be subject to the CISWI federal plan requirements range in kiln types and number and types of fuels, depending on their site-specific fuels program. Some facilities have very well established programs where the fuels are sourced from many different suppliers of materials and varieties of materials, which can be blended together or fed to the kiln according to the specific process needs on a day-by-day basis. The nature of the non-hazardous alternative fuel sources is such that the same fuels are not always available every day or on the same schedule. Other facilities may utilize more specific streams or from fewer suppliers, including a single source. The location and types of commercial and industrial sources of materials available to that location is one factor that contributes to the differences in facility programs.

The specifics of cement kiln alternative fuel programs at each facility somewhat resembles the activities and lessons learned during the development of the regulatory history and CKRC company programs focused on hazardous waste fuels. During this same period, regulatory agency technical knowledge expanded with approaches developed for activities such as performance testing requirements which were similar to those now required under CISWI. The CISWI rule language notes, as one example, that the testing should be performed with the feed streams that will be utilized. Based on history, it has been documented that the ability to use each actual type of alternative fuel during the testing may not be practical since the fuel sources cannot be guaranteed to be produced and available during a planned CISWI compliance test. In fact, some fuels are only available for very short periods of time or in small quantities, or may be event driven. However, we understand the need to properly characterize the physical and chemical composition of the feed streams to be utilized. From a practical aspect and based upon our experience with hazardous waste fuels, we have successfully worked through testing programs where the representative waste concept was used. That is, the feed stream used during testing needs to be representative of the variety of feed streams in order to assure that the compliance test effectively demonstrates compliance. We believe that EPA should recognize that the use of a representative waste stream as documented within an approved test plan would alleviate any concern regarding the need to demonstrate each and every potential type of waste during a compliance test. Further, this would eliminate the need to perform expensive compliance tests for multiple waste stream types while serving no practical purpose and for no corresponding environmental benefit.

Conclusion

CISWI cement manufacturing companies continue to diligently work through the detailed implementation issues leading up to the February 7, 2018 CISWI FIP compliance date. We appreciate the opportunity to provide input on areas for clarification and increased understanding, and we look forward to continued communications with EPA over the next year as we move toward the compliance date of this federal plan. CKRC and its members welcome any opportunities to bring our significant knowledge base to the solution development process. We want to be active participants in all efforts that will help both the CISWI industry and the Agency successfully implement the final rule and achieve compliance with the promulgated standards. Thank you in advance for considering our comments and please contact me if you have questions or would like additional information.

Sincerely,

/s/ Michelle G. Lusk _____

Michelle G. Lusk
Executive Director
Cement Kiln Recycling Coalition