

Searles Valley Minerals (Dennis Cruise)

Please see comments of Searles Valley Minerals attached. Thank you!

Public Comment on Proposed Cap-and-Invest Program Amendments

Submitted to: California Air Resources Board

Submitted by: Searles Valley Minerals

Re: Phased Industrial Decarbonization and Leakage Prevention

Date: March 9, 2026

INTRODUCTION AND SUMMARY

Searles Valley Minerals (SVM) appreciates the opportunity to comment on the California Air Resources Board's (CARB) proposed amendments to California's Cap-and-Invest Program. SVM supports the State's climate objectives and CARB's commitment to achieving near-term greenhouse gas (GHG) reductions while minimizing emissions leakage and adverse socioeconomic impacts.

As discussed below, SVM is in an Emissions Intensive Trade Exposed (EITE) industry that faces significant global competition for the production of critical minerals, such as borate products (V-BOR, boric acid). SVM is actively evaluating unit-level, industrial decarbonization actions, but faces numerous real-world technical and operational constraints in addition to the growing cost pressures of the Cap-and-Invest program. Consequently, SVM's cost exposure under the Cap-and-Invest program has exacerbated SVM's risks of losing business to global suppliers of boron and related products. These comments provide evidence of ongoing emission leakage among EITE industries, like SVM's. To address these risks and fulfill the CARB's statutory directives to minimize leakage, SVM provides the following recommendations for modifications to the rulemaking package:

1. Create a unique product-based benchmark for boron produced from brine.
2. Broaden the definition of “process emissions” to includes processes such as SVM’s that require thermal energy and have no available substitute to extract brine for processing.
3. Authorize the Executive Officer to review applications for decarbonization programs.

DISCUSSION

I. Boron is a Critical Mineral and Borate Products Face Significant Leakage Risk.

The Energy Act of 2020 directs the United States Geological Survey (USGS) to maintain a list of “critical minerals,” updated every three years. This bipartisan law intends to modernize energy innovation, efficiency and infrastructure. Critical minerals are those that are essential to the economic or national security of the United States, and boron is currently included in the critical minerals list.¹ Boron is crucial to national security because it is a lightweight, high-strength, and heat-resistant element essential for advanced military applications, including armored vehicle plating, weapon systems, and nuclear reactor control rods. It is also critical for modern technology, such as permanent magnets in electric vehicles (EV), drones, and semiconductors.

Boron is mined in only a few locations – California and Turkey. Although Turkey is *currently* the largest producer, California is capable of competing with global boron supplies. Currently, Cap-and-Invest costs remain the most significant cost risk to future production. The Cap-and-Invest program creates uncertainty due to the scale of potential allowance costs. As explained below, SVM’s operations will focus on borate

¹ See [USGS Critical Mineral List](#).

products, but the uncertainty associated with the Cap-and-Invest creates material risks for future operations.

Economic leakage is a significant concern for SVM and the surrounding community. The recent mothballing of the Argus soda ash plant resulted in the loss of approximately 310 jobs and a reduction in in-state production capacity. These impacts underscore the sensitivity of products mined at SVM, such as boron. The proposed amendments to the Cap-and-Invest regulation pose a material risk of additional production curtailments, job losses, and emissions displacement outside California.

II. CARB Should Create a Unique Product-Based Benchmark for Borate Products Extracted from Brine.

SVM is shifting its operations to focus on borate products in part because global demand for borate is strong and soda ash faces trade exposure risks and cost differentials far in excess of free allocations. It is also important to note that borate products are listed as critical minerals because they are essential to high-tech, green energy, and agricultural industries, yet face high supply risks due to concentrated, limited global deposits (primarily in the U.S. and Turkey). Borate products are crucial for EV batteries, solar panels, insulation, fertilizer, and strengthening steel/glass.

Historically, SVM used waste heat from its soda ash process to manufacture its borate products. In the absence of soda ash production, SVM will need to produce considerably more steam to produce the same quantity of borate products. The current product-based benchmark for borate is based on the Rio Tinto facility, which is an open pit mining operation. We also understand that CARB evaluated the production of borate products relying on thermal energy from soda ash at SVM's facility when CARB developed the original borate benchmark.

SVM appreciates that CARB generally attempts to create single benchmarks, but here as in other cases such as the natural gas sector, and processing of food and other products, brine production and open-pit mining are fundamentally different processes that merit distinction in the Cap-and-Invest regulation. SVM's operation requires considerably more thermal energy to extract borate from the brine and process it. Allocating to SVM using a benchmark based on a different type of facility will not encourage more efficient operations. A brine-based operation cannot be converted to an open pit mining operation. Moreover, due to the loss of waste heat from the soda ash operations, SVM anticipates that the current product-based benchmark for borate will only cover 30% of SVM's expected emissions obligation before the application of the cap-adjustment factor (CAF).

We appreciate that this recommendation may require analysis by CARB of verified emissions data. We believe that verified data from prior emissions years can be presented demonstrating the projected under-allocation for brine-based borate products and CARB can reasonably deduce how much waste heat was supplied for borate mining in the past. Accounting for the allocation needs of brine-based borate in this rulemaking will help ensure that brine-based borate products are not subject to leakage and potentially, full facility closure before another rulemaking can be completed. Moreover, creating a brine-based benchmark will also free up capital for SVM to continue to evaluate decarbonization of the existing coal boilers at the SVM facility.

III. SVM's Operations Qualify as Process-based Emissions and Should Be Eligible for the Alternate Cap-Adjustment Factor.

Under current law, the first element of the Alternate CAF would require SVM to demonstrate that 50% of its emissions are from process emissions. Process emissions are defined as

the emissions from industrial processes (*e.g.*, cement production, ammonia production) involving chemical or physical transformations other than fuel combustion. For example, the calcination of carbonates in a kiln during cement production or the oxidation of methane in an ammonia process results in the release of process CO₂ emissions to the atmosphere. (emphasis added)²

SVM recommends that CARB update its policy for process emissions and adopt a more liberal definition for process emissions. In particular, processes such as SVM that require thermal energy in order to extract brine from the lakebed should be classified as process emissions because there are no substitutes for thermal energy. The process cannot be electrified and the application of a stringent cap-adjustment factor will not encourage lower carbon options, such as electrification.

IV. SVM Supports the Decarbonization Incentive with Adjustments.

SVM operates industrial boilers that provide essential process heat. As part of ongoing decarbonization efforts, SVM has reduced coal use associated with one boiler, resulting in a material reduction in direct GHG emissions. One boiler continues to operate on coal as needed to maintain operational reliability and safety while SVM evaluates and advances alternative energy pathways capable of meeting industrial process requirements.

² Regulation for the Mandatory Reporting of Greenhouse Gas Emissions (MRR) § 95102(a).

These actions reflect a phased transition approach. While longer-term fuel and energy strategies continue to be evaluated, SVM has already taken concrete steps that reduce emissions and require operational and capital commitments. Based on conservative emissions factors, reductions in coal use on the order of approximately 300,000 tons per year correspond to an estimated 0.75 to 0.87 million metric tons of CO₂ per year in potential direct emissions reductions.

While the proposed amendments include manufacturing decarbonization incentives, there is a limited array of technologies that can be claimed. Given the complexity and diversity of products in the “hard-to-decarbonize” sector, CARB should provide itself with the ability to review novel technologies. The Low Carbon Fuel Standard Tier 2 Application process is an example of how CARB could transparently and fairly review applications for a diverse array of technologies and products. We also recommend avoiding a post-hoc true-up mechanism, which can disrupt the timing and lender comfort in capital-intensive transition activities. Improved alignment between the timing of emissions reductions and the availability of an alternative CAF would help encourage early, good-faith action.

SVM also requests CARB to more clearly recognize active decarbonization projects for the Manufacturing Decarbonization Incentive Allocation Program. For example, SVM is working on numerous electrification projects, including electrified industrial fans.

With the ability to explore a broader range of decarbonization products through an application process, SVM will be more likely to utilize the Manufacturing Decarbonization Incentive Allocation. Our goal of transitioning high emission-intensity

fuel, such as coal, can only be realized if there is certainty for critical minerals produced in California, like boron. Whether through an application process or a technology enumerated in regulation, CARB should make clear the inclusion of industrial thermal and boiler-related pathways within the manufacturing decarbonization provisions.

CONCLUSION

SVM is pursuing practical, stepwise decarbonization under operational constraints common to heavy industry. Refinements to the Cap-and-Invest program that recognize phased transitions and address leakage risks would better align regulatory incentives with real-world conditions while preserving environmental integrity.

Respectfully submitted,

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