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ASSEMBLY COMMITTEE ON ENVIRONMENTAL SAFETY & TOXIC MATERIALS AND SENATE COMMITTEE ON ENVIRONMENTAL QUALITY JOINT HEARING

CALIFORNIA'S GREEN CHEMISTRY PROGRAM:

ARE WE PROTECTING PEOPLE FROM TOXIC CHEMICALS IN PRODUCTS?

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I. Introduction

Good afternoon Chairman Quirk, Chairman Allen, and members of the Committees. My name is Gina Solomon and I am the principal author of the study: "California's Green Chemistry Initiative at Age 10: An Evaluation of Its Progress and Promise". The study was conducted as a research collaboration between the Public Health Institute and UCSF.

The Public Health Institute is a nonprofit organization that promotes health, well-being and quality of life through research, policy change and direct service.

The project was supported by a grant from the California Breast Cancer Research Program. CBCRP is the largest state-funded breast cancer research effort in the country, and is funded primarily through the tobacco tax. It is administered within the U.C. Office of the President and funds research into the causes and prevention of breast cancer, including policies that have the potential to reduce breast cancer.

Hundreds of chemicals have been linked to breast cancer, either directly in humans or animals, or through indirect evidence, such as estrogenic activity. Many dozens of these breast cancer-relevant chemicals are still in widespread use in consumer products. In fact, 167 breast cancer-relevant chemicals are on the DTSC Candidate Chemicals list.

This research project broadly evaluated whether there are policy enhancements that could strengthen the California Green Chemistry Initiative, with a focus on the Safer Consumer Products Program (SCP) established under A.B. 1879 and the Toxics Information Clearinghouse and Hazard Traits established under S.B. 509. I'll be talking about the broader findings and recommendations of the report in this presentation, although I'm happy to talk in more detail about the breast cancer specific findings in response to any questions.

The main findings of this study are that the California laws and program are innovative and have a broad impact that goes far beyond California. The program effectively addresses some key elements of the Safety Gap, but the two other gaps identified in the original report to the legislature – the Data Gap and the Technology Gap – persist and have been largely unaddressed. In addition, the slow pace of implementation of the program has limited its effectiveness at addressing the backlog of chemicals and products that may require evaluation.

II. Methodology

This was a qualitative research project that included a scoping review of the literature to identify best practices in chemical policy, followed by taped and coded semi-structured interviews with experts in green chemistry science and policy.

Two dozen experts from government, academia, business, and the non-profit sector was selected based on their expertise and diversity of viewpoints for the initial round of interviews. Over half of the interviewees were from California, with the remainder from other states, federal, and international perspectives. The interviews ultimately generated 799 text excerpts for analysis.

The preliminary findings were then presented individually in a second round of less structured interviews with 10 additional experts from all perspectives, and the findings were refined based on their feedback. The entire project was overseen by an 8 member science-policy Advisory Group.

III. Findings

The California green chemistry laws in general, and the SCP in particular, was cited by 75% of experts from all perspectives as unique and innovative, having a broad scope and an international impact. For example, a business scientist said, "I think that California is trying to do things that nobody's done before."

The SCP was recognized by most experts as having other strengths including: (1) Broad scope and authority across entire classes of chemicals and all types of consumer products; (2) Potential to promote innovation and reduce the likelihood of regrettable substitution; (3) A focus on protecting vulnerable populations; and (4) Multiple opportunities for public input into the process.

a. Three Gaps:

Dr. Mulvihill mentioned the three gaps identified in the original 2006 report to the Legislature by Drs. Mike Wilson and Meg Schwarzman from UC Berkeley. Our findings supported the analysis of the three gaps, but also identified sub-components to each of these gaps. It's a useful framing for the main findings in the report. As a reminder, the three gaps are:

Data Gap - insufficient information on toxicity, use, or exposure to new and existing chemicals.

Safety Gap - limits on regulatory authority that make it difficult for government to protect people and the environment from hazardous chemicals.

Technology Gap - the lack of green chemistry education and the need for businesses and governments to prioritize research and development of safer chemicals.

The main weaknesses in the California program are that the Data Gap and Technology Gap are still significant problems and remain to be addressed. The Safety Gap is partially addressed but is hampered due to lack of efficiency relative to the scale of the problem.

b. Data Gap

There are three main data gaps:

1) Gaps in chemical toxicity data will make the Alternatives Analyses difficult, and may mean that chemicals won't be added to the Candidate Chemical list when they should be. This gap could be addressed by having OEHHA use predictive toxicology to anticipate the hazards of emerging chemicals.
2) Gaps in exposure data make it hard to know what's getting into people or becoming widespread in the environment. This could be addressed by expanding the Biomonitoring California Program and enhancing and integrating environmental monitoring for chemicals in air, water, food and products.

3) Gaps in ingredients information in products create a threshold problem for DTSC when they are trying to prioritize chemicals in products for regulation under the program. For example:

- "[without data] it's a fishing expedition…you can spend a lot of time and money looking at things that aren't high-impact." [Business]
- "[Chemical use information] is something that we're simply going to have to give the department the authority to require. And that authority ought to be available for products – 'What are the ingredients in this cup?' And chemical manufacturers – 'Where are you selling your chemical X?' So they can look at it from both perspectives, recognizing that everyone doesn't know everything." [Scientist]

The data gap in ingredients information relates to the other biggest challenge of the SCP – the slow pace of the program.

c. Slowness

Almost everyone interviewed said the program has been slow, but some said that is to be expected, whereas others said it's unacceptable -- "It is moving at a pace that it's really not meeting the goals of the program." [NGO]

- "The Safer Consumer Products Program [is like] a machine, and they built a machine, and they're testing the machine…and that takes time. And before you start altering the machine, you have to make sure all the pieces…work, and then you can go back and increase speed." [Government]

At this point, the machine is built and tested. Now it's time to go back and increase the speed.

One key recommendation to increase the speed of the program is to significantly increase the funding and staff. The current program is severely under-resourced. It does not have dedicated resources, and it has a staff that is far too small for its mandate. These problems need to be addressed.

Another way to increase speed is to recognize that there is only one path through the process right now. The legislature could allow DTSC to fast-track some chemicals where the need to act and the path forward is obvious. For example:

- "If you can find ingredients that don't contribute to the function of the product…and that are causing at least a perceived problem or an established problem, it would seem to me that those probably shouldn't be in there." [Business]
- "I think where there are clear alternatives and the market is not favoring them in part because of the absence of regulatory pressure, so it's totally circular, there should be a very expedited process for DTSC forcing the conventional, more toxic, probably lower cost or otherwise easier product off the market. We should not have a cumbersome process there." [Academic]

If DTSC could, through a rulemaking, make a finding that a chemical isn't necessary in a product, or that the chemical has a demonstrated safer alternative, then they should be able to skip the alternatives analysis and move directly to a regulatory response. For example, they could have done that with children's foam sleep products, and avoided the need for legislative action.

IV. Other Findings

a. S.B. 509

The Toxics Information Clearninghouse (TIC) was universally seen as not useful, and many experts said that the original vision has been superseded by other tools that are out there. Some people suggested

eliminating the TIC, whereas others suggested keeping it but shifting the mandate and purpose. Specifically, the Hazard Traits developed by OEHHA were widely seen as very useful. Some experts suggested transferring the TIC to OEHHA and using the Clearinghouse to house information on chemicals that are screened using new predictive toxicology. This would address three problems at once: (1) The toxicology data gap; (2) The purpose of the TIC; and (3) The need to update the Candidate Chemical list with new science. For example:

- "OEHHA [could] be doing more with the candidate chemical [list] and adding chemicals as they assess hazard using not just traditional stuff but the newer methods." [Business]

b. Technology Gap

The Technology Gap was never addressed. It's important because it's the "carrot" to the SCP's "stick", and it's an important opportunity for California leadership. It also was an issue that generated enthusiasm from all stakeholder perspectives. For example:

- "It's a lot easier to put pressure on somebody to take something bad out if you have something to turn to." [NGO]
- "[We need] to assist California businesses to lead the world in greener design and production…Then if the program actually prioritizes a chemical that doesn't have a safer substitute, you could incentivize the industry to come up with it. [NGO]

People pointed to the Berkeley Center for Green Chemistry as a model that could be expanded, and replicated at other California colleges and universities. People also pointed to California leadership on clean energy and the benefits that leadership has brought to our state. This is a comparable opportunity.

Overall Recommendations:

- California must ramp up its efforts. Our state agencies are our first line of defense and need to increase their scale of effort. This will require faster action where toxic chemicals aren't necessary and a safer path is clear. The program will also require staffing and resources adequate to the scale of the task.
- Good science needs good data. California agencies struggle to deal with thousands of problem chemicals in hundreds of thousands of products. This gargantuan job is rendered almost impossible because the program does not have clear authority to demand comprehensive information on product ingredients. Without good data it's hard to make good decisions.
- Healthy chemistry is California's future. Consumers are demanding products that are safe for families and for the environment. California can build an economically successful green and healthy chemistry industry that has the potential to rival clean energy technology.

California leadership can protect families and the environment from hazardous chemicals, and stimulate economic innovation. The program and the Department can be congratulated for a decade of hard-won progress, but they need additional tools to build a stronger Safer Consumer Products Program, a more relevant clearinghouse of chemical hazard traits, and a vibrant green chemistry industry in California.

Thank you!