




**National Rural Electric  
Cooperative Association**

A Touchstone Energy<sup>®</sup> Cooperative 

February 11, 2014

OSHA Docket Office  
Docket No. OSHA-2010-0034  
U.S. Department of Labor  
Room N-2625  
200 Constitution Avenue, NW  
Washington, DC 20210

**FILED ELECTRONICALLY VIA REGULATIONS.GOV**

Dear Sir or Madam:

RE: Docket No. OSHA-2010-0034

Please accept for filing the following initial comments of the National Rural Electric Cooperative Association in the above-captioned docket.

**I. Introduction, Summary and Background**

• ***Introduction***

The National Rural Electric Cooperative Association (NRECA) is the national service organization dedicated to representing the national interests of cooperative electric utilities and the consumers they serve. NRECA membership is comprised of more than 900 not-for-profit rural electric utilities that provide electric energy to over 42 million people in 47 states or 12 percent of electric customers. Rural electric cooperatives provide approximately 11 percent of all electric energy sold in the United States. Electric cooperatives own and maintain 2.5 million miles or 42 percent of the nation's electric distribution lines, covering 75 percent of the U.S. landmass. Rural electric cooperatives were formed to provide reliable electric service to their owner-members at the lowest reasonable cost. Across the country, rural electric cooperative employ approximately 68,000 workers.

NRECA is pleased to provide these comments on OSHA's Proposed Rule on Respirable Crystalline Silica ("RCS"). In the sections below, we explain the two major types of rural electric cooperatives and how the potential exposure of workers to crystalline silica at Distribution electric cooperatives is different from the potential exposure of workers at Generation & Transmission electric cooperatives, we set forth our concerns with the proposed rule, we set

forth recommended changes to the language of the proposed rule, and we answer several of the questions posed by OSHA in the proposed rule and request for comments.

- **Summary**

NRECA sets forth in its comments below the reasons why:

- Distribution cooperatives should be exempt from the proposed rule; and
- Generation and Transmission cooperatives (“G&T’s”) should be granted additional time to implement the rule.

As an initial matter, NRECA does not comment on the current or proposed Permissible Exposure Limits or Action Levels in and of themselves. Neither NRECA nor its members have the scientific wherewithal to conduct an independent assessment of OSHA’s findings with regard to exposures. We note, however, that many organizations have commented negatively on OSHA’s proposed change to the Permissible Exposure Level (see for example comments filed by the American Chemistry Council Silica Panel, the US Chamber of Commerce, the American Foundry Society, and the National Association of Manufacturers).

We also note as an initial matter that Federated Rural Electric Insurance Exchange, the provider of workers' compensation insurance to over half of the 900 member cooperatives of NRECA, reports ZERO cases of silicosis in over 25 years.

Our issues are with the potential mismatch of the time required for measuring exposure per the new rule and members’ work processes. The time dedicated to work activities at rural electric cooperatives that potentially expose workers to RCS tend to be 30 minutes or less, far less than the time required for accurate measures under the proposed rule. The work activities of rural Distribution cooperatives that expose workers to RCS are so minimal that it is impossible to measure. Thus, we ask OSHA to exempt rural Distribution electric cooperatives from the Proposed Rule.

In the case of G&T’s, the likelihood of exposure is a bit greater. While we don’t ask for a complete exemption from the Proposed Rule for rural Generation cooperatives, we do ask for a longer time period to implement the Final Rule.

NRECA recommends an additional extension of the comment period of one year to allow for an adequate review of the standard and supporting materials. A one year extension would result in a comment period end date of 1/27/2015.

Because both the general industry and construction versions of the standards are essentially similar in content, NRECA recommends that cross-referencing language be added to 1926.1053(a) as follows:

*“(2) Compliance with this section will also be deemed to comply with 1910.1053, Respirable Crystalline Silica, if the employers procedures address the hazards covered by paragraphs (a)(1) of this section and those of 1910.1053(a).”*

Similarly, we recommend that cross referencing language be added to 1910.1053(a) as follows:

*“(2) Compliance with this section will also be deemed to comply with 1926.1053, Respirable Crystalline Silica, if the employers procedures address the hazards covered by paragraphs (a)(1) of this section and those of 1926.1053(a).”*

With regard to timing, NRECA recommends that the start-up dates for both the initial exposure assessment and medical surveillance requirements of the general industry and construction standards be extended to one year after the effective date and both 1910.1053(k)(2) & 1926.1053(k)(2) to be revised to read as follows:

*“(2) Start-up dates. (i) All obligations of this section, except initial exposure assessments required by paragraph (d)(2) of this section, medical surveillance required by paragraph (h) of this section, engineering controls required by paragraph (f) of this section and the laboratory requirements in paragraph (d)(5)(ii) of this section, commence 180 days after the effective date.”*

We also recommend adding the following language to (1910.1053(k)(2) & 1926.1053(k)(2):

*“(iv) Initial exposure assessments required by paragraph (d)(2) of this section and medical surveillance required by paragraph (h) of this section shall be completed one year after the effective date.”*

Finally, NRECA recommends modification to 1910.1053(d)(2)(A) & 1926.1126(d)(2)(A) as follows:

*“(A) Has monitored employee exposures under conditions that closely resemble those currently prevailing, provided that such monitoring satisfies the requirements of paragraphs (d)(5)(i) with respect to analytical methods employed: or...”*

- **Background**

Rural electric cooperatives date back to the 1935 when only a small percentage of American farms had access to electricity. In response, President Franklin Roosevelt signed Executive Order 7037 formally creating the Rural Electrification Administration, now known as the Rural Utilities Service in the U.S. Department of Agriculture. Rural electric cooperatives have several characteristics worthy of note:

1. **Member owned:** Consumer-members own the cooperative. Consumer-members elect a Board of Directors from among the membership. The Board of each cooperative hires Managers to run the day to day operation of the cooperative. The

Board serves at the pleasure of the consumer-members. In order to receive service from an electric cooperative, membership in the cooperative is required.

2. **Not for profit:** Electric cooperatives charge cost-based rates for electricity. Rates reflect only the costs the cooperative incurs to provide safe, affordable, reliable electric service. No profit margin is added to the rates. To the extent that there is excess revenue above the cost to serve, those funds are returned to member-owners in the form of capital credits.
3. **Democratically governed:** Cooperatives are democratic organizations controlled by their members, who actively participate in setting policies and making decisions. The elected representatives are accountable to the membership.

A typical rural electric cooperative has approximately 7 consumers per mile of electric line operated. This compares to more urban utilities who serve 34 customers per mile of electric line operated (Investor Owned Utilities) or 48 customers per mile of electric line operated (municipally owned utilities). The average (mean) income for households served by electric cooperatives is 11.5% below the national average.

Rural electric cooperatives are classified by the North American Industrial Classification System ("NAICS") as part of NAICS sector 22, Utilities, and several subsectors including 22111 (Electric Power and Generation), 221112 (Fossil Fuel Electric Power Generation), 221113 (Nuclear Electric Power Generations), 221119 (Other Electric Power Generation) and 22112 (Electric Power Transmission, Control and Distribution) .

Under the Small Business Administration's size standard for utilities, all Distribution electric cooperatives and many G&T's are considered small entities.

Rural electric cooperatives are subject to regulation under OSHA's Construction (29 CFR 1926) and General Industry (29 CFR 1910) regulations. Depending upon the work or activities being performed by the cooperative, work can be classified as maintenance or construction as defined by 29 CFR 1910.12 and 29 CFR 1926.32(g).

Work activities may be self-performed by the cooperative or contracted to an independent firm for completion. It is important to note that a single cooperative and the individuals performing work within that cooperative may be subject to both Construction and General Industry standards depending upon the scope of the work being performed.

As explained below, rural electric cooperatives in general are of two types: 1) Distribution cooperatives and 2) Generation and Transmission or G&T cooperatives. Each type is described below.

**i. Description of Rural Distribution Electric Cooperatives**

Rural Distribution Electric Cooperatives (hereinafter "Distribution co-ops") are electric cooperatives that purchase wholesale electric power, and deliver it to their member owners over the cooperatives' distribution systems. Distribution cooperatives are responsible for building, maintaining and operating the distribution system, a network of electrical lines that may be hung on poles or, in some cases, buried underground. In addition, Distribution cooperatives are typically responsible for meter reading, billing, customer care and other retail electricity service functions.

Across the country, Distribution co-ops own operate and maintain 2.5 million miles of distribution lines.

Distribution system maintenance and construction activities performed by cooperative linemen include placing or replacing poles on which electric distribution wires are mounted. Initial construction or replacement of poles consists of digging holes into the earth into which a pole is mounted. Thus, linemen perform tasks such as augering soil, trenching soil, operating a backhoe, operating a digger derrick and shoveling soil, to name the major activities that involve disturbing earth.

Nationally, distribution co-ops employ approximately 55,000 full time employees. Of these full time employees, 38% or approximately 21,000 serve outside functions such as linemen, groundsmen, or treemen. While it is these employees that are potentially exposed, that potential exposure is not only de minimus but virtually impossible to measure.

**ii. Description of Rural Generation and Transmission Electric Cooperatives**

Generation and Transmission cooperatives provide wholesale power to the Distribution cooperatives that typically own the G&T. The G&T may generate power itself using generating facilities fueled by coal, natural gas or other fossil fuels, or the G&T may purchase the power on the wholesale market for delivery to the Distribution coops. Regardless of the source of the power, the G&T delivers the power to its Distribution owners over high-voltage transmission lines.

Nationally, NRECA G&T members own approximately 990 generating units, representing just less than 61,000 MW of electric generation. Fuel source for these units is:

Fuel Source	Number of Units	MW of capacity
Coal	62	25,500
Natural Gas	338	30,350
Oil	372	1,415
Nuclear	12	2,700
Renewable & Other	Over 200	1,000

We focus our comments herein on the G&T cooperatives that own and operate coal fired generation.

**II. Potential Exposure of Distribution cooperative workers to respirable crystalline silica ("RCS") is minimal**

Despite the short time given for review and analysis prior to filing these comments to OSHA's proposed rule, Distribution cooperatives have analyzed work processes and conclude that a subset of Distribution cooperative employees may be exposed to minimal amounts of crystalline silica when they are performing tasks involving moving earth. Due to the nature of this work – i.e., performed out-of-doors in open air spaces, we conclude that the exposure of distribution cooperative employees is *de minimus*. The work processes at Distribution cooperatives involve neither man-made nor industrial processes using crystalline silica, nor products generally containing crystalline silica. The exposure of a subset of Distribution cooperative employees is to naturally occurring silica in soil, when the soil is moved or disturbed. The processes in which earth is moved or disturbed occurs in open air environments where the dust that may contain silica disburse rapidly. So rapidly, in fact, that in many cases it is impossible to measure the amount of crystalline silica due to extremely small amounts in the dust and rapid dispersion. The earth disturbing tasks performed by Distribution coops are generally short in duration, lasting from only a few minutes to, in general no more than an hour or two, and likely to generate dusts that contain only a small fraction of respirable-sized particles. In other words, the dirt is often shoveled, augered or excavated, activities which do not pulverize the particles, but rather only disturb them.

Current monitoring methods for respirable crystalline silica are OSHA ID-142 and NIOSH Manual of Analytical Methods (NMAMs) 7500, 7601, and 7602. OSHA ID-142 and NMAM 7500 uses an X-Ray Powder Diffraction (XRD) technique, NMAM 7602, uses Infrared Absorption Spectrophotometry (IR) technique, and NMAM 7601 uses visible absorption spectrophotometry (VIS) technique for measurement of samples. These sampling methodologies require volume ranges of 400 to 1000 Liters through a personal sampling pump with the assistance of a Nylon, HD, or aluminum cyclone, depending on the monitoring method selected, attached to the

sampling media. Depending on the type of cyclone used, Nylon, HD, or aluminum, flow rates of 1.7, 2.2, and 2.5 liters per minute (lpm) are used respectively. This equates to collection times of 235, 182, or 160 minutes to obtain the minimum of 400 Liters of total sample volume. Work activities at Distribution co-ops likely to create exposure to respirable crystalline silica do not last for this length of time. Said another way, the sampling pumps would run longer than the task itself. In the case of installing underground distribution lines, most are installed using wet boring methods; this method is not expected to produce respirable crystalline silica due to water inhibiting the creation of dust.

Given the very low level of risk of exposure of Distribution co-ops to respirable crystalline silica, NRECA recommends that OSHA should exempt Distribution co-ops from coverage under the standard. In the alternative, OSHA should grant Distribution co-ops additional time to perform testing to confirm the lack of exposure and to delay the decision to include the Distribution co-ops within the standard until the additional data is available.

### **III. Potential Exposure of G&T cooperative workers to respirable crystalline silica**

Potential sources of RCS at G&T co-ops include, but are not limited to, activities or work tasks involving any of the following materials:

- Fly Ash
- Coal
- Sand Blasting
- Concrete
- Cement
- Refractory Mixes
- Ceramic Fiber Insulation
- Abrasive blasting grit and associated waste

Typical work activities performed by G&T's that operate coal fired generation include:

- Handling and preparation of coal for combustion
- Handling and disposal of coal ash derived from the combustion of coal.
- Operation and maintenance of coal and ash transport systems
- Operation and maintenance of furnaces where coal is combusted.
- Operation and maintenance of pollution control devices
- Construction and maintenance of facilities, transmission lines and equipment,
- Installation and maintenance of refractory
- Installation and removal of ceramic fiber insulation

- Disturbing (auguring, trenching, drilling, excavating, etc.) soils.
- Construction, operation, and maintenance of transmission lines and equipment. This includes excavation of soils, working with concrete and cement, etc.

This work may be performed by personnel such as plant or coal handling operators, mechanics, welders, linemen, etc. Exposure times are varied depending upon the tasks being performed.

#### **IV. Concerns with the Proposed rule**

- **Length of comment period**

OSHA began development of these standards on or before December 19<sup>th</sup>, 2003. It took from that date until May 22, 2009 – a period of 5 years and 5 months --for OSHA to initiate the peer review of the health effects and risk assessment on which the proposed rule is based. Completing the peer review of the health effects and risk assessment alone took OSHA approximately 8 months. Additionally, the Office of Information and Regulatory Affairs (OIRA) received the proposed rules for review on February 14, 2011, and required approximately 2<sup>1/2</sup> years to complete its review on August 23, 2013.

The proposed standard was published in the Federal Register on September 12, 2013. Comments on the proposed standard were originally due to OSHA on December 11, 2013. The comment period was subsequently extended to January 27, 2014. This has given stakeholders a total of 137 days to perform a comprehensive review of the standards and the materials used in their development.

The proposed standard published in the Federal Register included:

- A 99 page Preamble
- A 1401 page Preliminary Economic Analysis
- OSHA-2010-0034-1365 – 622 pages
- OSHA-2010-0034-1709 updated construction industry draft – 134 pages
- References to 1,700 documents

OSHA has not provided an adequate amount of time to review the material used by OSHA in the development of these standards as well as the standards themselves. OSHA took approximately 10 years and 1 month to review applicable materials, develop the standards and complete the required reviews. NRECA recommends that OSHA allow stakeholders adequate time to review and assess the wealth of material provided by OSHA in support of the proposed rule.



Particularly troubling is the length of time that the preliminary risk and economic assessments were withheld from the public. We are disappointed that OSHA did not make these assessments, and their supporting documents, available at a much earlier date so that stakeholders would have had additional time to examine OSHA's analyses and provide more thorough analysis and response.

NRECA recommends an additional extension of the comment period of one year to allow for an adequate review of the standard and supporting materials. A one year extension would result in a comment period end date of 1/27/2015. NRECA further recommends that OSHA meet with members of the utility industry to exchange information on forms of exposure and to further refine the categories within the industry that should be the focus of testing and evaluation.

- **Construction versus Maintenance**

As noted above, many of our members perform both maintenance and construction activities. In some cases our employees could be required to perform both maintenance and construction activities within the same day. Review of both the proposed general industry and construction industry standards revealed that the requirements contained in each one are essentially the same.

Because both the general industry and construction versions of the standards are essentially similar in content, we recommend that cross-referencing language be added to 1926.1053(a) as follows:

*“(2) Compliance with this section will also be deemed to comply with 1910.1053, Respirable Crystalline Silica, if the employers procedures address the hazards covered by paragraphs (a)(1) of this section and those of 1910.1053(a).”*

Similarly, we recommend that cross referencing language be added to 1910.1053(a) as follows:

*“(2) Compliance with this section will also be deemed to comply with 1926.1053, Respirable Crystalline Silica, if the employers procedures address the hazards covered by paragraphs (a)(1) of this section and those of 1926.1053(a).”*

- **Baseline monitoring and Medical surveillance for G&T cooperatives**

OSHA has proposed an effective date of 60 days following publication of the final rule in the Federal Register with a startup date of 180 days following the effective date for all obligations of the section with the exception of engineering controls and laboratory requirements (1910.1053(k) & 1926.1053(k)).

Many rural electric cooperatives do not maintain full time industrial hygienists on staff. We are concerned that with the short time frame for implementing and completing baseline exposure assessments there will not be adequate resources to assist our members. Additionally many of our members are located in rural areas. These members do not have local occupational health resources with the requisite expertise to assist us in complying with the medical surveillance requirements of the standard.

Therefore we recommend that the start-up dates for both the initial exposure assessment and medical surveillance requirements of the general industry and construction standards be extended to one year after the effective date and both (1910.1053(k)(2) & 1926.1053(k)(2) to be revised to read as follows:

*“(2) Start-up dates. (i) All obligations of this section, except initial exposure assessments required by paragraph (d)(2) of this section, medical surveillance required by paragraph (h) of this section, engineering controls required by paragraph (f) of this section and the laboratory requirements in paragraph (d)(5)(ii) of this section, commence 180 days after the effective date.”*

We also recommend adding the following language to (1910.1053(k)(2) & 1926.1053(k)(2):

*“(iv) Initial exposure assessments required by paragraph (d)(2) of this section and medical surveillance required by paragraph (h) of this section shall be completed one year after the effective date.”*

- **Employers should be allowed to include more than 1 year’s historical data as proposed in the rule.**

Proposed Rule sections 1926.1053(d)(2)(ii) and 1910.1053(d)(2)(ii) both allow the use of objective historical data such as personal breathing zone measurements that have been collected by a company. Both sections, however, limit the employer to using data that was collected during the year prior to the effective date of the standard.

Where applicable, personal air monitoring for RCS is typically performed by our members in accordance with any of the following standard methods and analyzed by a laboratory participating in the American Industrial Hygiene Association’s laboratory accreditation program.

- OSHA ID-142
- NMAM7500
- NMAM 7602
- NMAM 7603
- MSHA P-2
- MSHA P-7

Many of the operations that could result in potential exposure to RCS within the utility industry are ongoing and function continually with little change to processes, fuel sources, etc. Consequently, production processes, types of materials, control methods, work practices, and environmental conditions can remain unchanged for extended periods of time. When changes are made the changes are the subject of advance planning and are well defined.

OSHA recently promulgated regulations on Hexavalent Chromium (Chromium VI, 1910.1026 and 1926.1126). Both regulations allow the use of historical air monitoring data to determine employee exposures (1910.1026(d)(3) & 1926.1126(d)(3)) when that data reflect workplace conditions closely resembling the processes, types of material, control methods, work practices, and environmental conditions in the employer's current operations (1926.1126(b) & 1910.1026(b)) without the limitation of using data obtained within the year prior to the effective date of the standard. The construction cadmium standard (1926.1127(d)(2)(iii)) does not limit data to that obtained within a prior year.

The proposed restriction for RCS testing to historical data obtained within the year prior to the effective date of the standard poses an unnecessary burden on employers by requiring them to reassess known exposures. This burden includes both the labor and associated costs for completing the required air monitoring, sample analysis, duplicate reporting, lost production, etc. The requirement is also inconsistent with the performance oriented provisions of the standards described in the previous paragraph.

It is NRECA's recommendation that air monitoring data obtained by a person with adequate training and experience to perform the required air sampling, following one of the above listed sampling methods, and when analyzed by an accredited laboratory should be allowed to be used for initial monitoring requirements when it meets the criteria for objective data as in the proposed rule at 1910.1053(b) & 1926.1126(b).

Therefore NRECA recommends modification to 1910.1053(d)(2)(A) & 1926.1126(d)(2)(A) as follows:

*“(A) Has monitored employee exposures under conditions that closely resemble those currently prevailing, provided that such monitoring satisfies the requirements of paragraphs (d)(5)(i) with respect to analytical methods employed: or...”*

Adoption of this recommended change will allow employers to meet the intent of the proposed standards while doing so in a more efficient and cost effective manner that is consistent with the performance oriented approach OSHA has used in other standards.

- **Definition of respirable crystalline silica**

The definition of respirable crystalline silica in the Proposed Rule is as follows: “airborne particles that contain quartz, cristobalite, and/or tridymite and whose measurement is determined by a sampling device designed to meet the characteristics for respirable-particle size-selective samplers specified in the International Organization for Standardization (ISO) 7708:1995: Air Quality—Particle Size Fraction Definitions for Health-Related Sampling.” (Proposed Rule at 56444)

It is well known that the health hazards of crystalline silica are not just from the inhalation of all silica dusts but when the dusts are of such small size that they become trapped deep within the respiratory system, specifically in the gas-exchange region of the lung, and scar surrounding tissues just the same as asbestos. (“Assessment clearly relates development of crystalline silica-related disease to respirable, rather than total, dust exposures: “(Proposed Rule, 56445)). These very small particles are called respirable dusts and are commonly believed to be anything 10 microns or smaller in aerodynamic diameter; just as the Proposed Rule states on pages 56445 and 56451. However, the proposed definition would include anything that gets collected onto the sampling media from respirable-particle size-selective samplers. Unfortunately, these samplers are not fool-proof and often much larger sized particles do make their way into the sampling media; that is, they collect total crystalline silica dusts rather than just the respirable portions. This definition will include all total dusts that make their way through the cyclone and into the sampling media, thus suggesting a much larger exposure than is otherwise the case.

An additional concern with the definition is that it states “any particles that contain quartz, cristobalite, and/or tridymite..” It is possible to interpret this portion of the definition to mean that any other minerals/impurities that were able to be collected into the sampling media will be counted/weighed as opposed to just the silica portions, again overstating the occurrence of RCS.

NRECA recommends that OSHA revise the definition to be more precise and focused only on RCS.

#### **V. Answers to specific questions posed by OSHA in the Proposed Rule**

National Rural Electric Cooperative Association’s (“NRECA”) answer to select questions posed by OSHA in the Proposed Rulemaking:

##### **Question 8:**

*In its PEA of the proposed rule, summarized in Section VIII of this preamble, OSHA presents a profile of the affected worker population. The profile includes estimates of the number of affected workers by industry sector or operation and job category, and the distribution of*

*exposures by job category. If your company has potential worker exposures to respirable crystalline silica, is your industry among those listed by North American Industry Classification System (NAICS) code as affected industries? Are there additional data that will enable the Agency to refine its profile of the worker population exposed to respirable crystalline silica? If so, provide or reference such data and explain how OSHA should use these data to revise the profile.*

**NRECA Response to Question 8:**

Rural electric cooperatives and electric utilities in general, are not included in those listed by the agency as affected industries. This makes sense due to the very limited exposure of our workers to RCS. Therefore NRECA recommends that the utility industry not be listed as an affected industry. In support of this recommendation, Federated Rural Electric Insurance Exchange, the provider of workers' compensation insurance to over half of the 900 member cooperatives of NRECA, reports ZERO cases of silicosis in over 25 years.

**Question 9:**

*What are the job categories in which employees are potentially exposed to respirable crystalline silica in your company or industry? For each job category, provide a brief description of the operation and describe the job activities that may lead to respirable crystalline silica exposure. How many employees are exposed, or have the potential for exposure, to respirable crystalline silica in each job category in your company or industry? What are the frequency, duration, and levels of exposures to respirable crystalline silica in each job category in your company or industry? Where responders are able to provide exposure data, OSHA requests that, where available, exposure data be personal samples with clear descriptions of the length of the sample, analytical method, and controls in place. Exposure data that provide information concerning the controls in place are more valuable than exposure data without such information.*

**NRECA Response to Question 9:**

Please see our introduction and background comments for details on the two major types of rural electric cooperatives. We divide our answer to this question according to the two major functions.

At distribution cooperatives, workers that may be potentially exposed to crystalline silica include linemen, apprentice linemen, linemen helpers and equipment operators.

These workers may be exposed to crystalline silica when ground is broken by augering, trenching, operating a backhoe or using a shovel to dig, handle or push soil. These operations occur in the process of digging holes in the ground to set the poles on which wires are strung to provide electricity to member/consumers of the cooperative. Due to the nature of this work – i.e., performed out-of-doors in open air spaces, we conclude that the exposure of distribution cooperative employees is *de minimus*. The work processes at Distribution cooperatives involve

neither man-made nor industrial processes using crystalline silica, nor products generally containing crystalline silica. The exposure of a subset of Distribution cooperative employees is to naturally occurring silica in soil, when the soil is moved or disturbed. The processes in which earth is moved or disturbed occurs in open air environments where the silica disburse rapidly. So rapidly, in fact, that in many cases it is impossible to measure the amount of crystalline silica due to extremely small amounts and rapid dispersion. The earth disturbing tasks performed by Distribution coops are generally short in duration and likely to generate total dusts rather than respirable-sized dusts; that is, the dirt is often shoveled, augered or excavated which is not pulverizing the particles, but rather is disturbing them. The current sampling method for respirable crystalline silica is found in NIOSH's Manual of Analytical Methods 7500. This sampling methodology requires a minimum volume of collection of 400 Liters through the sampling pump. Using average sampling pumps, the collection of 400 Liters typically requires anywhere between 2.5 -3.5 hours. OSHA's Proposed Rule sets forth a method that would require 8 hours minimum to collect samples. This is even more unrealistic for the work activities performed by Distribution cooperatives. Work activities at Distribution coops likely to create exposure to respirable crystalline silica typically are not performed for 2.5 – 3.5 hours, let alone 8 hours. Said another way, the sampling pumps would run longer that the task itself. In the case of installing underground distribution lines, most are installed using wet boring methods; this method is not expected to produce respirable crystalline silica due to water inhibiting the creation of dust.

While we are still in the process of gathering data for a broader sample of distribution cooperatives, one typical distribution cooperative reports that its workers spend daily averages as follows by activity<sup>1</sup>:

<b>Activity</b>	<b>Daily Time</b>
Augering Soil	30 minutes per day
Trenching Soil	45 minutes per day
Operating Backhoe	2 hours per day
Shoveling Soil	1 hour per day

**Question 11:**

*Have there been technological changes within your industry that have influenced the magnitude, frequency, or duration of exposure to respirable crystalline silica or the means by which employers attempt to control such exposures? Describe in detail these technological changes and their effects on respirable crystalline silica exposures and methods of control.*

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<sup>1</sup> Source: Southern Maryland Electric Cooperative

**NRECA Response to Question 11:**

Exposure to crystalline silica has been mitigated at both Distribution and G&T cooperatives by the adoption of wet boring methods and enclosed cab mini-excavators that have replaced trenchers.

**Question 12:**

*Has there been a trend within your industry or an effort in your firm to reduce or eliminate respirable crystalline silica from production processes, products, and services? If so, please describe the methods used and provide an estimate of the percentage reduction in respirable crystalline silica, and the extent to which respirable crystalline silica is still necessary in specific processes within product lines or production activities. If you have substituted another substance(s) for crystalline silica, identify the substance(s) and any adverse health effects associated with exposure to the substitute substances, and the cost impact of substitution (cost of materials, productivity impact). OSHA also requests that responders describe any health hazards or technical, economic, or other deterrents to substitution.*

**NRECA Response to Question 12:**

The adoption of wet boring methods and enclosed cab mini-excavators (discussed in Question 11 above) have mitigated what is already minimal exposure to crystalline silica at electric cooperatives. The risk of exposure of workers at electric cooperatives is to dust containing naturally occurring crystalline silica in earth moving processes. As discussed above, earth moving operations are not the main focus of worker activities at electric cooperatives.

**Question 13:**

*Has your industry or firm used outsourcing or subcontracting, or concentrated high exposure tasks inhouse, in order to expose fewer workers to respirable crystalline silica? An example would be subcontracting for the removal of hardened concrete from concrete mixing trucks, a task done typically 2–4 times a year, to a specialty subcontractor. What methods have you used to reduce the number of workers exposed to respirable crystalline silica and how were they implemented? Describe any trends related to concentration of high exposure tasks and provide any supporting information.*

**NRECA Response to Question 13:**

While some work at rural electric cooperatives is outsourced or subcontracted, the decision to do so is never made on the basis of exposure to RCS. The exposure of our workers, be they in-house or contractors, is minimal and occurs mostly in earth moving activities. Earth moving activities are not the main focus of the work performed at Distribution and G&T cooperatives.

**Question 14:**

*Does any job category or employee in your workplace have exposures to respirable crystalline silica that air monitoring data do not adequately portray due to the short duration, intermittent or non-routine nature, or other unique characteristics of the exposure? Explain your response and indicate peak levels, duration, and frequency of exposures for employees in these job categories.*

**NRECA Response to Question 14:**

Current monitoring methods for respirable crystalline silica are OSHA ID-142 and NIOSH Manual of Analytical Methods (NMAMs) 7500, 7601, and 7602. OSHA ID-142 and NMAM 7500 use an X-Ray Powder Diffraction (XRD) technique, NMAM 7602, uses Infrared Absorption Spectrophotometry (IR) technique, and NMAM 7601 uses visible absorption spectrophotometry (VIS) technique for measurement of samples. The aforementioned sampling methodologies require volume ranges of 400 to 1000 Liters through a personal sampling pump with the assistance of a Nylon, HD, or aluminum cyclone, depending on the monitoring method selected, attached to the sampling media. Depending on the type of cyclone used, Nylon, HD, or aluminum, flow rates of 1.7, 2.2, and 2.5 liters per minute (lpm) are used respectively. This equates to collection times of 235, 182, or 160 minutes to obtain the minimum of 400 Liters of total sample volume. Sampling should be performed in compliance with NIOSH Analytical Method 7500, requiring a minimum of 400 L collected per sample. Typically, this would require between 2.5 - 3.5 hours sampling time based upon flowrates. Construction tasks associated with electric transmission and distribution work producing dust containing respirable silica are of such short duration (~1hr) that sampling pumps would typically run longer than the task itself. OSHA's Proposed Rule sets forth a method that would require 8 hours minimum to collect samples. This is even more unrealistic for the work activities performed by Distribution and Generation and Transmission cooperatives. Work activities at coops likely to create exposure to respirable crystalline silica typically are not performed for 2.5 – 3.5 hours, let alone 8 hours. Said another way, the sampling pumps used in either methodology would have to run longer than the task itself.

Additionally, representative samples would be difficult to portray since the silica source is naturally occurring in the earth's soil and varies by geography.

Although employees do perform digging, trenching and handling of soil, those activities are not the main activities performed by Distribution and G&T cooperative employees.

Based on Table 1 (Exposure Control Methods for Selected Construction Operations) in the Proposed Rule, only 3 operations of the total of 13 analyzed by OSHA are performed by employees at Distribution cooperatives. While workers in our industry do use jackhammers and



other impact drillers, operate vehicle-mounted drilling rigs for rock and use heavy equipment for earthmoving, in most cases these tasks involve no more than 4 hours per 8 hours shift, and in many cases the duration would not exceed one hour. On an annual basis, we estimate that these activities would fall well below 30 days per year per employee.

**Question 18(e):**

*Are OSHA's estimates for medical surveillance costs—including direct medical costs, the opportunity cost of worker time for offsite travel and for the health screening, and recordkeeping costs—reasonable?*

**NRECA Response to Question 18(e):**

In the Preliminary Economic Analysis at page 56363, the estimated unit cost of the initial health screening in general industry and maritime ranges from \$378 to \$397. In the absence of objective air monitoring data, all employees may be subject to the establishment of an initial baseline examination. In the case of distribution co-ops, 42,447 employees would potentially require an initial baseline examination. Given OSHA's estimate, and using the lower end of the range, that would burden the Distribution subsector of the industry with a \$16 million cost of compliance. Even if only the workers involved in outside work were to be required to have a baseline examination, that cost would still be a \$6 million cost to an industry that serves some of the most economically challenged members of our society.

In addition, given the rural nature of our members, the range used in OSHA's estimate is likely understated. More travel time and fewer medical personnel in rural areas will increase this estimate in the case of rural electric cooperatives.

**Question 19:**

*OSHA has considered the effects on small entities raised during its SBREFA process and addressed these concerns in Chapter VIII of the PEA. Are there additional difficulties small entities may encounter when attempting to comply with requirements of the proposed rule? Can any of the proposal's requirements be deleted or simplified for small entities, while still providing equivalent protection of the health of employees? Would allowing additional time for small entities to comply make a difference in their ability to comply? How much additional time would be necessary?*

**NRECA Response to Question 19:**

At Page VIII-12 of the Preliminary Economic Analysis, OSHA states "Although OSHA did not explicitly develop or quantitatively analyze any other regulatory alternative involving longer-term or more complex phase-ins of the standard (possible involve more delayed implementation dates for small businesses), the Agency is soliciting comments on this issue. NRECA strongly recommends that OSHA adopt a longer term phase in for both Distribution and G&T cooperatives, many of which are small entities.

Given that the risk of exposure to RCS by Distribution cooperatives is minimal, as shown by our description of the work processes, as well as no reported cases of silicosis by a major provider of Workers Compensation coverage to approximately half of these workers, a longer term phase in would not postpone benefits of the standard to these workers.

In the case of G&T co-ops that qualify as small, NRECA strongly recommends an additional 6 months (to July 28, 2014) of comment period, and a 2 year phase in once the final rule is adopted. Please note that we also recommend a one year phase in (i.e., implementation one year after the effective date of the Final Rule) for G&T's that don't qualify as small. Both the 2 year phase in for small G&T's and the 1 year phase in for those G&T's that don't qualify as small will give the labs a chance to get up and running with the new requirements. It is inefficient and disruptive to impose an implementation date for employers that is prior to that required of the labs.

**Question 23:**

*If the proposed rule is promulgated, OSHA will provide outreach materials on the provisions of the standards in order to encourage and assist employers in complying. Are there particular materials that would make compliance easier for your company or industry? What materials would be especially useful for small entities? Submit recommendations or samples.*

**NRECA Response to Question 23:**

NRECA members have found training materials developed by OSHA to be a helpful resource in training workers on new and existing OSHA requirements. We strongly urge OSHA to develop a complete suite of training materials, including PowerPoint training presentations and presenters' scripts, and Frequently Asked Questions. For example, our members have found the Recordkeeping FAQ's found at <https://www.osha.gov/recordkeeping/entryfaq.html> to be very helpful. We also encourage OSHA to update its webpage on this rule to include timely training materials.

**Question 30:**

*OSHA's Advisory Committee on Construction Safety and Health (ACCSH) has historically advised the Agency to take into consideration the unique nature of construction work environments by either setting separate standards or making accommodations for the differences in work environments in construction as compared to general industry. ASTM, for example, has separate silica standards of practice for general industry and construction, E 1132-06 and E 2625-09, respectively. To account for differences in the workplace environments for these different sectors, OSHA has proposed separate standards for general industry/maritime and construction. Is this approach necessary and appropriate? What other approaches, if any, should the Agency consider? Provide a rationale for your response.*

**NRECA Response to Question 30:**

NRECA's members perform both maintenance and construction activities. In some cases our employees could be required to perform both maintenance and construction activities within the same day. Review of both the proposed general industry and construction industry standards revealed that the requirements contained in each one were essentially the same.

Because both the general industry and construction versions of the standards are essentially similar in content, we recommend that cross-referencing language be added to 1926.1053(a) as follows:

*“(2) Compliance with this section will also be deemed to comply with 1910.1053, Respirable Crystalline Silica, if the employers procedures address the hazards covered by paragraphs (a)(1) of this section and those of 1910.1053(a).”*

Similarly, we recommend that cross referencing language be added to 1910.1053(a) as follows:

*“(2) Compliance with this section will also be deemed to comply with 1926.1053, Respirable Crystalline Silica, if the employers procedures address the hazards covered by paragraphs (a)(1) of this section and those of 1926.1053(a).”*

We make this recommendation in the interest of clarity as well as to avoid worker confusion.

**Question 33:**

*Should OSHA limit coverage of the rule to materials that contain a threshold concentration (e.g., 1%) of crystalline silica? For example, OSHA's Asbestos standard defines "asbestos containing material" as any material containing more than 1% asbestos, for consistency with EPA regulations. OSHA has not proposed a comparable limitation to the definition of respirable crystalline silica. Is this approach appropriate? Provide the rationale for your position.*

**NRECA Response to Question 33:**

Limiting the Proposed Rule to materials that contain a threshold concentration would make the rule very onerous for NRECA members if testing would be required before activities commence, and would also be impractical because of the naturally occurring silica content of the earth's surface. As stated repeatedly in these comments, exposure of workers at rural electric cooperatives is generally at work sites where earth is disturbed. Asbestos containing materials can, in many cases, be tested and the percentage of asbestos can be determined from samples.

**Question 35:**

*Competent person. OSHA has proposed limited duties for a competent person relating to establishment of an access control plan. The Agency did not propose specific requirements*

*for training of a competent person. Is this approach appropriate? Should OSHA include a competent person provision? If so, should the Agency add to, modify, or delete any of the duties of a competent person as described in the proposed standard? Provide the basis for your recommendations.*

**NRECA Response to Question 35:**

To the extent that any Final Rule is applicable to rural electric utilities, a competent person would be required to set up the access control plan to areas of potential exposure. A competent person is also needed to be able to set up appropriate protection for the employees that experience exposure to respirable crystalline silica. The competent person should be trained in the setup of proper air monitoring, setting the boundaries of the control zone, physical characteristics of crystalline silica, proper personal protective equipment including respirators. Just as in the excavation standard a competent person would be able to identify existing and predicable hazards in the surroundings, or working conditions which are unsanitary, hazardous, or dangerous to employees and has authorization to take prompt corrective measures to eliminate them.

**Question 36:**

*Has OSHA defined "respirable crystalline silica" appropriately? If not, provide the definition that you believe is appropriate. Explain the basis for your response, and provide any data that you believe are relevant.*

**NRECA Response to Question 36:**

The definition of respirable crystalline silica in the Proposed Rule is as follows: "airborne particles that contain quartz, cristobalite, and/or tridymite and whose measurement is determined by a sampling device designed to meet the characteristics for respirable-particle size-selective samplers specified in the International Organization for Standardization (ISO) 7708:1995: Air Quality—Particle Size Fraction Definitions for Health-Related Sampling." (Proposed Rule at 56444).

It is well known that the health hazards of crystalline silica are not just from the inhalation of all silica dusts but when the dusts are of such small size that they become trapped deep within the respiratory system, specifically in the gas-exchange region of the lung, and scar surrounding tissues just the same as asbestos. ("Assessment clearly relates development of crystalline silica-related disease to respirable, rather than total, dust exposures: "(Proposed Rule, 56445)). These very small particles are called respirable dusts and are commonly believed to be anything 10 microns or smaller in aerodynamic diameter; just as the Proposed Rule states on pages 56445 and 56451. However, the proposed definition would include anything that gets collected onto the sampling media from respirable-particle size-selective samplers. Unfortunately, these samplers are not fool-proof and often much larger sized particles do make their way into the sampling media; that is, they collect total crystalline silica dusts rather than just the respirable portions. This

definition will include all total dusts that make their way through the cyclone and into the sampling media, thus suggesting a much larger exposure than is otherwise the case.

An additional concern with the definition is that it states “any particles that contain quartz, cristobalite, and/or tridymite..” It is possible to interpret this portion of the definition to mean that any other minerals/impurities that were able to be collected into the sampling media will be counted/weighed as opposed to just the silica portions, again overstating the occurrence of RCS.

NRECA recommends that OSHA revise the definition to be more precise and focused only on RCS.

**Question 85:**

*OSHA requests comment on the time allowed for compliance with the provisions of the proposed rule. Is the time proposed appropriate, or should there be a longer or shorter phase-in of requirements? In particular, should requirements for engineering controls and/or medical surveillance be phased in over a longer period of time (e.g., over 1, 2, 3, or more years)? Should an extended phase-in period be provided for specific industries (e.g., industries where first-year or annualized cost impacts are highest), specific size classes of employers (e.g., employers with fewer than 20 employees), combinations of these factors, or all firms covered by the rule? Identify any industries, processes, or operations that have special needs for additional time, the additional time required, and the reasons for the request.*

**NRECA Response to Question 85:**

NRECA strongly recommends that the proposed rule be phased in such that Distribution and G&T employers can make reliable and consistent determination of the RCS exposure of their employees. Sources for testing must be available, labs must be in place to analyze results, results must come back to the employer in a timely fashion, medical services must be available to begin the initial (baseline) exam and the employer must be given time to establish engineering controls/ work procedures to protect employees.

In order to achieve the outcomes described above, NRECA strongly recommends:

1. Additional time for analysis and comments on the proposed rule. An additional 6 months of comment period at a minimum is necessary for stakeholders to absorb the:
  - 99 page Preamble to the Proposed Rule
  - 1401 page Preliminary Economic Analysis
  - 622 pages of OSHA-2010-0034-1365
  - 134 page of OSHA-2010-0034-1709 updated construction industry draft
  - References to 1,700 documents

OSHA has not provided an adequate amount of time to review the material used by OSHA in the development of these standards as well as the standards themselves. OSHA took approximately 10 years and 1 month to review applicable materials, develop the standards and complete the required reviews.

By extending the comment period to July 28, 2014, stakeholders will be able to provide more comprehensive comments and proposals to address concerns.

2. Additional time for implementation of the Rule once it is Final. NRECA strongly recommends that the effective date for employers be one year after the effective date for labs. It is inefficient to begin testing before labs are prepared for the new Rule. See our response to Question 86 below.

**Question 86:**

*OSHA is proposing a two-year start-up period to allow laboratories time to achieve compliance with the proposed requirements, particularly with regard to requirements for accreditation and round robin testing. OSHA also recognizes that requirements for monitoring in the proposed rule will increase the required capacity for analysis of respirable crystalline silica samples. Do you think that this start-up period is enough time for laboratories to achieve compliance with the proposed requirements and to develop sufficient analytic capacity? If you think that additional time is needed, please tell OSHA how much additional time is required and give your reasons for this request.*

**NRECA Response to Question 86:**

The Proposed Rule should be phased in such that employers can make a reliable and consistent determination of the crystalline silica exposure of its employees. Sources for testing must be available, labs must be in place to analyze results, results must come back to the employer in a timely fashion, medical services must be available to begin the initial (baseline) exam and the employer must be given time to establish engineering controls/ work procedures to protect employees. While not commenting on the sufficiency of proposed timing for laboratories, NRECA strongly recommends that OSHA phase in the rule in such a way that the laboratories achieve compliance before employers are required to comply.

**VI. Conclusion**

NRECA and its member systems are concerned about and focused on worker safety. We appreciate the effort and time that OSHA has expended to update the crystalline silica exposure rule. We consider these comments to be preliminary due to the truncated timeline provided in this comment period. We urge OSHA to allow sufficient time for stakeholders to develop and present more in-depth analysis regarding the Proposed Rule.

Due to the unique nature of work processes at Distribution co-ops, we believe that Distribution co-op workers' exposure to crystalline silica is de minimus. The work processes that may expose workers involve disturbing earth, are conducted out of doors and the resulting RCS may not even be measurable. We recommend that OSHA exempt Distribution coops from the standard. In the alternative, OSHA should grant Distribution coops additional time to perform testing to confirm the lack of exposure. OSHA should delay any decision to include Distribution coops within the standard until data on exposure is available.

Generation & Transmission co-ops with coal fired generation likely face a slightly greater exposure of workers to RCS. Nevertheless, we urge OSHA to consider our comments with regard to timing and data when developing the Final Rule. First, OSHA should extend the comment period, allowing not only NRECA members, but to all stakeholders so that stakeholders have sufficient time to analyze and respond to the work that has taken OSHA years to complete. Second, any Final Rule should phase in implementation such that the laboratories are able to handle testing required by the Final Rule. Implementation by employers should not be required prior to the laboratories being sufficiently ready to test and deliver consistent results. Third, to the extent that G&T cooperatives are currently conducting air sampling, and have been doing so for some time, OSHA should not limit the use of sampling data to the most recent 12 months. The work processes at coal fired generating stations simply haven't changed enough to warrant only 12 months' worth of sampling data to be considered. Of course, there may be scenarios at newer plants where only the most recent 12 months data is available. Our point here is that OSHA should not limit the data used for testing.

Granting additional time for comments and implementation to the utility industry will not create additional risk of exposure. Federated Rural Electric Insurance Exchange, the provider of workers' compensation insurance to over half of the 900 member cooperatives of NRECA, reports ZERO cases of silicosis in over 25 years. OSHA should retrieve this kind of information from US Government databases and factor it into its risk assessment. Such data may negate the inferences of continued risk at the present PEL, making the proposed reduction unnecessary.

As stated above, NRECA also recommends that cross-referencing language be added to 1926.1053(a) as follows:

*"(2) Compliance with this section will also be deemed to comply with 1910.1053, Respirable Crystalline Silica, if the employers procedures address the hazards covered by paragraphs (a)(1) of this section and those of 1910.1053(a)."*

Similarly, we recommend that cross referencing language be added to 1910.1053(a) as follows:

*“(2) Compliance with this section will also be deemed to comply with 1926.1053, Respirable Crystalline Silica, if the employers procedures address the hazards covered by paragraphs (a)(1) of this section and those of 1926.1053(a).”*

NRECA recommends that the start-up dates for both the initial exposure assessment and medical surveillance requirements of the general industry and construction standards be extended to one year after the effective date and both (1910.1053(k)(2) & 1926.1053(k)(2) to be revised to read as follows:

*“(2) Start-up dates. (i) All obligations of this section, except initial exposure assessments required by paragraph (d)(2) of this section, medical surveillance required by paragraph (h) of this section, engineering controls required by paragraph (f) of this section and the laboratory requirements in paragraph (d)(5)(ii) of this section, commence 180 days after the effective date.”*

And, we recommend adding the following language to (1910.1053(k)(2) & 1926.1053(k)(2):

*“(iv) Initial exposure assessments required by paragraph (d)(2) of this section and medical surveillance required by paragraph (h) of this section shall be completed one year after the effective date.”*

Finally, NRECA recommends modification to 1910.1053(d)(2)(A) & 1926.1126(d)(2)(A) as follows:

*“(A) Has monitored employee exposures under conditions that closely resemble those currently prevailing, provided that such monitoring satisfies the requirements of paragraphs (d)(5)(i) with respect to analytical methods employed: or...”*

Again, we appreciate the opportunity to provide these preliminary comments and look forward to working with OSHA and other stakeholders in addressing this important issue.

Respectfully submitted,



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