Coalition for Sustainable Cement Manufacturing & Environment
1107 9th Street, Suite 930 | Sacramento, CA 95814 | (916) 447-9884

June 21, 2024

Ms. Liane M. Randolph
Chair
California Air Resources Board
1001 "I" Street
Post Office Box 2815
Sacramento, California 95812

Subject: **The California Cement Industry's Comments on the May 31, 2024 Cap-and-Trade Program Workshop**

Dear Ms. Randolph:

The Coalition for Sustainable Cement Manufacturing and Environment ("CSCME") provides these comments on the California Air Resources Board ("CARB") May 31, 2024 Cap-and-Trade Program Workshop, including discussions of potential cap-and-trade Program updates and budgets, industrial allocation, and certain Mandatory Reporting Regulation ("MRR") reporting requirements.

CSCME is a coalition of all five cement manufacturers in California.[1] The California cement industry has a long history of working cooperatively and constructively with legislators and regulators to develop policies that advance the state's climate goals and promote the cost-effective reduction of greenhouse gas ("GHG") emissions in the cement industry while minimizing the risk of economic and emissions leakage. The industry's work with CARB extends from the initial design and implementation of the cap-and-trade program under AB 32, to the amendment and extension of the program under AB 398, to the ongoing efforts to amend the cap-and-trade program and develop a cement industry strategy to achieve net carbon neutrality by 2045 under SB 596.

Due to this collaboration among industry leaders, policymakers, regulators, and other stakeholders, the California cement industry has continued to serve as a reliable source of jobs, investment, and other benefits for local communities while also making significant contributions to the state's climate objectives. For example, between 2008 and 2021, the California cement industry produced 7 percent more cement but with 12 percent fewer GHG emissions.[2] The industry also continues to serve as a laboratory for innovative policies, pilot projects, and new technologies that have the potential to further reduce GHG emissions inside the state and around the world.[3]

CARB's industrial allowance allocation program has been critical to the California cement industry's ability to sustain in-state production while also reducing its GHG intensity. During the initial design of the cap-and-trade program, CARB recognized that the California cement industry faces two unique challenges: (1) it is highly

[1] The Coalition includes CalPortland Company, Cemex, Inc., Mitsubishi Cement Corporation, National Cement Company of California Inc., and Tehachapi Cement, LLC. There are seven cement plants currently in operation in California.

[2] Cement production data from: United States Geological Survey (2008-2021). Mineral Industry Surveys, Cement, Table 1A. Greenhouse gas emissions data from: California Air Resources Board (2023). 2000-2021 GHG Inventory.

[3] *See*, *e.g.*, National Cement Company of California selected for award negotiation by the U.S. Department of Energy (DOE) Office of Clean Energy Demonstrations (OCED) as part of the Industrial Demonstrations Program, https://www.nationalcement.com/news-main/national-cement-of-california.

exposed to leakage risk due to its extremely high carbon cost burden and significant exposure to imports, and (2) it is difficult-to-decarbonize due to its significant share of process emissions (*i.e.*, GHG emissions resulting from the chemical reaction of converting limestone into clinker that cannot be mitigated by fuel switching). As a result, CARB concluded that the industry merited both a full assistance factor and a cap adjustment factor ("CAF") that declines at half the rate of other industries. CARB's ability to recognize the California cement industry's unique challenges and address them in the initial design of the program, coupled with a relatively low carbon price environment for many years, was essential to minimizing the risk of emissions leakage in the industry during the cap-and-trade program's nascent years.

But much has changed since the industrial allowance allocation program was designed and implemented over a dozen years ago. The allowance allocation rate for California cement manufacturers has declined by 14 percent. Allowance prices have increased by more than 300 percent. The offsets usage limit has been cut in half. Imports have increased from virtually non-existent to roughly a quarter of the market. And the world's understanding of the cement industry's high leakage risk and difficult-to-decarbonize status has only been reaffirmed, heightened, and deepened.

At the same time, many things have remained unchanged. Cement importers are still not held to a similar environmental standard as in-state producers. Due to legislation to extend the cap-and-trade program, the cement industry receives the same assistance factor as all other industries, despite extreme differences in carbon cost burden and leakage risk. And many of the policy, regulatory, and market barriers that prevent the California cement industry from reducing its GHG footprint remain in place.

In short, the risk of economic and emissions leakage in the California cement industry is greater than ever and continues to grow. It is against this backdrop that CARB is proposing new amendments to the cap-and-trade program that, if taken at face value, will only exacerbate the industry's leakage risk by both decreasing its allowance allocation rate (via reducing the CAF) and increasing allowance prices (via reducing the overall supply of allowances). In the absence of a mechanism that holds imported cement to a similar environmental standard or other policy changes that offset an increasing carbon cost burden that far exceeds other industries, these changes have the potential to push California cement manufacturers across a tipping point in which they are unable to effectively compete in the California market.

The consequences of crossing such a tipping point would be devastating to the state's economic, security, and environmental interests. It would shutter plants that are major sources of jobs and investment for local communities, especially given that California cement plants tend to reside in relatively small and rural communities. It would increase the state's reliance on imported cement and, therefore, threaten the security of the state's construction supply chain. And it would undermine California's climate change objectives as local sourcing is replaced by imported cement that often has a larger GHG footprint, especially after accounting for the GHG emissions associated with getting it to port, shipping it halfway across the world, and trucking/railing it through already congested ports to get into the California market.

It is within this broader context that the California cement industry offers our feedback on: (a) the accelerating risk of economic and emissions leakage for the California cement industry; (b) implementing any increase in the stringency of the cap; (c) expanding the definition of cement output and the potential implications for allowance allocations; and (d) requiring cement importers to report the GHG emissions associated with imported product to CARB. We also offer additional thoughts on the importance of unlocking carbon capture, utilization, and/or storage ("CCUS") as a viable pathway for reducing GHG emissions in the California cement industry, especially as it relates to implementing SB 905.

I. THE ACCELERATING RISK OF ECONOMIC & EMISSIONS LEAKAGE IN THE CALIFORNIA CEMENT INDUSTRY

The California cement industry is widely recognized as both difficult to decarbonize and highly exposed to the risk of leakage. These twin challenges heighten the urgency of creating a policy and regulatory environment that incentivizes long-term investments in deep decarbonization and ensures that local cement producers are not placed at a competitive disadvantage to imports from both foreign and domestic sources that are not held to a similar environmental standard.

As described in prior comments, the California cement industry is highly exposed to the risk of economic and emissions leakage because of a variety of factors:

- Cement is a fungible, globally traded commodity that is purchased primarily based on price.
- Cement production entails a significant amount of process emissions which constitute roughly two-thirds of the industry's GHG footprint.
- The cement industry is an energy-intensive and emissions-intensive industry in which relatively small increases in carbon costs, whether due to increases in carbon prices or other regulatory measures, can have a devastating effect on a producer's economic viability.
- The vast majority of California cement demand is within a short distance of the coast and, therefore, demand can be easily met by imports from jurisdictions with less stringent environmental regulations, including distant nations in Asia.
- California has the infrastructure capacity (*i.e.*, terminals) to readily accommodate a rapid expansion of imports.

Given that a market is easily accessible to imports that are not held to a similar environmental standard, the primary driver of economic and emissions leakage is the carbon cost burden associated with complying with the cap-and-trade program. And the extent of an industry's carbon cost burden is primarily determined by two factors: (1) the quantity of GHG emissions generated per unit of economic output (*i.e.*, per dollar of value added) and (2) the compliance costs per GHG emission (*i.e.*, the allowance price).[4]

In 2010, CARB conducted an analysis to evaluate the first factor to better understand the relative risk of leakage across a wide range of California industries.[5] That analysis found that the California cement industry emitted almost 14,000 metric tons of carbon dioxide equivalent ("CO2e") per unit of value added. To put that figure into perspective, it is approximately four times greater than any major emitting industry in California and ten times greater than many other industries that continue to receive a 100 percent assistance factor due to AB 398 (Figure 1).[6] Simply put, the California cement industry is highly unique when it comes to GHG intensity per unit of

[4] An industry's value added is effectively its contribution to economic output (*i.e.*, gross domestic product). An industry's value added is calculated as the difference between the value of its gross output (*e.g.*, sales) and the cost of its inputs. Benchmarking GHG emissions relative to value added (as opposed to physical units, gross sales, or some other measure), provides a more accurate measure of the impact that a carbon price has on an industry's financial health and viability.

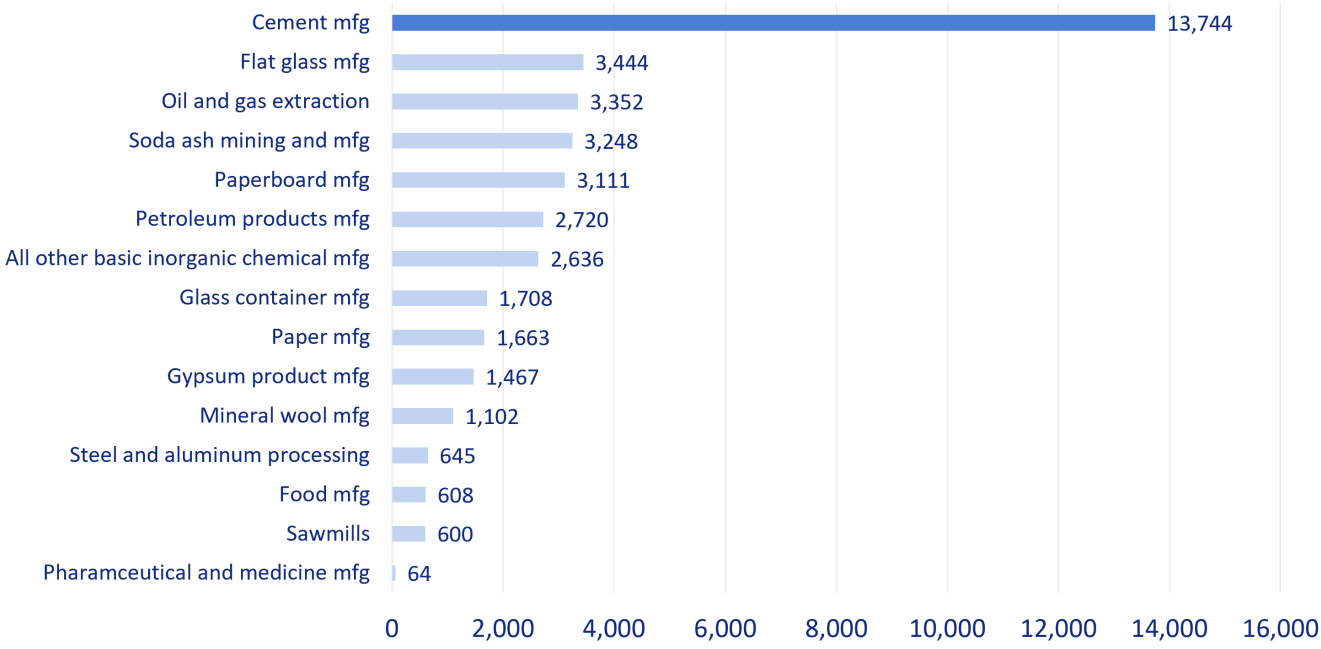
[5] California Air Resources Board (2010). Initial Statement of Reasons. Appendix K.

[6] For the purpose of this comment letter, "major emitting industry" is defined as manufacturing industries that emitted more than 60,000 metric tons of CO2e in 2022.

economic output, and, therefore, the carbon cost burden associated with the state's cap-and-trade program in the absence of allowance allocations is extraordinarily and disproportionately high.

GHG Emissions Intensity by Industry

CO2e per million dollars of value add



Sources: California Air Resources Board, Appendix K to the Initial Statement of Reasons, 2010. California Air Resources Board, 2022 GHG Facility and Entity Emissions, November 2023.

Note: Only industries with total 2022 emissions that exceed 60,000 metric tons of CO2e are included in the chart above.

The initial design of the industrial allowance allocation framework recognized the cement industry's high carbon cost burden (*i.e.*, applying an assistance factor of 100 percent throughout the duration of the initial phases of the program) and its difficult-to-decarbonize status (*i.e.*, applying a CAF that declines at half the rate of other industries). That output-based framework has served its purpose because it has significantly offset the industry's "pre-allocation" carbon cost burden while still providing a strong financial incentive for cement manufacturers to maintain local production and reduce their GHG intensity when technologically feasible and cost effective. Combined with the relatively low allowance prices experienced during the first decade of the program, the allowance allocation to mitigate the carbon cost burden was essential to helping the industry survive the initial implementation of the cap-and-trade program.

However, the initial industrial allowance allocation framework is unlikely to be sufficient to minimize economic and emissions leakage in the California cement industry as CARB proceeds to increase the stringency of the cap and accelerates its drive to achieving net carbon neutrality by 2045. The combination of increasing allowance prices (due to a more stringent cap) and a reduction in the industry's allowance allocation rate (due to a decline in its CAF) is likely to expose a flaw at the heart of the initial industrial allowance allocation framework — namely, a failure to properly account for the extreme difference in carbon cost burden borne by the cement industry versus every other industry in the state.

To illustrate this point, consider that a California cement plant with a GHG intensity equal to the industry benchmark level would (given the clearing price at the most recent CARB allowance auction) pay more than 50 cents

in carbon costs per dollar of value added in the absence of the industrial allowance allocation system (Figure 2), which is multiple times greater than every other major emitting industry and an order of magnitude greater than many of them. Although the industrial allowance allocation system somewhat reflects this difference by assigning a less stringent CAF to industries with a high level of process emissions, like cement, such adjustments do not go nearly far enough to account for the extreme difference in carbon cost burden and, as a result, emissions leakage.

Carbon Cost Burden by Industry

C&T compliance costs per dollar of value added

Sources: California Air Resources Board, Appendix K to the Initial Statement of Reasons, 2010. California Air Resources Board, 2022 GHG Facility and Entity Emissions, November 2023.

Note: Only industries with total 2022 emissions that exceed 60,000 metric tons of CO_2e are included in the chart above. Estimates reflect a representative facility that produces at an industry's benchmark GHG intensity and assume a cost of $37.02 per allowance, which was the settlement price during the May 2024 allowance auction.

Simply put, the current allowance allocation framework is inequitable in that it does not sufficiently recognize that the cement industry is truly "one-of-one" with respect to the size of the carbon cost burden imposed by the cap-and-trade program and, therefore, the risk of economic and emissions leakage. As described below, any amendments to the cap-and-trade program should take that fact into consideration. CARB should not take for granted that the initial industrial allowance allocation framework that served the state's environmental policy goals well for the first dozen years of the program will continue to do so for the next dozen years. This is especially true as it relates to the cement industry and especially in the absence of a mechanism that holds imported cement to a similar environmental standard, including as part of a cement-specific strategy that removes barriers to achieving net carbon neutrality for all cement consumed in California by 2045, as required by SB 596.

II. IMPLEMENTING ANY INCREASE IN THE STRINGENCY OF THE CAP

As a result of updates to the California GHG emissions inventory and the increased ambition of the 2022 Scoping Plan, CARB is proposing to increase the stringency of the program cap. Even without any adjustments to the cement industry's allowance allocations, increasing the stringency of the cap will result in reducing the overall

supply of allowances and increasing allowance prices — thereby increasing the risk of economic and emissions leakage in the cement industry.

However, as a result of increasing the stringency of the program cap, CARB is also proposing to reduce the cement industry's allowance allocation rate (via a reduction in the CAF) — a measure that, if implemented, will only exacerbate the risk of economic and emissions leakage in the cement industry.

Especially given its mandate to minimize leakage, CARB should avoid making generalized adjustments to the program without carefully considering the implications of the unique circumstances faced by certain high leakage risk industries. The changes to the cap-and-trade program highlighted at the Workshop, if applied to the California cement industry, would have several significant impacts, including:

- Increasing leakage risk for the cement industry, whether that is done explicitly through reduced allowance allocations via changes to the CAF, or implicitly through placing upward pressure on allowance prices. Regardless of the mechanics, the result will run counter to AB 32's requirement to minimize leakage risk.
- Reducing the amount of capital available in the cement industry at precisely the moment in which it is needed to make substantial investments in decarbonizing the industry and achieving net carbon neutrality by 2045.
- Permanently increasing uncertainty and undermining confidence in the cap-and-trade program for the cement industry, other covered entities, market participants, and various stakeholders, who will no longer have assurances that foundational program elements (such as the allowance allocation rate) will not be significantly altered "mid-stream" again in the future.

To the extent that CARB decides to lower the cap to reflect "increasing ambition," it should do so in a way that does not negatively affect industry allowance allocations. This is especially true of the California cement industry, given its high risk of leakage and its difficult-to-decarbonize status and given that imported cement is not currently held to a similar environmental standard.

Specifically, if CARB decides to lower the cap, it should freeze the CAF for high leakage risk industries, such as cement, at current levels. Such a freeze should remain in place unless and until CARB is able to create mechanisms that apply similar environmental standards to imported product and effectively level the carbon playing field between local and imported products. In the case of the California cement industry, such treatment is merited and justified based on the outsized exposure to the program's carbon cost burdens compared to virtually every other manufacturing industry in California, as demonstrated above.

III. EXPANDING THE DEFINITION OF CEMENT AND THE IMPLICATIONS FOR ALLOWANCE ALLOCATION

Under the existing cap-and-trade regulatory framework, allowance allocations to cement manufacturers is based on cement output, which is defined as "adjusted clinker and mineral additives (gypsum and limestone) produced." This definition is limiting in that it does not provide cement manufacturers with an incentive to replace emissions-intensive clinker by increasing the use of supplementary cementitious materials ("SCMs") whenever feasible.

As part of the proposed amendments to the cap-and-trade program, CARB is considering expanding the scope of the output measure to include "finished cement", which it defines as the sum of "adjusted clinker and mineral additives produced" and SCMs blended. As a general matter, CSCME strongly supports expanding the scope of

the output measure to include SCMs, as increasing the production and consumption of blended cements will be a critical pathway for reducing the industry's GHG footprint and achieving net carbon neutrality by 2045.

CARB also noted during the workshop that there are other types of "low-carbon alternative clinker" under development that *could* meet "equivalent performance requirements" to limestone-based clinker and eventually become commercially available in the California market. CARB is considering whether manufacturers of alternative clinker should be treated the same as manufacturers of limestone-based clinker, where the cement produced with alternative materials is manufactured in California and meets equivalent performance requirements. As a general matter, CSCME supports a technology-neutral approach in which all clinkers are treated similarly, provided that they truly meet equivalent performance requirements.

During the workshop, CARB presented several specific questions regarding the definition of cement and how that might be implemented in the context of the cap-and-trade program in general and the industrial allowance allocation program in particular. CSCME's views on many of those questions are underpinned by a collection of observations, implications, and guiding principles:

- CARB provides allowance allocations to industrial entities to minimize the risk of emissions leakage due to the cap-and-trade program. The risk of emissions leakage is primarily a function of two factors: (1) the carbon cost burden associated with complying with the cap-and-trade program and (2) the extent to which the industry is exposed to imports that are not held to similar environmental standards. Therefore:
    - An entity that does not have a compliance obligation or otherwise experience a significant carbon cost burden should not be eligible for industrial allowance allocations.
    - An entity that produces a "non-tradeable good" (*i.e.*, a good that is logistically or economically difficult to import) should not be eligible for industrial allowance allocations.
- The cap-and-trade program should be technology neutral — that is, it should treat similar products similarly, regardless of how they are produced in terms of the imposition of compliance obligations, the accounting for GHG emissions, and the eligibility for industrial allowance allocations. That said, a technology neutral policy must ensure that products are functionally similar, especially with respect to quality (*i.e.*, equivalent performance requirements). For instance, CARB should take a cautious and considered approach when determining whether a particular product is truly similar to limestone-based clinkers and cements, as there are an increasing number of products that purport to be substitutes but are in fact substantially inferior in terms of performance.
- As a general matter, California should encourage the production and consumption of blended cements, regardless of where the blending occurs within the supply chain. To maximize the use of blended cements, California should encourage blending wherever it is most logistically and economically feasible. To the extent that providing allowance allocations is inappropriate (*e.g.*, an entity is not exposed to the risk of leakage), CARB should explore other mechanisms for encouraging the production and consumption of blended cements.
- A guiding principle of sound regulatory policy is to regulate the fewest number of entities necessary to achieve the policy objective. Accordingly, CARB should take a cautious and considered approach when determining whether to extend the scope of the cap-and-trade program to include entities in the cement-concrete-construction supply chain.

With those observations, implications, and guiding principles in mind, CSCME provides the following feedback on questions presented by CARB during the workshop.

1. ***How should the definitions of "cement" and "adjusted clinker and mineral additives produced" be modified?***

CSCME recommends that the definition of cement output explicitly include supplementary cementitious materials that are commonly used today, including but not limited to slag cement, fly ash, natural pozzolans, calcined clays, and silica fume. We also recommend that CARB establish a process that allows producers to petition to add a new material to the list of alternative materials that have the potential to reduce the clinker content of cement without sacrificing product performance.

2. ***Should alternative clinker be eligible for allocation under the cement allocation framework?***

CSCME supports making producers of alternative clinker eligible for allowance allocations provided that the following conditions are met:

- The entity is located in California.
- The entity makes a product that meets equivalent performance standards as limestone-based cement.
- The entity has a compliance obligation under the cap-and-trade program for its GHG emissions (including for highly carbon intensive inputs sourced from outside California) and is otherwise treated similarly to limestone-based cement manufacturers.
- The extent to which entities are provided allowance allocations should reflect their risk of leakage.

That being said, we would like to emphasize the importance of an alternative clinker meeting equivalent performance standards, as there are many emerging products that are marketed as alternative clinkers that are far inferior to limestone-based clinker in terms of strength, durability, and other key dimensions of performance. This raises a critical set of questions. What constitutes an equivalent performance standard? Which standards should be used? How will CARB verify that a product meets those standards? CARB should carefully evaluate such questions before proceeding to expand the allowance allocation system to include entities that purport to produce a true alternative to limestone-based clinker.

3. ***Should SCM suppliers be eligible for allocation under the cement allocation framework?***

CSCME does not support making SCM suppliers eligible for allowance allocations. As a threshold matter, SCM suppliers are unlikely to have significant GHG emissions and, therefore, unlikely to have significant compliance obligations that would place them at risk of leakage. Such entities should not receive allowance allocations to protect them from a non-existent risk. Additionally, it is unclear why SCM suppliers should be eligible to receive allowance allocations under the framework for the cement industry, as their output in the absence of clinker does not constitute finished cement. Finally, many SCM suppliers today are merely distributors and do not actually produce the material (which is often a by-product of other production processes).

It is also worth noting that expanding the definition of cement output to include SCMs will benefit SCM producers and suppliers, even if they do not directly receive allowance allocations. Economic theory would suggest that the act of providing incentives to cement producers for using SCMs will not only increase the demand for SCMs in general, but that the value of the incentives will effectively be shared throughout the entire supply chain via contract negotiations and other standard commercial practices.

For similar reasons, CSCME does not support making downstream cement consumers eligible for allowance allocations, even those that might blend the SCMs to create a blended cement. A downstream consumer that is using cement to produce concrete is not exposed to emissions leakage given that (especially in the geographic context of California) concrete is effectively a "non-tradable good" in that it can only be economically transported across short distances (*i.e.*, concrete is neither imported nor exported in significant quantities). Given a concrete producer's lack of leakage risk, the provision of allowance allocations would be inconsistent with applicable law and policy.

It is conceivable that CARB could eventually develop an alternative "credit system" that would encourage SCMs to be blended wherever it makes the most economic sense to do so, whether it be at the cement plant or the concrete batch plan or some other point along the supply chain. Again, economic theory would suggest that the value associated with those credits would be shared throughout the entire supply chain via contract negotiations and other standard commercial practices.

That being said, it would take a significant amount of time to design and implement a well-functioning credit system. CSCME supports immediately expanding the definition of cement in order to provide a clear incentive to use SCMs at the cement plant level even if CARB would eventually like to create an alternative mechanism for incentivizing and rewarding the blending of SCMs further down the supply chain.

4. What NAICS codes reflect industrial production of the range of materials that are under consideration?

No input.

5. If SCMs are eligible for allocation, who should receive allocation?

CSCME supports expanding the definition of output in the cement industry to include SCMs, as this will provide an incentive for cement manufacturers to produce blended cements. However, as noted above, the allowance allocation system should not be extended to SCM suppliers, who do not currently have compliance obligations and are not considered to be at risk of emissions leakage.

6. For SCMs, is it feasible for one party to report verifiable information on the amount of SCMs shipped from SCM producers and received by users to make cement? Would multiple parties need to report to ensure accuracy?

We recommend that CARB research this issue further. Although CSCME believes that allowance allocations should be reserved for industries that are at risk of leakage, we also believe that it is in the state's best interest (on environmental policy grounds) to incentivize the deployment of blended cements regardless of where the blending occurs in the supply chain, provided that it is administratively feasible. This raises the question of how the state might incentivize such behavior without directly allocating allowances to entities that do not merit leakage protection. CSCME encourages CARB to consider an alternative "crediting system" that would incentivize SCM blending across the supply chain without violating basic principles of the cap-and-trade program. However, such a system will take time to develop and, in the meantime, expanding the definition of cement to include SCMs so as to provide cement producers with an incentive to increase blended cement production is a sound policy improvement that can be implemented immediately.

IV. CEMENT IMPORTER REPORTING

CARB has proposed an initial concept under which cement importers would report under California's Regulation for the Mandatory Reporting of Greenhouse Gas Emissions ("MRR"), and data reported during a "transitional

period" would not be subject to verification. The data reported during this period would be "GHG emissions intensity and the amount of imported cement using best available quantification methodologies."

1. Who should be required to report imported cement data to MRR?

CSCME considers that the obligation to report imported cement (and clinker) should be the California legal entity that takes ownership upon first entry of imported cement (and clinker) into California. This requirement may fall on the owner of the import terminal, the owner of the concrete batch plant purchasing the imported cement for consumption, the owner of the clinker grinding facility, or another entity that receives the imported cement or clinker in California for resale.

2. What kinds of reporting methodologies could be allowed during a transitional period?

CSCME recommends that CARB develop a hierarchy of reporting methodologies. The first tier would be data reported in accordance with MRR methodologies or using methodologies substantially similar to MRR methodologies. The second tier would be partial reporting based on MRR or substantially similar methodologies combined with default values for certain missing data. The third tier would be reporting using reasonable default emissions factors and other best information available in instances where data is demonstrated to be unavailable. Such factors and information could be based on, for example, the source of the raw materials, the type of production technology and energy sources, the type of cement, and the location of the manufacturing. The final tier would be adverse or punitive default emissions factors that apply following enforcement actions or violations or where emissions data is reasonably available but is being withheld.

3. Which products or materials should be reported (clinker, alternative clinker, gypsum, limestone, SCMs)? Could imported cement reporting be disaggregated by component materials?

CSCME recommends that reporting should cover imports of finished cement and clinker, including alternative cement and clinker that meet the performance requirements for limestone-based finished cement and clinker. Import documentation for the relevant imported clinker or cement should necessarily include any relevant materials blended into the finished cement. The reporting of imported materials separately is already publicly available and would not need to be reported separately, given those materials are not covered by the cap-and-trade program.

4. Should verification be initially required or phased in?

CSCME supports the immediate introduction of a requirement to submit data on imports of cement with a phasing-in of the verification requirement. This phase-in would ensure that the establishment of any verification regime does not delay the initial submission of data. The regulation should make clear, however, that all data provided to CARB, including during any part of the transition period, is subject to applicable penalties for false statements and may be subject to future verification if necessary to address potential concerns regarding accuracy, completeness, etc.

V. CONCLUSION

The stakes of achieving net carbon neutrality in the California cement industry are high. If successful, California will provide the world with a model for how to achieve net neutrality in an industry that is difficult to electrify, difficult to decarbonize, and highly exposed to the risk of economic and emissions leakage. If unsuccessful, California will provide the world with a cautionary tale about how climate policy can damage a local industry, resulting in both fewer jobs and greater global GHG emissions. CSCME looks forward to working with CARB and other stakeholders to ensure that California has a strong, carbon neutral local cement industry in 2045, which will

inevitably require a cap-and-trade program that provides a predictable carbon price and stable policy environment that supports relatively high-cost, high-stakes, and long-lived investments in decarbonization.

In addition to a sound cap-and-trade program, achieving net neutrality will require complementary policies that actively remove barriers to deep decarbonization in the California cement industry. This includes policies that facilitate the development of infrastructure that will eventually enable the industry to cost-effectively capture and store or utilize carbon, as envisioned by SB 905. Accordingly, it is critical that the California legislature fully fund the resources needed to implement SB 905, as well as any other efforts that seek to unlock or remove barriers to reducing GHG emissions in high leakage risk industries, such as cement.

We look forward to continuing to work with CARB and other stakeholders to make California's signature climate program an economically feasible, efficient, and effective pathway to carbon neutrality for the California cement industry by 2045.

Sincerely yours,

Steve Coppinger
Chair, Executive Committee
Coalition for Sustainable Cement Manufacturing & Environment

CC:

Honorable Steven S. Cliff, Ph.D., Executive Officer, California Air Resources Board
Edie Chang, Deputy Executive Officer, California Air Resources Board
Rajinder Sahota, Deputy Executive Officer, California Air Resources Board
Mark Sippola, Chief, California Air Resources Board
Rachel Gold, Esq. Supervisor, California Air Resources Board
Mihoyo Fuji, Staff Air Pollution Specialist, California Air Resources Board