

**Department of Defense Comments on the
Draft Toxicological Review of Hexavalent Chromium Charge Questions**

Comments submitted by: Chemical
Material Risk Management Directorate

Organization: Department of Defense

Date Submitted: May 6, 2010

*Comment categories: Science or methods (S); Editorial, grammar/spelling, clarifications needed (E); or Other (O). Also please indicate if Major i.e. affects the outcome, conclusions or implementation of the assessment.

Comment No.	Section	Page & Paragraph (enter "Global" if report section-wide)	Comment	Suggested Action, Revision and References (if necessary)	Category*
1.	(A); (B).	Pages 1 and 2.	The reviewers should be asked if they agree with the species selected to derive the toxicity values from the NTP 2008 studies, that is, the mouse data rather than the rat data, which some may believe may be more relevant to humans. For the carcinogenicity endpoint, the oral mucosa avoids the uncertainty of amount of reduction in the GI tract.	Please add the question: "Do you agree with the selection of the mouse as the key species for derivation of a human oral cancer potency estimate?"	S, M
2.	(B).	New Question.	We understand that both EPA's National Center for Environmental Assessment and Office of Prevention, Pesticides, and Toxic Substances (OPPTS) both have prepared hexavalent chromium toxicology/risk assessment-related draft documents. We believe that a comparison between the two would be beneficial for the reviewers and all documents should be made available.	Please add the question: "Are the conclusions of the assessments of hexavalent chromium toxicity performed by NCEA and OPPTS comparable?"	S,M
3.	(B).	Page 2. #2.	Because of considerable uncertainty regarding the specific mode of action by which chromium caused either the mouse intestinal tumors and the rat oral mucosa tumors we believe that there is insufficient evidence to support the conclusion of a mutagenic mode of action.	We appreciate EPA's including the question concerning mutagenic mode of carcinogenic action in the charge questions. We would like to add a sentence to that question, to ask, "Do you believe there is sufficient information to determine a mode of action as defined by current Agency guidance and policies?"	S,M

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4.	(B)	Page 2. #3.	We acknowledge that EPA included a charge question concerning whether the 2008 rodent study should be selected for derivation of the oral cancer slope factor. We suggest EPA consider adding the additional question specifically about human data to this charge question.	Please add the additional question: "Are existing human data related to hexavalent chromium carcinogenicity sufficient to determine whether the two-year drinking water study in rodents (NTP, 2008) was the best data to use as a point of departure to derive the human oral cancer slope factor for Cr+6?"	S,M