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Clerk of the Board
California Air Resources Board
1001 I Street
Sacramento, CA 95814

Subject: ***Public Comment Regarding the Proposed Rule for Regulating Non-Electric and Non-Semiconductor use of Sulfur Hexafluoride (SF_6)***

Dear Madam Chairman and Board Members,

Tracer Environmental Sciences and Technologies, Inc (Tracer ES&T) is a certified small business enterprise in California. In addition to being an active participant on the Technical Working Group for the proposed rule, we are a stakeholder in the subject regulation because we provide both private and government organizations with technical services that utilize SF_6 as an atmospheric tracer gas.

As you may already know, SF_6 can be applied as a very powerful tool in assessing dispersion and transport characteristics of the atmosphere. We have used SF_6 as a surrogate for hazardous and toxic materials to assess local and distant population exposure to future, present and past pollutant emissions. It has been most helpful in making such assessments when the error or uncertainty in models is realized. To name a few, studies using SF_6 as a tracer gas have been conducted for this purpose regarding school sites, environmental justice neighborhoods, onshore impact regions downwind of offshore oil production facilities, cities and communities adjacent to power plants, landfills, sewage treatment facilities and refineries.

We also use SF_6 as a ground-truthing tool for new or modified measurement systems for hazardous and toxic materials. This "truth boxing" has been performed to test specialized measurement equipment related to chemical, biological, radiological (CBR) threats. SF_6 is also used to prove functionality of force protection systems utilized by the first responders and the military.

The above examples are just a few applications of SF_6 usage that ultimately provides very valuable information that saves lives and protects the health and welfare of people.

In reality, the small amount of SF_6 we have used in these important programs has virtually a zero contribution to global climate change, but offer very significant information for gauging health related impacts related to pollutant emission. In fact, one could argue that even the global usage of SF_6 has an insignificant impact on global warming since its radiative forcing impact is small compared to CO_2 (IPCC, 2001). What is of concern about SF_6 is that is stays with us for a very long time (some speculate for centuries) and that longevity has defined its global warming potential (GWP). It is important to place this into perspective, in that many mislead the layman in saying that SF_6 threatens global warming since it has a high GWP *and* stays in the environment for a long time. The truth of the matter is that on a year to year basis, SF_6 has little effect on global warming, but has a high GWP *because* it stays in the environment for a long time.

Nevertheless, in recent years Tracer ES&T has voluntarily reduced our usage of SF_6 and relied on using perfluorocarbon (PFC) chemicals as atmospheric tracers. This has been coincident with the federal government's national labs (i.e. Brookhaven National Laboratory) progression to entirely utilize PFC tracers in their programs as they continue to perform atmospheric tracer studies for many federal agencies. In fact, Tracer ES&T has not used SF_6 in California as a tracer gas for nearly 5 years. We have found much success in using PFC's for tracer studies due to the fact that they have a natural background that is much less than SF_6 and that allows us to detect the PFC's at much lower concentrations (about 1000 time less that SF_6). Furthermore, the PFC's we use in tracer studies are safe and present no toxicological threat to humans and the environment as supported by numerous accounts of its mutagenic and toxicological affects. This translates into a net benefit to the environment in that for the same study, we can usually use about 100 to 500 times less PFC tracer than SF_6. We are fortunate to be able to make this change. But the ability to change to PFCs is not as simple for some other stakeholders of this rule due to the physical characteristics and purity issues of SF_6 that forces them to remain with the chemical.

In order for Tracer ES&T to support adoption of the proposed rule, we would like assurances from the ARB in the form of language in the proposed rule, that PFC tracers will be allowed and viewed as a "green" alternative to SF_6. Unlike SF_6, we understand that a usage fee is being considered for certain PFC's and at this time we have no idea what the magnitude of that fee is. Therefore, before enacting this rule, I strongly recommend completing the PFC rule in draft form in order to see if tracer study applications using these inert gases are unfairly and disproportionately impacted with no other reasonable alternative.

The draft regulation allows some blanket exceptions for SF_6 usage. We strongly feel that military and homeland security usage of SF_6 should also be added to the exemption list in that their applications have national security implications.

I appreciate you listening to and considering our perspectives. Furthermore, I would like to thank all the ARB staff that worked on this draft rule for their cooperative spirit and working approach to this important regulation. I stand eager to continue to work with the ARB on this and other issues to find common ground in regulations that benefit our state.

Sincerely,

Tracer Environmental Sciences and Technologies, Inc.

Thomas J. Rappolt, QEP, REA
President