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May 16, 2016

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(Via Federal Express and Electronic Mail)
Dr. Chuck Carr Brown
Secretary, Louisiana Department of Environmental Quality
602 North Fifth Street
Baton Rouge, LA 70802

Re: Denka Performance Elastomer LLC
Pontchartrain Facility

Dear Dr. Brown:

We want to thank you for meeting on Tuesday, May 10, with Denka Performance Elastomer LLC (DPE) concerning the chloroprene ambient air risk assessment issues at the Pontchartrain Facility near LaPlace. DPE appreciates the Louisiana Department of Environmental Quality's (LDEQ's) efforts to address these issues with DPE cooperatively.

At the May 10 meeting, you requested DPE to advise LDEQ by Friday, May 13, which deadline you agreed to extend to Monday, May 16, of what DPE could do to achieve a potential risk-based ambient air standard for chloroprene of 0.2 $\mu g/m^3$ on an annual average basis. In the short time allowed, we have developed this response on behalf of DPE. We reserve the right to supplement and/or modify some of the following points as we develop more information. We look forward to discussing this with you in more detail.

I. The Proposed Ambient Standard Should be Based on the Current Toxicological Information

The LDEQ and the EPA are currently reviewing chloroprene risk assessment issues for chloroprene based on the EPA's Integrated Risk Information System (IRIS) inhalation Unit Risk Estimate (URE) set out in the IRIS 2010 Toxicological Review of Chloroprene, and on the identification in that Review of a mutagenic mode of action (MOA). A more recent, comprehensive and peer reviewed study by Allen, *et al.* (2014),[1] concluded that the 2010 IRIS

[1] Allen BC, Van Landingham C, Yang Y, Youk AO, Marsh GM, Esmen N, Gentry PR, Clewell III HJ, Himmelstein MW. (2014) A constrained maximum likelihood approach to evaluate the impact of dose metric on cancer risk assessment: Application to β-chloroprene. *Regulatory Toxicology and Pharmacology* 70: 203–213.

URE is approximately 100 times larger than could be supported by a scientifically valid URE, and that chloroprene does not have a mutagenic MOA.

In addition, it is important for the LDEQ to recognize that the National Academy of Sciences' National Research Council (NRC) recommended an extensive overhaul of the IRIS toxicity evaluation methodology in 2011[2] and again in 2014,[3] and Congress instructed EPA to change the IRIS methodology to address the NRC recommendations (in 2012, 2014, and 2015).[4] EPA has advised Congress that it is implementing these changes.[5] Of course, the IRIS 2010 Toxicological Review of Chloroprene was completed prior to these changes, and has not been updated to be consistent with these changes.

In general, the NRC recommended that EPA standardize the IRIS process in order to provide more transparency and to ensure that EPA takes into account all relevant and reliable evidence. Using methodology consistent with the NRC recommendations, the Allen, *et al.* study recommends an inhalation URE of approximately 100 times smaller than the 2010 IRIS URE, and it concludes that chloroprene does not operate in a mutagenic MOA. The 2010 IRIS URE for chloroprene, which includes a 60% upwards adjustment based on the concern that chloroprene had a mutagenic MOA, is 5 X 10^{-4} per $\mu g/m^3$. In contrast, the Allen, *et al.* study derived a maximum-likelihood estimate of 1.86 x 10^{-6} per $\mu g/m^3$.

Moreover, the epidemiologic studies referenced in the 2010 IRIS study do not establish a clear causal connection between occupational chloroprene exposure and liver and lung cancers. Consequently, one of EPA's arguments to justify a proposed "likely to be carcinogenic to humans" classification for chloroprene would not be supported by a revised assessment of the epidemiological data coupled with a rigorous integration of evidence.

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2 National Research Council, Review of the Environmental Protection Agency's Draft IRIS Assessment of Formaldehyde (2011).

3 National Research Council, Review of EPA's Integrated Risk Information System (IRIS) Process, at 3 (2014).

4 H.R. Rep. No. 112-331 at 1072 (Dec. 15, 2011) (Conference Committee joint explanatory statement accompanying 2012 Consolidated Appropriations Act); 160 Cong. Rec. H475, H977 (Jan. 15, 2014) (explanatory statement accompanying 2014 Consolidated Appropriations Act); H. R. Rep. No. 113-551 at 59 (July 23, 2014), *cited in* 160 Cong. Rec. H9307, H9766 (Dec. 11, 2014) (explanatory statement accompanying Consolidated and Further Continuing Appropriations Act of 2015).

5 *See* U.S. Environmental Protection Agency Office of Research and Development, EPA's Integrated Risk Information System Program Progress Report and Report to Congress at 11 (June 2012); U.S. Environmental Protection Agency Office of Research and Development, EPA's Integrated Risk Information Program Progress Report and Report to Congress at 3 (Feb. 2015).

During our meeting on May 10, you advised us that LDEQ, based on the 2010 IRIS URE, was considering an ambient standard of chloroprene of 0.2 $\mu g/m^3$ on an annual average basis. Based on the Allen, *et al.* study, the appropriate ambient standard would be much higher. Our preliminary analysis, if the Allen, *et al.* findings are given full weight, is that the limiting concentration for a potential ambient air standard should be based on the Reference Concentration (RfC) for non-cancer risks of 20 $\mu g/m^3$ as set out in the 2010 IRIS Toxicological Review of Chloroprene.

Accordingly, and in response to your request, DPE will evaluate options for emission control strategies to meet both LDEQ's suggested 0.2 $\mu g/m^3$ annual average standard and to meet a more accurate 20 $\mu g/m^3$ ambient standard on an annual average basis. It is important to recognize, however, that any potential ambient standard based on the 2010 IRIS URE is scientifically flawed and would be far more stringent than required to protect human health and the environment.

II. Ambient Air Standard Evaluation Activities

As you know, the evaluation of chloroprene concentrations near the Pontchartrain Facility requires an analysis of ambient air concentrations based on air monitoring and air modeling information.

A. Air Monitoring

In February, LDEQ undertook air sampling in the vicinity of the Pontchartrain Facility. DPE has not yet been provided with LDEQ's air sampling results. This information will need to be addressed in our study.

On March 29, LDEQ requested DPE to submit an air monitoring plan to LDEQ for review and approval. DPE submitted the monitoring plan to LDEQ on May 6. As soon as DPE has LDEQ's approval of the plan, DPE can commence air monitoring.

B. Air Modeling

On March 29, and by letter dated March 30, LDEQ requested DPE to submit a plan for air dispersion modeling of the Pontchartrain Facility's air emissions. This plan was submitted to LDEQ on April 13 as required. After DPE receives approval of that air modeling plan, DPE can commence the air dispersion modeling study.

III. Evaluation of Emission Abatement Options

As you know, EPA has commenced a Risk and Technology Review (RTR) of the Pontchartrain Facility's chloroprene emissions. This involves a systematic review both of available MACT level controls under Clean Air Act Section 112(d) and a residual risk review under Clean Air Act Section 112(f). 42 U.S.C. § 7412(d) and (f). You have requested that DPE evaluate air control or abatement options and implement controls much more rapidly than can be accomplished as a result of EPA's RTR evaluation.

DPE is willing to work with LDEQ to achieve early reductions of chloroprene emissions; however, at the same time, DPE requests LDEQ to recognize that emission requirements must ultimately be based on good science. In response to your request, DPE agrees to review available emission control technologies potentially available for use at the Pontchartrain Facility at this time, recognizing that available emission control technology may substantially reduce chloroprene emissions, but may not necessarily achieve an unrealistic standard. Even with the recent scientific information, it will take time and resources for review and reconsideration of the IRIS 2010 URE. DPE will be willing to consider the installation of emission controls and to consider with LDEQ whether the installation of available emission reduction controls will meet LDEQ's requirements pending a review by EPA IRIS of the 2010 URE, and during the pendency of EPA's RTR process. We can undertake these discussions on a mutually agreeable schedule.

IV. Conclusion

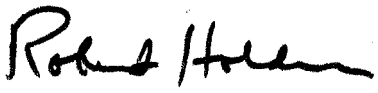
DPE will evaluate options to achieve LDEQ's identified potential ambient air standard of 0.2 $\mu g/m^3$ annual average, as well as a more scientifically appropriate potential standard of 20 $\mu g/m^3$ on an annual average basis. To conduct its evaluation, it is important that DPE review LDEQ's recent air sampling results. In addition, DPE's evaluation will require LDEQ's approval of its air monitoring and air modeling plans.

DPE is willing to discuss with LDEQ whether it will be possible to install emission control technology on an expedited basis. We will work with LDEQ to develop a mutually agreeable schedule to review the possible options.

We also want to thank you for agreeing to schedule a meeting on May 27 with Mr. Mitsukuni Ayabe, Vice President of Denka Company Limited. Mr. Ayabe is a very senior executive for Denka Company, and Denka Company is the majority investor in DPE. We look forward to the meeting.

We look forward to our continued discussions with LDEQ on this matter.

Yours very truly,



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