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Cc: Chen, Jihong (Jane) (CDC/NIOSH/EID) (CTR); Doyle, Glenn (CDC/NIOSH/EID)

Subject: 115 - TDSH Comments

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Comments

- 1) The prevailing practice of developing and manufacturing products and materials containing nanomaterials with inadequate assessment of potential toxicity, especially for chronic health endpoints, leaves nanotechnology workers potentially vulnerable to long-term adverse health impacts from their exposures.
- 2) This inadequate hazard evaluation prior to manufacture and commercialization, along with the marked heterogeneity in engineered nanomaterials, also makes it highly unlikely that sufficient scientific hazard data will be available in the near future to design a medical surveillance program targeted at specific health outcomes.
- 3) For these reasons, we strongly support the development of a national or international exposure registry for workers potentially exposed to nanoparticles and other nanomaterials to serve as the basis for future epidemiologic study. Such a registry should include such information as baseline health status, job title, nanomaterials worked with and around, whether worksite exposure monitoring was done and any available results, and major concurrent job exposures to other hazards. We recommend defining potential exposure broadly and inclusively to ensure that no exposed workers are inadvertently left out of the registry.
- 4) The exposure registry should be developed and maintained by NIOSH.

 Funds for an exposure registry should be allocated in addition to any existing or planned future research funds for potential health and environmental implications of nanotechnology. Specific allocation of funding to NIOSH for an exposure registry should be considered during the reauthorization of the NNI.
- 5) The initial term of the registry should be long enough to capture the latency of other chronic health effects known to be associated with particulate exposure. An initial term of 30 years is recommended based on the known latency of asbestos exposures.
- 6) While there are limitations to the ability of such an exposure registry to provide needed answers to questions about potential health effects, we strongly believe the benefits of creating a registry, which include the ability to identify potentially exposed workers for communication and outreach, the ability to conduct epidemiologic studies across a wide variety of companies, and the demonstration of societal and governmental concern for the potentially exposed workers, outweigh considerations of cost and limitations.
- 7) In addition to the creation of a national or international nanotechnology worker exposure registry, we urge NIOSH to make a recommendation that companies with existing medical surveillance programs for workers extend those programs to workers potentially exposed to nanomaterials. While such programs will not support high quality epidemiologic investigations, they will increase the probability of the identification of sentinel health events that may arise from nanomaterial exposure.