Dear
Secretary of the Board,
California Air Resources Board

Please see a transcript of my presentation during the open comments session on October 28, 2021 below:

1. Hello, Chair Randolph and members of the board. My name is Rito Sur, PhD and I am the CEO/ Founder of Indrio Technologies based in San Jose, California. Today I will talk about our laser based chemical sensors that are available to help you meet your air quality and climate change goals.

2. The core technology was developed by me and my colleagues at Stanford University after a decade of research.

3. Indrio makes 2 main types of sensors:

   a. Sampled or open path gas sensors, we call ***Zephyr***, which can be used for environmental sensing. We have delivered several units of these sensors to CARB (with Walter Ham and Shaohua Hu's teams), and
   b. The second type of sensors from Indrio are deployed directly inside the high temperature exhausts of vehicles, locomotives, ships, power plants, etc. we call ***Ignis***. Our Ignis sensors are currently under development.

4. Our Zephyr sensors are currently being piloted by CARB staff to flag high emitting trucks on road as a part of your "Portable Emissions AcQuisition System" program…. commonly referred to as PEAQS. In this picture you can see our Zephyr system being integrated inside your PEAQS system.

5. Our Ignis sensor technology is currently under development for studying NOx and ammonia emissions for Portable Emissions Monitoring Systems or PEMS and OBD applications in vehicles. We are currently funded by the National Science Foundation (NSF) and the US Department of Energy (DOE) to develop these sensors. We have also received a portion of the grant provided by CARB to the UC Riverside CE-CERT team led by Dr. Kent Johnson to contribute 10 of our next generation sensors for their study. These Ignis sensors can play a critical role in your "near zero NOx" heavy

duty diesel engine emissions standards program. Our sensors can detect ultra-low levels of NOx without interference from ammonia, which is a fundamental problem in achieving accurate control in next generation aftertreatment systems. My company has been working with different engine manufacturers to test and validate our technology and we welcome your support in this endeavor.

6. Other applications for the sensors from Indrio Technologies include Continuous Emissions Monitoring Systems or CEMS monitoring at power plants, oil refineries and other industrial sources;

7. Fence line monitoring around refineries, oil and gas fields and similar facilities.

8. Indrio Technologies is also researching sensor applications for hydrogen infrastructure.

9. Indrio Technologies develops tools to support CARB's goals. Please consider us for small business grants and other funding opportunities. We welcome any advice, direction and support you can provide to us as we are a California based startup company. We are available to meet with you and your staff at any time to further discuss our sensor technologies and welcome you to visit and tour our facilities in San Jose, California. Please visit our website at indriotech.com and contact me at rsur@indriotech.com or via cell at 408.410.7486. Thank you very much for your attention and my team at I at Indrio Technologies look forward to working with you and your staff to support your air quality and climate change goals!