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Subject: Environmental Defense comments on 1,3,4-Thiadiazole, 2,5-bis(tert-nonyldithio) (CAS# 89347-09-1)

(Submitted via Internet 12/17/03 to oppt.ncic@epa.gov, hpv.chemrtk@epa.gov, boswell.karen@epa.gov, chem.rtk@epa.gov, MTC@mchsi.com, and Sarah_McLallen@americanchemistry.com)

Environmental Defense appreciates this opportunity to submit comments on the robust summary/test plan for 1,3,4-Thiadiazole, 2,5-bis(tert-nonyldithio) (CAS# 89347-09-1).

The American Chemistry Council Petroleum Additives Panel Health, Environmental, and Regulatory Task Group (HERTG) has submitted a Robust Summary/Test Plan describing available data and testing needs for a lubricant additive, 1,3,4-thiadiazole, 2,5-bis(tert-nonyldithio). This chemical is used as an additive in lubricants and, to a limited extent, as a sulfur deactivator and corrosion inhibitor in some fuels. Other possible uses are not mentioned. If there are other uses of this chemical, they should be described as well.

The brief Test Plan submitted for 1,3,4-thiadiazole, 2,5-bis(tert-nonyldithio) indicates that data addressing its properties and toxicity are very limited. Because this high-volume chemical is shipped in concentrated forms in tank cars, boats and trucks, it is subject to accidental spills that could result in significant human exposure and/or environmental contamination. Concern for the environment is also raised by the fact that finished lubricants containing this chemical are used in cars and trucks maintained by service personnel and consumers who may be largely unaware of the potential for environmental contamination resulting from inappropriate disposal of used lubricants.

The limited studies described in this submission are somewhat reassuring in that they indicate that 1,3,4-thiadiazole, 2,5-bis(tert-nonyldithio) is not mutagenic and appears to have low acute toxicity to both mammals and fish. It should be noted, however, that studies described in the Robust Summary indicate that much of the material used in studies of toxicity to fish was apparently not in solution and that 1,3,4-thiadiazole, 2,5-bis(tert-nonyldithio) is not readily biodegraded. Thus, low-level exposure such as might occur in an incident of environmental contamination might have a greater negative long-term effect than predicted by these acute toxicity studies.

In sum, in spite of the fact that 1,3,4-thiadiazole, 2,5-bis(tert-nonyldithio) has significant potential for human exposure and may be widely distributed in the environment, it has been the subject of very few studies to characterize its environmental or human toxicity. Most of the SIDS elements requested under EPA's HPV Challenge Initiative have not yet been addressed. However, we are pleased to note that those SIDS elements that have been addressed are -- with the exception of those for

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acute toxicity -- recent, well designed and were conducted under GLP. These studies are described in some detail in the well-organized Robust Summaries. We are also pleased to note that the Test Plan submitted by HERTG for 1,3,4-thiadiazole, 2,5-bis(tert-nonyldithio) proposes to conduct studies using appropriate OECD guidelines, computer modeling or technical discussion for each of the SIDS elements not currently addressed by adequate studies. We strongly support the studies proposed and agree that the resulting data should allow for a screening-level hazard characterization of 1,3,4-thiadiazole, 2,5-bis(tert-nonyldithio).

Thank you for this opportunity to comment.

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