

## RESPONSE - CARB Letter to Health Effects Institute

### Position:

On August 10 *Transport Topics* published an article that referenced a letter from CARB to the Health Effects Institute. The article omitted key facts and was a distortion of the referenced studies and the letter's true intent. The use of an inflammatory headline was unfortunate and may have led to unnecessary and unwarranted concern about SCR emissions reduction technology which has been proven to be effective at virtually eliminating two emissions that have measurable impact on public health.

Emissions from diesel engines carry toxic elements. SCR eradicates elements that have the highest impact on public health – NOx and Particulate Matter – and meets standards set by the EPA more than a decade ago. For this reason, SCR has been adopted for use in many mobile applications, including off-road, marine, farm and retro-fitted vehicles as well as cars and heavy, medium and light duty trucks. And, SCR has been used in stationary applications for decades.

As outlined by CARB respondents in the original August 10 article, the referenced letter represents a theoretical exercise in projecting futuristic testing technologies and methodologies. These will be used to identify and evaluate the presence of additional elements, which could include infinitesimal compounds found in combustion engine emissions that were not included in the 2010 emissions standards set in 2001. This inquiry into understanding the potential of "unregulated species" of emissions is part of standard scientific research practice and will not impact SCR emissions control equipment anytime in the foreseeable future – if ever at all.

Based on current SCR technologies and available testing procedures, the emissions in question and referenced in the letter are most-likely neutralized by the SCR ammonia slip catalyst or captured by the SCR catalyst filter. In other words, the emissions in question are not an issue of concern for 2009 SCR passenger cars and light duty trucks and 2010 commercial vehicles.

### Support Background:

The CARB letter was a request for advice on future theoretical testing of SCR technologies, which includes off-road, marine, farm equipment and aged truck and stationary machinery retro-fits, and which are very important to California and at various stages of development. The advent of the letter does not indicate the need for concern related to high performing, tested and proven SCR uses in cars, light duty trucks and heavy duty commercial vehicles which are meeting 2010 standards at the tailpipe.

As the gentleman from CARB is quoted as saying in the bottom of the article and in the last sentence, the letter to the Health Effects Institute is standard practice and deals with theoretical occurrences. To the best of our knowledge, the letter is in keeping with a request for expertise and research into what methodologies and testing technologies should be developed to evaluate the potential for future emissions and their potential public health impacts once NOx and PM are handled. Interestingly, the problem the regulators are having is that not enough of the substances in question are generated by the current technologies to make it possible to test – the machinery has not been developed yet - thus, the request for new testing methodologies and equipment.

The studies cited had to do with emissions that are neutralized by the current ammonia slip catalysts that are standard in the planned 2010 SCR technologies (at least the high performing ones in the truck classes). Other studies referred to in the letter dealt with soot composition and catalyst build up for the purposes of catalyst manufacturing. Today, to the best of my knowledge, these are captured and contained within the NOx catalysts which last the lifetime of the truck in most cases.

The important thing to remember is that the 2010 standards were established to take care of NOx and PM and to positively impact some critical public health issues. These most critical elements have been reduced to near-zero levels at the tailpipe in SCR-equipped vehicles and this reduction is only proven to be possible using SCR in combination with EGR technology.

Implementing these most stringent standards in the world for NOx and Particulate Matter reduction will benefit U.S. communities by improving the outlay of health benefits (which are projected today at \$70 billion), and, most importantly, will help avoid 8,300 premature mortalities, will help avoid 7,100 cases requiring hospitalization and will help American families and companies to avoid 1.5 million lost work days.