From: John Husing <john@johnhusing.com>
Sent: Wednesday, August 24, 2016 12:13 PM
To: Jo Kay Ghosh; Larry McCallon (GBM); Ben Benoit (GBM); Margarita Felix (Ben); Ben Benoit (GBM)
Subject: Missing appendix item or discussion

As a member of the AQMP Advisory group, I note that in your 26 pages of references to studies on the health impacts of pollution, I the only study (*title and summary below*) that directly measured the impact of the 2007 and later diesel engines on long term health and cancer was not listed. This despite the fact that it concludes no cancer risk and was paid for, among others, by CARB, NRDC and EPA. It appears to be research that AQMD does not even want to acknowledge exists.

Advanced Collaborative Emissions Study (ACES): Lifetime Cancer and Non-Cancer Assessment in Rats Exposed to New-Technology Diesel Exhaust Jacob D McDonaldJeffrey C BemisLance M HallbergDaniel J ConklinResearch Report 184, January 2015 Health Effects Institute

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STUDY OF LIFETIME ANIMAL EXPOSURE TO NEW TECHNOLOGY DIESEL ENGINE EXHAUST FINDS NO LUNG CANCER

(Boston, January 27. 2015) The first study to conduct a comprehensive evaluation of lifetime exposure to new technology diesel exhaust (NTDE) has found no evidence of carcinogenic lung tumors.
The Advanced Collaborative Emissions Study (ACES), issued today by the Health Effects Institute
(HEI)1also confirmed that the concentrations of particulate matter and toxic air pollutants emitted from
NTDE are more than 90% lower than emissions from traditional older diesel engines (TDE).
The study exposed laboratory rats 80 hoursa week, for up to 30 months, to emissions from a heavy-
duty diesel engine meeting stringent 2007 US EPA standards that use new filters and oth
er control technology to reduce emissions significantly. In contrast to previous health studies of TDE, the ACES
study found that lifetime exposure did not induce tumors or pre-cancerous changes in the lung and did not
increase tumors related to NTDE in any other tissue. A few mild changes were seen in the lungs,
consistent with long-term exposure to NO2, a component of NTDE that has been further substantially
reduced in 2010-and later model year engines compliant with US EPA rules.

The ACES results are expected to play an important role in future risk reviews of diesel engines by
international and US agencies. "We are already seeing a transition in America's roads with over 30% of
the trucks and buses in use today meeting these new standards and the trend is growing in Europe as
well," said Dan Greenbaum, President of HEI. "These results confirm the great strides that government
and industry have made to reduce diesel risk – and argue for even greater efforts to accelerate the
replacement of older diesel engines."