

Why the Nano Community Cares About the California Green Chemistry Initiative

Under green chemistry legislation enacted in 2008 (A.B. 1879), the California Department of Toxic Substances Control (CDTSC) was required to adopt regulations by January 1, 2011, to identify and regulate chemicals of concern in consumer products. The regulations would prioritize chemicals of concern in consumer products and for evaluating safer alternatives to toxic chemicals through a science-based approach. Under the Green Chemistry Program, the Office of Environmental Health Hazard Assessment (OEHHA) will specify the hazard traits, environmental and toxicological end-points, and other relevant data to include in the state's Toxics Information Clearinghouse. CDTSC will use information from the clearinghouse to help identify chemicals of concern in consumer products.

CDTSC issued draft "Safer Consumer Product Alternatives" (SCPA) regulations on June 23, 2010, proposed regulations on September 17, 2010, and revised proposed regulations on November 16, 2010.¹ The November 16, 2010, version of the regulations prompted concerns from environmental groups, as well as Assembly Member Mike Feuer, the author of the 2008 law. According to a December 23, 2010, letter from Linda S. Adams, California's Secretary for Environmental Protection, responding to a letter from Feuer outlining his concerns, "DTSC has agreed to take additional time to be responsive to the concerns raised and revisit the proposed regulations." Instead, Adams stated that CDTSC and its regulation development team would reconvene the Green Ribbon Science Panel in early 2011 to address the "programmatic issues that have been brought to our attention via the public comment process." Adams states that "[t]his additional time and expertise will help ensure that the vision behind this component of the Green Chemistry Initiative and implementing statute AB 1879, is fully realized."²

Of particular note, in the November 16, 2010, revised proposed regulations, CDTSC removed all references to nanotechnology and nanomaterials, which previously defined nanomaterials and included "physical, chemical, or quantum properties specific to nanomaterials" on the list of prioritization factors that CDTSC would consider in placing chemicals on the list of Chemicals Under Consideration. The revised proposed regulations also no longer excluded nanomaterials from the *de minimis* exemption.³

On August 10, 2010, OEHHA issued a pre-regulatory draft regulation that specifies hazard traits and environmental and toxicological endpoints and other relevant data that are to be included in the Toxics Information Clearinghouse. While the pre-regulatory draft regulation includes reference to nanoparticles and defines a "nanomaterial hazard trait,"⁴ OEHHA removed these references from its December 2010 proposed regulations.⁵ OEHHA's December 2010 Initial Statement of Reasons includes a discussion of size dimension and the potential for particles of one microgram or less to pose an exposure potential hazard through multiple exposure pathways. The Initial Statement of Reasons also states that "[v]ery small particles can also cross the walls of the gastrointestinal tract and the skin into the systemic circulation."⁶ While neither statement explicitly refers to nanoparticles, the citation for each is an article on safety assessment for nanotechnology and nanomedicine.

While industry has been successful thus far in eliminating explicit references to nanomaterials from CDTSC's proposed SCPA regulations, CDTSC reconvened the Green Ribbon Science Panel to discuss "critical policy issues" raised during the comment period for the SCPA regulations, and the Panel has formed three new subcommittees to discuss issues related to the Green Chemistry Program. OEHHA revised its regulation concerning the Toxics Information Clearinghouse to remove the references to nanoparticles and a "nanomaterial hazard trait," but, based on a careful reading of OEHHA's Initial Statement of Reasons, it is clear that OEHHA remains concerned about the potential hazard posed by nanoparticles.

The nanotechnology industry must remain vigilant in monitoring Green Chemistry Program initiatives. CDTSC is deeply engaged in nano initiatives, and stakeholders of all sorts may be inclined to return to earlier versions of the implementing regulations, which considered properties specific to nanomaterials as a prioritization factor for placing a substance on the list of Chemicals Under Consideration. This plainly would not be a positive development, which is why it is important to keep focused on legislative and SCPA regulatory initiatives.

¹ The draft, proposed, and revised proposed regulations are available on CDTSC's website at

<http://www.dtsc.ca.gov/PollutionPrevention/GreenChemistryInitiative/index.cfm#GreenChemistryInitiativeDocumentsandInformation>.

² A copy of Adams' letter is available at <http://www.dtsc.ca.gov/upload/GRSP-12-23-2010.pdf>.

³ A strikeout version of the revised proposed regulations is available at http://www.dtsc.ca.gov/LawsRegsPolicies/upload/SCPA_Regs_15Day_Revisions_11162010.pdf.

⁴ The pre-regulatory draft regulation is available at <http://www.oehha.ca.gov/multimedia/green/pdf/081110prereghazard.pdf>.

⁵ The proposed regulations are available at <http://www.oehha.ca.gov/multimedia/green/pdf/GCRegText121710.pdf>.

⁶ The Initial Statement of Reasons is available at http://www.oehha.ca.gov/multimedia/green/pdf/GC_ISOR121710.pdf.