

**CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY  
OFFICE OF ENVIRONMENTAL HEALTH HAZARD ASSESSMENT  
SAFE DRINKING WATER AND TOXIC ENFORCEMENT ACT OF 1986  
(PROPOSITION 65)**

**REQUEST FOR RELEVANT INFORMATION  
ON CHEMICALS BEING CONSIDERED FOR LISTING  
BY THE AUTHORITATIVE BODIES MECHANISM:**

**COCAMIDE DIETHANOLAMINE, KRESOXIM-METHYL, MON 4660, MON 13900,  
PYMETROZINE, AND TETRACONAZOLE**

**October 22, 2010**

The California Environmental Protection Agency's Office of Environmental Health Hazard Assessment (OEHHA) is requesting information as to whether the chemicals identified in the table below meet the criteria for listing under the Safe Drinking Water and Toxic Enforcement Act of 1986.<sup>1</sup> This action is being proposed under the authoritative bodies listing mechanism.<sup>2</sup>

<b>Chemical</b>	<b>CAS No.</b>	<b>Endpoint</b>	<b>Reference</b>	<b>Chemical Use</b>
<i>Cocamide diethanolamine (coconut oil acid diethanolamine condensate)</i>	68603-42-9	Cancer	U.S. EPA (2001), NTP (2001)	Biopesticide composed of diethanolamides of fatty acids found in coconut oil; used in consumer products including cosmetics, soaps and shampoos; active ingredient in pet shampoo.
<i>Kresoxim-methyl</i>	143390-89-0	Cancer	U.S. EPA (1999a)	Fungicide used on apples, cherries, grapes, pears, pome fruits and pecans.
<i>MON 4660 (dichloroacetyl-1-oxa-4-aza-spiro(4.5)-decane)</i>	71526-07-3	Cancer	U.S. EPA (1999b)	Herbicide safener used in formulations with acetanilide herbicides (such as alachlor and/or acetochlor).
<i>MON 13900 (furilazole)</i>	121776-33-8	Cancer	U.S. EPA (1999c)	Herbicide safener used in formulations with the acetanilide herbicide acetochlor.

<sup>1</sup> Commonly known as Proposition 65, the Safe Drinking Water and Toxic Enforcement Act of 1986 is codified in Health and Safety Code section 25249.5 *et seq.*

<sup>2</sup> See Health and Safety Code section 25249.8(b) and Title 27, Cal. Code of Regs., section 25306.

Chemical	CAS No.	Endpoint	Reference	Chemical Use
<i>Pymetrozine</i>	123312-89-0	Cancer	U.S. EPA (1999d)	Anti-feeding insecticide used on lettuce, broccoli, celery, and other vegetables and fruits
<i>Tetraconazole</i>	112281-77-3	Cancer	U.S. EPA (2000)	Triazole fungicide used to control leafspot and powdery mildew on sugar beets

**Background on listing via the authoritative bodies mechanism:** A chemical must be listed under the Proposition 65 regulations when two conditions are met:

- 1) An authoritative body formally identifies the chemical as causing cancer (Section 25306(d)<sup>3</sup>).
- 2) The evidence considered by the authoritative body meets the sufficiency criteria contained in the regulations (Section 25306(e)).

However, the chemical is not listed if scientifically valid data which were not considered by the authoritative body clearly establish that the sufficiency of evidence criteria were not met (Section 25306(f)).

The U.S. Environmental Protection Agency (U.S. EPA) and the National Toxicology Program (NTP) are two of several institutions designated as authoritative for the identification of chemicals as causing cancer (Section 25306(m)).

OEHHA is the lead agency for Proposition 65 implementation. After an authoritative body has made a determination about a chemical, OEHHA evaluates whether listing under Proposition 65 is required using the criteria contained in the regulations.

**OEHHA's determination:** *Cocamide diethanolamine, kresoxim-methyl, MON 4660, MON 13900, pymetrozine, and tetraconazole* appear to meet the criteria for listing as known to the State to cause cancer under Proposition 65, based on findings of the U.S. EPA and the NTP.

**Formal identification and sufficiency of evidence for cocamide diethanolamine (coconut oil acid diethanolamine condensate):** In 2001, the U.S. EPA and the NTP each published reports on cocamide diethanolamine, entitled *Cancer Assessment Document, Evaluation of the Carcinogenic Potential of Cocamide Diethanolamine (DEA)* and *Toxicology and Carcinogenesis Studies of Coconut Oil Acid Diethanolamine Condensate (CAS No. 68603-42-9) in F344/N Rats and B6C3F<sub>1</sub> Mice (Dermal Studies)*, respectively, that conclude that the chemical causes cancer (NTP, 2001; U.S. EPA, 2001). These reports appear to satisfy the formal identification and sufficiency of evidence criteria in the Proposition 65 regulations.

<sup>3</sup> All referenced sections are from Title 27 of the Cal. Code of Regulations.

OEHHA is relying on the U.S. EPA's discussion of data and conclusions in its report that cocamide diethanolamine causes cancer. The U.S. EPA report concludes cocamide diethanolamine is " 'likely to be carcinogenic to humans' based on the occurrence of liver and kidney tumors in male and liver tumors in female B6C3F<sub>1</sub> mice." The tumors were observed in studies conducted by the National Toxicology Program (also described below). Specifically, the U.S. EPA described a study of male mice treated with cocamide diethanolamine showing significant increases in the incidences of combined renal tubule carcinomas and adenomas, hepatoblastomas, and combined hepatocellular adenomas, carcinomas, and hepatoblastomas. The U.S. EPA also described a study of female mice treated with cocamide diethanolamine showing significant increases in the incidences of hepatocellular carcinomas and combined hepatocellular adenomas, carcinomas, and hepatoblastomas.

OEHHA is also relying on the NTP's discussion of data and conclusions in its report that coconut oil acid diethanolamine condensate causes cancer. In its report, the NTP described the studies of male and female mice treated with cocamide diethanolamine as showing increases in the incidences of combined hepatocellular adenomas, hepatocellular carcinomas, and hepatoblastomas in both sexes. The NTP also reported an increase in combined renal tubule adenomas and carcinomas among treated male mice. The NTP (2001) report concludes:

"Under the conditions of these 2-year dermal studies, there was *no evidence of carcinogenic activity* of coconut oil acid diethanolamine condensate in male F344/N rats administered 50 or 100 mg/kg. There was *equivocal evidence of carcinogenic activity* in female F344/N rats based on a marginal increase in the incidences of renal tubule neoplasms. There was *clear evidence of carcinogenic activity* in male B6C3F<sub>1</sub> mice based on increased incidences of hepatic and renal tubule neoplasms and in female B6C3F<sub>1</sub> mice based on increased incidences of hepatic neoplasms. These increases were associated with the concentration of free diethanolamine present as a contaminant in the diethanolamine condensate." (Emphasis in original)

Thus, the U.S. EPA (2001) found that cocamide diethanolamine causes increased incidences of combined malignant and benign liver tumors and rare combined malignant and benign kidney tumors in male mice, and malignant and combined malignant and benign liver tumors in female mice. The NTP (2001) also found that cocamide diethanolamine causes increased incidences of combined malignant and benign liver and kidney tumors in male mice and increased incidences of combined malignant and benign liver tumors in female mice.

**Formal identification and sufficiency of evidence for kresoxim-methyl:** In 1999, the U.S. EPA published a report on kresoxim-methyl entitled *Cancer Assessment Document, Evaluation of the Carcinogenic Potential of Kresoxim-Methyl* that concludes that the chemical causes cancer (U.S. EPA, 1999a). This report appears to satisfy the formal identification and sufficiency of evidence criteria in the Proposition 65 regulations.

OEHHA is relying on the U.S. EPA's discussion of data and conclusions in the report that kresoxim-methyl causes cancer. The U.S. EPA report concludes that kresoxim-methyl is " 'likely to be carcinogenic to humans' by the oral route." Evidence described in report includes studies showing that kresoxim-methyl increased the incidences of hepatocellular carcinoma in male and female rats in two experiments in each sex.

Thus, the U.S. EPA (1999a) has found that kresoxim-methyl causes increased incidence of malignant liver tumors in two experiments in male rats and in two experiments in female rats.

**Formal identification and sufficiency of evidence for MON 4660 (dichloroacetyl-1-oxa-4-azaspiro(4.5)decane):** In 1999, the U.S. EPA published a report on MON 4660, entitled *Cancer Assessment Document, Evaluation of the Carcinogenic Potential of MON 4660*, that concludes that the chemical causes cancer (U.S. EPA, 1999b). This report appears to satisfy the formal identification and sufficiency of evidence criteria in the Proposition 65 regulations.

OEHHA is relying on the U.S. EPA's discussion of data and conclusions in the report that MON 4660 causes cancer. The U.S. EPA report concludes that MON 4660 is " 'likely to be carcinogenic to humans' by the oral route." Evidence described in the report includes studies showing that MON 4660 increased the incidences of tumors as follows:

Male rats:

- Hepatocellular carcinomas and combined hepatocellular adenomas and carcinomas
- Combined squamous cell papillomas and carcinomas of the stomach

Female rats:

- Combined hepatocellular adenomas and carcinomas

Male mice:

- Hepatocellular carcinomas and combined hepatocellular adenomas and carcinomas
- Squamous cell carcinomas and combined squamous cell papillomas and carcinomas of the stomach

Female mice:

- Squamous cell carcinomas and combined papillomas and carcinomas of the stomach

Thus, the U.S. EPA (1999b) has found that MON 4660 causes an increased incidence of malignant tumors or combined malignant and benign tumors in male rats and male and female mice, with tumors at multiple sites in male rats and mice.

**Formal identification and sufficiency of evidence for MON 13900 (furilazole):** In 1999, the U.S. EPA published a report on MON 13900 (furilazole), entitled *Cancer Assessment Document, Evaluation of the Carcinogenic Potential of MON 13900*, that

concludes that the chemical causes cancer (U.S. EPA, 1999c). This report appears to satisfy the formal identification and sufficiency of evidence criteria in the Proposition 65 regulations.

OEHHA is relying on the U.S. EPA's discussion of data and conclusions in the report that MON 13900 causes cancer. The U.S. EPA report concludes that MON 13900 is " 'likely to be carcinogenic to humans' by the oral route." Evidence described in the report includes studies showing that MON 13900 increased the incidences of tumors as follows:

Male rats:

- Combined hepatocellular adenomas and carcinomas
- Combined squamous cell papillomas and carcinomas of the stomach
- Testicular interstitial cell tumors of the testes

Female rats:

- Hepatocellular carcinomas and combined hepatocellular adenomas and carcinomas

Female mice:

- Hepatocellular carcinomas and combined hepatocellular adenomas and carcinomas
- Bronchio-alveolar carcinomas and combined bronchio-alveolar adenomas and carcinomas

Thus, the U.S. EPA (1999c) has found that MON 13900 causes increased incidences of malignant or combined malignant and benign tumors in male rats, female rats, and female mice, including rare stomach tumors in male rats and an increased incidence of tumors at multiple sites in male rats and female mice.

**Formal identification and sufficiency of evidence for pymetrozine:** In 1999, the U.S. EPA published a report on pymetrozine, entitled *Cancer Assessment Document, Evaluation of the Carcinogenic Potential of Pymetrozine*, that concludes that the chemical causes cancer (U.S. EPA, 1999d). This report appears to satisfy the formal identification and sufficiency of evidence criteria in the Proposition 65 regulations.

OEHHA is relying on the U.S. EPA's discussion of data and conclusions in the report that pymetrozine causes cancer. The U.S. EPA report concludes pymetrozine is " 'likely to be a human carcinogen' by the oral route." Evidence described in the report includes studies showing that pymetrozine increased the incidences of hepatocellular carcinomas in male mice and combined benign hepatomas and hepatocellular carcinomas in male and female mice.

Thus, the U.S. EPA (1999d) has found that pymetrozine causes increased incidences of malignant liver tumors in male mice, and combined malignant and benign liver tumors in male and female mice.

**Formal identification and sufficiency of evidence for tetraconazole:** In 2000, the U.S. EPA published a report on tetraconazole, entitled *Cancer Assessment Document, Evaluation of the Carcinogenic Potential of Tetraconazole*, that concludes that the

chemical causes cancer (U.S. EPA, 2000). This report appears to satisfy the formal identification and sufficiency of evidence criteria in the Proposition 65 regulations.

OEHHA is relying on the U.S. EPA's discussion of data and conclusions in the report that tetraconazole causes cancer. The U.S. EPA report concludes tetraconazole is "likely to be carcinogenic to humans" by the oral route." Evidence described in the report includes studies showing that tetraconazole causes increases in the incidences of hepatocellular carcinomas and combined hepatocellular carcinomas and adenomas in male and female mice.

Thus, the U.S. EPA (2000) has found that tetraconazole causes increased incidences of malignant and combined malignant and benign liver tumors in male and female mice.

**Request for relevant information:** OEHHA is committed to public participation in its implementation of Proposition 65. OEHHA wants to ensure that its regulatory decisions are based on a thorough consideration of all relevant information. OEHHA is requesting public comment concerning whether these chemicals meet the criteria set forth in the Proposition 65 regulations for authoritative bodies listings.

After reviewing all comments received, OEHHA will determine whether the identified chemicals meet the regulatory criteria for administrative listing. For chemicals determined to meet the listing criteria, OEHHA will proceed with the listing process and publish a Notice of Intent to List.

In order to be considered, **OEHHA must receive comments by 5:00 p.m. on Tuesday, December 21, 2010.** We encourage you to submit comments in electronic form, rather than in paper form. Comments transmitted by e-mail should be addressed to [coshita@oehha.ca.gov](mailto:coshita@oehha.ca.gov). Comments submitted in paper form may be mailed, faxed, or delivered in person to the addresses below:

Mailing Address: Ms. Cynthia Oshita  
Office of Environmental Health Hazard Assessment  
P.O. Box 4010, MS-19B  
Sacramento, California 95812-4010

Fax: (916) 323-8803

Street Address: 1001 I Street  
Sacramento, California 95814

**Optional public forum:** Upon request, OEHHA will schedule a public forum to provide individuals an opportunity to present oral comments on the possible listing of these chemicals. At the forum, the public may discuss the scientific data and other relevant information related to whether these chemicals meet the criteria for listing in the regulations.

Requests for a public forum must be submitted in writing no later than Friday, November 19, 2010. The written request must be sent to OEHHA at the mailing

address above. If a public forum is requested, a notice will be posted on the OEHHA web site at least ten days before the forum date. The notice will provide the date, time, location and subject matter to be heard. Notices will also be sent to those individuals requesting such notification.

If you have any questions, please contact Ms. Oshita at [coshita@oehha.ca.gov](mailto:coshita@oehha.ca.gov) or at (916) 445-6900.

## References

National Toxicology Program (NTP, 2001). *Toxicology and Carcinogenesis Studies of Coconut Oil Acid Diethanolamine Condensate (CAS No. 68603-42-9) in F344/N Rats And B6C3F<sub>1</sub> Mice (Dermal Studies)*. NTP Technical Report Series No. 479. NIH Publication No. 01-3969. U.S. Department of Health and Human Services, NTP, Research Triangle Park, NC.

U.S. Environmental Protection Agency (U.S. EPA, 1999a). Cancer Assessment Document, Evaluation of the Carcinogenic Potential of Kresoxim-methyl. Final Report. Health Effects Division, Office of Pesticide Programs. August 19, 1999.

U.S. Environmental Protection Agency (U.S. EPA, 1999b). Cancer Assessment Document, Evaluation of the Carcinogenic Potential of MON 4660. Final Report. Cancer Health Effects Division, Office of Pesticide Programs. December 9, 1999.

U.S. Environmental Protection Agency (U.S. EPA, 1999c). Cancer Assessment Document, Evaluation of the Carcinogenic Potential of MON 13900. Health Effects Division, Office of Pesticides Programs. September 21, 1999.

U.S. Environmental Protection Agency (U.S. EPA, 1999d). Cancer Assessment Document, Evaluation of the Carcinogenic Potential of Pymetrozine. Health Effects Division, Office of Pesticide Programs. August 24, 1999.

U.S. Environmental Protection Agency (U.S. EPA, 2000). Cancer Assessment Document, Evaluation of the Carcinogenic Potential of Tetraconazole. Final Report. Health Effects Division, Office of Pesticide Programs. January 11, 2000.

U.S. Environmental Protection Agency (U.S. EPA, 2001). Cancer Assessment Document, Evaluation of the Carcinogenic Potential of Cocamide Diethanolamine (DEA). Final Report. Health Effects Division, Office of Pesticide Programs. October 17, 2001.