

Low 1,3-Butadiene C4 Category - Comments of Environmental Defense

(Submitted via Internet January 25, 2001)

Environmental Defense appreciates this opportunity to submit comments on the robust summary/test plan for Low 1,3-Butadiene C4 Category, submitted by the American Chemistry Council Olefins Panel.

This robust summary/test plan represents the second for the butadiene C4 compounds generated as streams that are products of the ethylene process, associated butadiene purification, and other C4 processes. The first was the crude butadiene C4 category for which a robust summary/test plan was submitted last year. In proposing the low 1,3-butadiene C4 (LBDC4) category, the Olefins Panel states that most of the 1,3-butadiene ? the compound of greatest toxicological concern in the C4 streams ? has been removed from the crude stream although up to 5% may remain in some circumstances (the crude stream contains approximately 10% 1,3-butadiene). After evaluating the stream compositions tabulated in the several tables of the appendix, we concur with this statement, and we support the proposed category.

This is a complex test plan because of the numerous chemicals present in the C4 streams and the varying processes in which they are used and generated. As a consequence, we spent considerable time reviewing the test plan and summaries and we want to compliment the Olefins Panel for their concise and accurate presentation of the critical issues including the stream components being tested under the HPV and SIDS programs. We agree with the Olefins Panel on all major issues of the proposed test plan as it clearly documents the current as well as the anticipated data from ongoing studies including preliminary results from the crude butadiene streams. The two HPV proposals and summaries, taken together with studies under the OECD program, have an appropriate mix of tests on individual components and on the most toxicologically relevant mixtures. In cases where a mixture or individual agent is not being studied, the justification is convincing.

We do, however, disagree on one relatively minor point of the document. On page 4, the Olefins Panel states that the genotoxicity of 1,3-butadiene will be reduced or eliminated in vivo by the presence of other components of the LBDC4 stream because of competition for the enzyme necessary for bioactivation for a genotoxic metabolite. This is overly speculative and perhaps irrelevant to endpoints other than cancer because of varying substrate affinities and many other pharmacokinetic considerations. Nevertheless, this point should not detract from a very well done test plan and data summary, particularly inasmuch as it does not affect endpoints that are included within the HPV initiative.

Thank you for this opportunity to comment.

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