

May 8, 2003

Edwin L. Mongan, III  
Manager, Environmental Stewardship  
E.I. du Pont de Nemours & Company  
Safety, Health & Environmental Excellence Center  
1007 Market Street  
DuPont 6062  
Wilmington, DE 19898

Dear Mr. Mongan:

The Office of Pollution Prevention and Toxics is transmitting EPA's comments on the robust summaries and test plan for 1,5-Cyclooctadiene posted on the ChemRTK HPV Challenge Program Web site on January 16, 2003. I commend E.I. du Pont de Nemours & Company for its commitment to the HPV Challenge Program.

EPA reviews test plans and robust summaries to determine whether the reported data and test plans will provide the data necessary to adequately characterize each SIDS endpoint. On its Challenge Web site, EPA has provided guidance for determining the adequacy of data and preparing test plans used to prioritize chemicals for further work.

EPA will post this letter and the enclosed comments on the HPV Challenge Web site within the next few days. As noted in the comments, we ask that E.I. du Pont de Nemours & Company advise the Agency, within 60 days of this posting on the Web site, of any modifications to its submission.

If you have any questions about this response, please contact Richard Hefter, Chief of the HPV Chemicals Branch, at 202-564-7649. Submit questions about the HPV Challenge Program through the "Contact Us" link on the HPV Challenge Program Web site pages or through the TSCA Assistance Information Service (TSCA Hotline) at (202) 554-1404. The TSCA Hotline can also be reached by e-mail at [tsca-hotline@epa.gov](mailto:tsca-hotline@epa.gov).

I thank you for your submission and look forward to your continued participation in the HPV Challenge Program.

Sincerely,

-S-

Oscar Hernandez, Director  
Risk Assessment Division

Enclosure

cc: C. Auer  
A. Abramson  
W. Penberthy  
M. E. Weber

**EPA Comments on Chemical RTK HPV Challenge Submission:  
1,5-Cyclooctadiene**

**SUMMARY OF EPA COMMENTS**

The sponsor, E.I. du Pont de Nemours & Company, Inc., submitted a test plan and robust summaries to EPA on December 11, 2002, for 1,5-Cyclooctadiene (CAS No. 111-78-4). EPA posted the submission on the ChemRTK HPV Challenge Web site on January 16, 2003.

EPA has reviewed this submission and has reached the following conclusions:

1. Physicochemical Properties. The submitted data for melting point, boiling point, vapor pressure, and partition coefficient are adequate for the purposes of the HPV Challenge Program. The submitter needs to provide measured data for water solubility.
2. Environmental Fate. The submitted data for photodegradation, and transport and distribution are adequate for the purposes of the HPV Challenge Program. The submitter needs to correctly address the stability in water of this chemical. The submitter needs to provide measured biodegradation data for this chemical.
3. Health Effects. Adequate data are available for acute and genetic toxicity endpoints for the purposes of the HPV Challenge Program. EPA agrees with the submitter's proposal to conduct a combined repeated-dose/reproduction/developmental toxicity screening test to address these endpoints. The submitter needs to specify the route of test substance administration for this test.
4. Ecological Effects. The submitted data for fish and daphnia are inadequate for the purposes of the HPV Challenge Program. Testing is needed for these two endpoints. EPA agrees with the submitter's proposal to conduct an algal study.

EPA requests that the submitter advise the Agency within 60 days of any modifications to its submission.

**EPA COMMENTS ON THE 1,5-CYCLOOCTADIENE CHALLENGE SUBMISSION**

**Test Plan**

Physicochemical Properties (melting point, boiling point, vapor pressure, partition coefficient and water solubility).

The submitted data for melting point, boiling point, vapor pressure, and partition coefficient are adequate for the purposes of the HPV Challenge Program.

*Water solubility.* The submitter indicates that the estimated value is adequate for this endpoint. EPA disagrees. In general, estimated water solubility data are not adequate for the purposes of the HPV Challenge Program. The submitter needs to provide measured data for this endpoint.

Environmental Fate (photodegradation, stability in water, biodegradation, fugacity).

The submitted data for photodegradation are adequate for the purposes of the HPV Challenge Program.

*Stability in water.* The submitter indicates that adequate data are available for this endpoint. However, the submitter provided only information about volatilization, which does not address this endpoint. Even

though this chemical does not have functional groups that are susceptible to hydrolysis, the submitter needs to explain this point in a robust summary.

*Biodegradation.* The submitter indicates that adequate data for this endpoint are available. EPA disagrees. The submitter's BOWIN-based conclusions for biodegradability are insufficient. The submitter needs to provide measured ready biodegradation data following OECD TG 301.

*Transport and distribution (fugacity).* The submitter needs to recalculate its fugacity model using measured water solubility data. The use of estimated values introduces uncertainties that then become magnified in modeling applications.

Health Effects (acute toxicity, repeated-dose toxicity, genetic toxicity, and reproductive/developmental toxicity).

EPA agrees with the submitter's proposal to conduct a combined repeated-dose/reproduction/developmental toxicity screening test (OECD TG 422) to address these endpoints. The submitter needs to specify the route of test substance administration for this test.

Ecological Effects (fish, invertebrate and algal toxicity)

EPA agrees with the submitter's proposal to conduct an algal study. The submitted data for fish and invertebrates are inadequate because the studies were performed using nominal concentrations in which the chemical's volatility during the tests was not addressed. Therefore, tests should be conducted for fish (96-hour) and daphnia (48-hour) using a closed system with no head space and mean measured concentrations.

### **Specific Comments on Robust Summaries**

None.

### **Followup Activity**

EPA requests that the submitter advise the Agency within 60 days of any modifications to its submission.