

Sept. 29, 2009

Ms. Minnie de Jong
Manager, Human Toxicology and Air Standards Section
Standards Development Branch
Ministry of the Environment
40 St. Clair Avenue West, 7th Floor
Toronto Ontario M4V 1M2

Re: ON Reg. 419 1,3-Butadiene Air Standard EBR 010-6214

Dear Ms. de Jong:

This letter contains input from the Canadian Petroleum Products Institute (CPPI) in response to the EBR Posting 010-6214.

CPPI is the national association representing the interests of the downstream petroleum industry for all aspects of petroleum refining, distribution, transportation and marketing of petroleum products. In the province of Ontario, CPPI members include Imperial Oil, NOVA Chemicals, Shell Canada, Suncor and Ultramar. This includes operation of the 6 petroleum refineries processing about 380,000 barrels per day of crude oil, and as well, the operation of a substantial portion of the distribution and marketing infrastructure in the province.

CPPI members have maintained and demonstrated a long-standing commitment to improving environmental performance and helping protect Ontarians from being exposed to toxic substances from their operations, as well, in partnering with MOE to provide meaningful input on new developments.

From reviewing the MOE proposed 1,3 Butadiene annual air standard of $2 \mu\text{g}/\text{m}^3$, it appears that the substantial science based input and arguments made by CPPI in our Jan. 26, 2009 submission to the science consultation document, that would credibly support a higher air standard were not accepted. This is disappointing. CPPI draws your attention to our Jan. 26th input, as well has outlined further specific scientific input for the MOE to reconsider. Based on this science basis, CPPI has recommended different annual, short-term AAQC values, and URTs.

1,3 Butadiene Annual AAQC

- MOE based the AACQ on the TCEQ evaluation of 1,3 Butadiene. The high scientific quality of this document is recognized and emphasized by MOE, as well as by CPPI. The TCEQ derives an ESL of $20 \mu\text{g}/\text{m}^3$. This level is established using a risk benchmark of 10^{-5} and takes into account the conservatism in the calculation of the cancer slope. The value of $20 \mu\text{g}/\text{m}^3$ is considered to be health protective in Texas. If $20 \mu\text{g}/\text{m}^3$ is health protective in Texas, why is this not health protective in Ontario?
- MOE clearly insists on using the conservative risk benchmark of 10^{-6} . However, the TCEQ value of $20 \mu\text{g}/\text{m}^3$, which carefully weighed all levels of conservatism, cannot simply be transformed to $2 \mu\text{g}/\text{m}^3$ using a different risk benchmark. If the more conservative risk benchmark of 10^{-6} is used, it is also advised to reduce the conservatism in the TCEQ value by inclusion of high-intensity tasks. This would result in a modestly higher AAQC of 4-5 $\mu\text{g}/\text{m}^3$.
- **Based on the above scientific basis, CPPI recommends that the MOE adopt the TCEQ value of $20 \mu\text{g}/\text{m}^3$ for the annual AAQC.**

1,3 Butadiene ½ hour and 24 hour AAQC

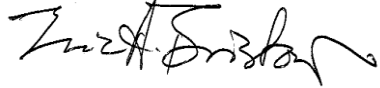
- The TCEQ ESLs are chemical-specific air concentrations set to protect human health and welfare. Short-term ESLs are based on data concerning acute health effects, odour potential, and vegetative effects. Long-term ESLs are generally based on data concerning chronic noncarcinogenic and/or carcinogenic health effects. It is not appropriate therefore to derive a 30-minute standard for 1,3 Butadiene, based on carcinogenic health effects. It is recommended that short-term (½ and 24-hour) AAQC's are based on acute effects only.
- TCEQ calculates a 1-hour ESL of $500 \mu\text{g}/\text{m}^3$ based on odour. The most relevant acute health effect reported in an animal study is reduced fetal bodyweight gain. However, the 1-hour ESL based on this health effect would be significantly above (i.e. $3700 \mu\text{g}/\text{m}^3$) the odour threshold.
- **Therefore, CPPI recommends that the 1,3 Butadiene half-hour standard be based on acute health effects as presented by TCEQ, which is odour and use the one hour TCEQ ESL for the half hour standard of $500 \mu\text{g}/\text{m}^3$ and that the 1,3 Butadiene 24 hour standard be changed to $170 \mu\text{g}/\text{m}^3$ (based on $500/3$).**

Upper Risk Threshold

- **If the Upper Risk Threshold (URT) is based on odour, then the URT should be $5000 \mu\text{g}/\text{m}^3$. Note that the TCEQ acute reference value based on acute health effects is $3700 \mu\text{g}/\text{m}^3$ for $\text{HQ} = 1$. The proposed URT ($\text{HQ} = 10$) based on odour is therefore far below the $\text{HQ} = 10$ for acute health effects.**
- **For the reasons outlined, CPPI does not agree that the carcinogenic effects should be the basis for the URT. Even if this was the case, the URT would have been $3000 \mu\text{g}/\text{m}^3$, rather than the MOE proposed URTs in Schedule 6 of 900 and $300 \mu\text{g}/\text{m}^3$ respectively.**

We welcome the opportunity to meet with you for further discussion, such that appropriate science based standards are set for 1,3 Butadiene.

Sincerely,



Eric A. Bristow
Director Government & Stakeholder Relations
Canadian Petroleum Products Institute - Ontario Division
20 Adelaide St E. Ste 901
Toronto, On M5C 2T6
Tel 416-492-5677 ext 34 [fax 2514]
E-Mail [ericbristow@cpqi.ca]

Cc Mr. Carl Griffith, ADM, Environmental Sciences and Standards Division, MOE
Mr. Dale Henry, Director, Standards Development Branch, MOE
Ms. Faith Goodman, Vice-President Ontario Division, CPPI