RE: Review of Pre-regulatory Draft No Significant Risk Level for Vinyl Acetate Monomer under Proposition 65

Dow is pleased to provide the following comments to the Office of Environmental Health Hazard Assessment (OEHHA) regarding its pre-regulatory draft No Significant Risk Level (draft NSRL) for vinyl acetate monomer (VAM; CASRN: 108-05-4) under the Safe Drinking Water Toxic Enforcement Act of 1986 or Proposition (Prop) 65.

Dow has a global footprint of large-scale operations, including 98 manufacturing sites in over 30 countries, and employs over 30,000 people. Dow's portfolio of plastics, industrial intermediates, coatings and silicones businesses delivers a broad range of differentiated science-based products and solutions for customers in high-growth market segments, such as mobility, packaging, infrastructure, and consumer care.

Dow is a producer of vinyl actetate monomer (VAM) and other vinyl acetate-based polymers. VAM is an important chemical intermediate and a primary building block in the manufacture of a broad range of industrial materials and formulated products. These materials are used in applications such as architectural and industrial paints and coatings, adhesives and glues, flexible plastic films, and wire and cable insulation, as well as in other products used by consumers and across manufacturing and infrastructure value chains.

As both a producer and supplier of these materials, Dow has a direct interest in ensuring that regulatory decisions concerning VAM are grounded in sound-science and a comprehensive evaluation of the available scientific evidence and appropriately reflect its properties, uses, and potential exposure pathways. Additionally, Dow is a member of the Vinyl Acetate Council (VAC) and supports its recent commissioning of an independent, triple-blinded expert panel to review VAM toxicology and related research. The panel derived an NSRL published earlier this year in Kirman et al. (2026).

Study Selection

In reviewing the available cancer studies and associated data sets, we disagree with the use of the Lijinsky and Reuber (1983) study for deriving the draft NSRL. Lijinsky and Reuber (1983)'s study has significant study reliability issues including: small group sizes, lack of good laboratory practice (GLP) compliance, incomplete pathology review, poor characterization of exposure concentrations, and potential instability and degradation of VAM in drinking water. Additionally, Lijinsky and Reuber (1983) is a drinking water study. OEHHA has not adequately justified the decision to use a drinking water study to derive a NSRL for all routes of exposure. Reliable studies of oral and inhalation exposure routes are available. Therefore a reliable inhalation study should be used in deriving a NSRL to be used for understanding risk when considering exposures via inhalation.

Evidence of Genotoxicity Is Weak and Does Not Support a Mutagenic Carcinogen Classification or use of a Linear Approach for Deriving NSRL

Furthermore, genotoxicity of VAM has been extensively studied and while positive findings have been observed in in vitro assays, in vivo evidence for mutagenicity is limited and inconsistent. DNA adduct formation and other observed effects may reflect tissue damage and repair processes rather than direct mutagenic activity. Recently, a combined in vivo micronucleus and Comet assay was conducted and the results are completely negative indicating no direct genotoxic mode of action. Detailed summaries of these studies can be found on the ECHA Chemical Database (Vinyl acetate 100.003.224 | 4a803ddb-7e42-487e-8279-cd43df139991 - ECHA CHEM). This further substantiates that no classification for mutagenicity is warranted under GHS/CLP.

Methodology for Deriving NSRL for Vinyl Acetate

Reviews from multiple regulatory agencies and experts have concluded that VAM exhibits a threshold, non-linear mode of carcinogenic action, including: ECHA (ECHA, 2011), Health Canada (Health Canada, 2008), and ATSDR (ATSDR, 2025). In particular, the chronic inhalation studies conducted on VAM demonstrate a threshold response with observation of tumors only occurring at high concentrations associated with significant irritation, inflammation, and tissue damage (Bogdanffy, 1994). Collectively, these findings support a cytotoxicity-driven threshold mechanism rather than a direct low-dose carcinogenic effect. Therefore, the weight of evidence supports a threshold mode of action for VAM rather than a genotoxic mode of action. However, OEHHA's proposed NSRL applied an inappropriate linear approach associated with a genotoxic mode of action despite the weight of evidence indicating a threshold mode of action.

Support for Proposed Section 25901

Dow supports OEHHA's proposed clarification regarding materials that contain residual VAM versus polymers manufactured from VAM and believes this distinction is important for suppliers, employers, and downstream users.

Concluding Remarks

Overall, we ask that OEHHA re-evaluate the scientific basis for the draft NSRL using the full weight of evidence, recognize the threshold mode of action for vinyl acetate, and derive a more scientifically robust NSRL. We support OEHHA's proposed clarification distinguishing residual vinyl acetate monomer in products from polymers manufactured using vinyl acetate.

Dow appreciates OEHHA's attention to these comments and is willing to have further discussions with the agency if it has any questions. Please direct all inquiries to Claire Doskey, Dow Toxicologist at cdoskey@dow.com or (989)638-6922 with any questions regarding VAM toxicology and risk assessment.

Sincerely,

Claire Doskey, Ph.D.

Toxicologist

Toxicology and Environmental Science

Dow

693 Washington Street, 1803 Building, Midland, MI 48640, USA

Phone: (989)638-6922 Email: cdoskey@dow.com

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