August 23, 2018

Dave Edwards
Branch Chief, Greenhouse Gas and Toxic Emission Inventory Branch
California Air Resources Board
PO Box 2815
Sacramento, CA 95812

Re: Proposed Regulation for Criteria Pollutant and Toxic Air Contaminant Emissions Reporting

Dear Mr. Edwards:

Our organizations represent communities that work to improve the health and well-being of the people of California through multiple strategies, including reductions in environmental pollution.

Our comments address the proposal from the Greenhouse Gas and Toxics Emission Inventory Branch to fulfill AB 617's mandate for annual reporting of air toxics emissions from stationary sources. We also explain what we need to see in the emissions inventory overall in order to protect the air in our communities.

We support the efforts by the State of California to oversee the development and execution of a robust public inventory that is timely, complete, and accurate, and is presented in ways that we can use to take actions to reduce emissions in our communities, as envisioned in AB 617, AB 197, and other state laws. We appreciate the efforts that the Branch has made toward this end.

As you are aware, California lacks a reliable and usable inventory of air toxics emissions. As we work to rectify this, we need to be sure that the full range and amount of pollutants released into our communities are included; that sources of emissions are fully identified; that emissions are accurately reported, that reporting is timely and publicly accessible and that the inventory is designed to support adoption of improved pollution control technologies.

Over time, we want to see an inventory that covers the essential information well. This would mean an inventory that:

- Includes all toxic air contaminants emitted into our communities, including air pollutants that are not on the list because that list has not been updated in decades;
- Includes all of the stationary sources, including smaller polluters, so that we can clearly see where emissions occur and understand cumulative impacts;
- Provides accurate, substantiated numbers that quantify emissions from facilities, including those from startups, shutdowns, malfunctions, and fugitive emissions;
- Reports data to the public annually in a timely and user-friendly way;
- Supports actions to reduce emissions in communities;
- Helps to identify sources that are candidates for improved pollution control technologies in an expeditious way;
- Can be easily overlaid with the CalEnviroScreen and emission inventories for criteria pollutants and greenhouse gases.

Here are some additional specifics about these topics.

Include all hazardous air pollutants emitted in our communities now

We are deeply concerned that the State and the local air districts may not be basing their emissions testing, ambient air monitoring, and management efforts on pollutants currently being released into the air in our communities. We know that the list of toxic air contaminants has not been updated since the late 1990s, with the single exception of the addition of environmental tobacco smoke. We also know that the list used by US EPA to identify "hazardous air pollutants" under the federal Clean Air Act has not been updated since 1990. That was 28 years ago.

Much has changed in the last 30 years. Moreover, we have additional concerns about emissions from oil and gas facilities, dangers of fire retardants and other neurodevelopmental toxicants, pesticides drifting into communities, and the global penetration of poly and perfluorinated compounds (PFAs) into every area of life with little or no regulation.

The lists need to be updated. A process of due diligence that can continue to review and update these lists over time is also needed. This is necessary to ensure that the inventories, as improved and updated, will actually address current conditions and that we know what problems we need to address. It's also necessary to assure that toxicity benchmarks used by CARB and the air districts are current and are protective of children, pregnant women, and other vulnerable populations.

Include All Stationary Sources in the Inventory

The existing inventory posted by the State is widely acknowledged to be woefully incomplete and outdated. It misses the majority of stationary sources of emissions, especially in the Central Valley and South Coast areas. Some would estimate that it includes less than a quarter of the permitted sources.

Several steps will be needed. The state inventory now includes only a portion of the sources for which local air districts have issued permits. A first step is to include all of the permitted sources in the State inventory and all sources that are required to report emissions under CARB's mandatory reporting requirements. The option of direct reporting into this inventory may ease this process while reducing delays and providing more consistent data, and we support the proposal to make this possible.

A second step will be to identify the many sources that have not been permitted by the local districts. We see many instances where local air districts are simply unaware of important sources. Ground truthing projects show a high percentage of sources not known to local air districts. CARB and the districts need to develop accurate ways to capture and consistently identify facilities that are sources.

Smaller sources now reported only as "area" sources should also be included. Some of these can be important to community health when concentrated in small areas. This will need to roll out over time but is where we should be headed.

As part of this process, it is important to ensure that facilities are not left out of the inventory due to highly variable prioritization schema adopted by the districts. To do so would mean that thousands of facilities that pollute our neighborhoods would be exempt from the inventory. Because the districts use different definitions for what is a priority, some communities would be informed about local toxic emissions, whereas others would not be provided with information about equal or greater toxic emissions. Disparate treatment of communities is the definition of injustice and could violate the equal protection rights guaranteed in the U.S. Constitution.

An inventory by its very nature should be complete. An incomplete inventory will make it difficult or impossible to identify and accurately prioritize communities for monitoring and emissions reductions as required by AB 617. We ask CARB to plan the inventory architecture to include all stationary sources.

Ensure Reliable Estimates of the Amount of Pollutants Emitted from Facilities

Perhaps the greatest deficiency is that the estimates of emissions that are currently used are often inaccurate for several known reasons. We need CARB to take a leadership role in updating methods used to quantify emissions to ensure that they produce accurate results and that best methods are consistently applied.

A wide variety of approaches exist. Districts vary in their emission estimation techniques, including the use of "factors" that allow calculation of emission estimates from values that represent the throughput of facilities. One example might be using fuel consumption as a way to represent the production of a facility, and then using such an "emission factor" to calculate emissions from the fuel consumption. There are many such emissions factors. Some are known to be inaccurate. All should be reviewed.

Direct measurement of emissions can be done through "stack tests" that measure what is coming out of a stack. These can provide a better basis for estimating emissions than application of emission factors in many cases. It may also be valuable to use a combination of these estimation techniques. Whatever estimation techniques are used must be accurate, substantiated, and able to be routinely validated.

One commonly relied upon list of emission factors, U.S. EPA AP-42, tends to provide source-specific "population average" emissions. They are intended to estimate emissions from all common sources nationwide. They are not an accurate estimate of emissions from any single source. Despite an explicit warning from EPA that "[u]se of these factors as source-specific permit limits and/or as emission regulation compliance determinations is not recommended by EPA," facility operators and local air districts continually rely upon AP-42 emission factors as an accurate accounting of actual facility-specific emissions.[1]

Newer technologies and approaches are also available and should be incorporated, including rigorous and representative stack testing, continuous emissions monitoring systems, monitoring of fugitive emissions, fence-line monitoring, remote sensing, and monitoring in communities upwind and downwind from facilities. Such monitoring should be done as a quality control check to ensure the accuracy of the reported emissions. We recognize that this is a significant

[1] U.S. EPA, 1995, AP-42 Introduction, p. 2.

undertaking, but the program has been in operation for over a generation, and a review to replace inaccurate or unreliable methods of quantification and to capture all emissions is appropriate at this time.

AB 617 expressly authorizes use of independent third-party audits to verify emissions reports. CARB should incorporate such independent verification, paid for by the facility, on a certain percentage of facilities each year to ensure accurate results. These should be open to public comment. Quite simply, our organizations do not trust the polluters to correctly report their emissions.

Timely and User-Friendly Reporting

Timely reporting and disclosure of emissions data are essential. Adoption of annual reporting is an important step forward that will allow data to be available soon enough to make a difference. Annual reporting is appropriate for all sources. It is also important to ensure that there is not a long lag time between when the reports are first submitted by the stationary source and when they are posted publicly. We are very appreciative of the direction from the Legislature and your Board to rectify this deficiency in the current regime, as this correction is a vital part of the broader effort to better focus air protection efforts on the communities most impacted by the cumulative impacts of air pollution.

While annual reporting is an important step forward, it is not sufficient in all cases. In some cases continuous monitoring with real-time reporting is needed to allow for more immediate actions to protect health. While this may be beyond the scope of the current regulation, it should be considered in the design of the system.

An architecture for the emissions inventory, including the sources and the emissions, must be intentionally designed to be used in conjunction with other data sources. There are a number of issues that must be addressed to make this possible, including correct and consistent assignment of geographic identifiers and facility identifiers, and we will not address all of these here. However, CARB needs to undertake an inclusive process with communities and other audiences for these data to design the data architecture as well as visualization tools to meet the needs of the users. Currently, only the air districts, CARB, and the emitters are seen as users of the system, and this is not the case.

The emissions and source data must be maintained and provided in ways that can be easily overlaid with the CalEnviroScreen, other databases maintained by CalEPA, the Water Board, and DTSC, as well as emission inventories for criteria pollutants and greenhouse gases. The data must allow communities to easily see which facilities in their neighborhood emit what quantities of which pollutants, and must also make it easy to learn about the health effects of these pollutants by linking to other resources, such as those provided by the Office of Environmental Health Hazard Assessment.

We look forward to further dialogue with you on these important issues, and we thank you for your consideration of these comments.

Respectfully Submitted,

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