Date: December 22, 2021

California Department of Public Health
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Re: CDPH Regulatory Implementation of AB 45, Industrial Hemp Products (Aguiar-Curry)

On behalf of Origins Council, representing nearly 900 licensed small and independent cannabis businesses in six counties throughout California, we are writing regarding the implementation of AB 45 (Aguiar-Curry), which establishes a regulatory framework for consumable hemp products in California. In addition to establishing statutory requirements for the registration, testing, and labeling of hemp-derived consumable products, AB 45 also grants the Department of Public Health the authority to implement additional emergency regulations on hemp products to protect consumer health and safety.

Cannabis and hemp are fundamentally the same plant, and are grown, manufactured, and sold in many of the same forms. Both cannabis and hemp are often consumed as smokable products such as smokable flower and concentrates, as well as orally consumable products such as infused edibles, beverages, tinctures, and dietary supplements. Consequently, we have worked over several years to ensure that hemp and cannabis products are regulated at parity, and that hemp regulation is developed in ways that protect consumer health and safety as well as the integrity of the regulated cannabis market.

Efforts to regulate hemp and cannabis at parity have been complicated by divergent legal schemes for these two substances at the federal level following passage of the 2018 Farm Bill. AB 45, however, includes important provisions that begin to rationalize hemp and cannabis regulation into a

consistent legal framework. Specifically, AB 45 addresses two critical issues in the interplay between hemp and cannabis: first, ensuring that intoxicating and high-THC products are not sold as "hemp"; and second, ensuring that hemp and cannabis products are tested at the same levels for contaminants including pesticides, heavy metals, and residual solvents.

Implementation of both of these principles depends largely on DPH's implementation of AB 45's intent. To further these goals, we would like to offer the following recommendations:

1. **The amount of allowable THC in consumable hemp products should be capped by weight, not by percentage. We recommend that DPH limit the allowable THC content in final form hemp products to 0.1mg per product.**

Federal law defines "industrial hemp" as a product containing less than 0.3% delta-9 THC. While this definition is sensible for hemp plant material, it leaves open a substantial loophole for edible, beverage, or dietary supplement hemp products to contain large, highly intoxicating doses of THC. For example, a typical energy bar weighing 60 grams (60,000 milligrams) would be allowed to contain up to 180mg THC if limited to 0.3% THC concentration by weight, an extremely high dose which exceeds the allowable THC dose for any single product under state cannabis regulation. Some hemp manufacturers are already selling products high in THC under this legal theory.[1]

Recognizing the limitations of the existing federal definition of hemp, AB 45 includes regulatory authority for DPH to set additional, weight-based standards for allowable THC concentration in hemp products.

> 111925(a)(3)The manufacturer of the hemp extract in its final form or the final form industrial hemp product shall be able to prove total THC concentration does not exceed 0.3 percent. A manufacturer of raw extract shall be able to prove that the THC concentration meets department requirements set forth pursuant to subdivision (a) of Section 111921.
>
> (b) The department may regulate and restrict the cap on extract and may cap the amount of total THC concentration at the product level based on the product form, volume, number of servings, ratio of cannabinoids to THC in the product, or other factors, as needed.

For comparison, cannabis regulations under the Department of Cannabis Control cap the amount of allowable THC in consumable cannabis products by weight, not by percentage: specifically, edible cannabis products may contain up to 10mg THC per serving, and 100mg THC per product.[2]

Hemp products should similarly be governed by milligram-based THC limitations. In setting these limits, DPH should consider that edible THC doses as low as 1-2 mg THC will be intoxicating or euphoric for many consumers, depending on the user's tolerance. For example, one article on the cannabis beverage Cann, which contains 2mg THC, describes the effect as a "light and pleasant

[1] https://liftedmade.com/shop/hemp-derived-products/delta-9-thc/urb-rocks/

[2] https://cannabis.ca.gov/wp-content/uploads/sites/2/2021/10/DCC-Cannabis-Regulations-Sept.-2021.pdf, Section 17304

buzz."[3] Leafly similarly characterizes doses as low as 2.5mg THC as "euphoric" and recommends that consumers "start with a dose of 2 mg THC if you're trying edibles for the first time."[4]

For this reason, we recommend that DPH not follow precedent in Oregon, where THC content in containers of edible hemp products was recently capped at 10mg. If consumed all at once, 10mg of THC will produce a strong psychoactive effect in users with low or medium tolerance. The Los Angeles Times characterizes 10mg THC as a "standard dose" for cannabis products, while also cautioning that 10mg may be "too strong" for beginning users.[5]

Instead, we recommend that DPH adopt more conservative THC limitations that rule out the potential for intoxication of consumers who purchase either one or multiple containers of hemp products, particularly considering that 1) hemp products are sold with no age restriction, 2) purchasers of hemp products are likely to expect that the product will not cause intoxication, and 3) the regulated hemp framework does not contain many other provisions applicable to licensed cannabis businesses that produce and sell intoxicating products, such as taxation, track-and-trace, and packaging and labeling requirements.

A limit of 0.1mg THC per container of hemp products would clearly ensure that a consumer purchasing one or multiple hemp products would not receive an intoxicating effect, establishing a clear legal brightline between hemp and cannabis sales. More liberal allowances - such as 1 mg per container - would easily allow individuals to purchase multiple edible "hemp" products to achieve an intoxicating effect.

2. **DPH should prohibit synthetic THC analogues, including THC-O-Acetate and HHC, from sale as "hemp"**

Over the past several years, it has become increasingly popular for hemp businesses to sell products containing delta-8 THC, delta-10 THC, THC-O-acetate, and other cannabinoids that mimic the intoxicating effects of THC.[6][7] Each of these cannabinoids can be synthesized from hemp-derived CBD, and - absent state-level regulation - are typically sold without restriction based on a claimed federal legal loophole.

AB 45 includes explicit language that restricts the sale of the most popular such synthetic cannabinoids, such as delta-8 and delta-10 THC, from sale as "hemp." Additionally, AB 45 includes provisions that direct the department to restrict the sale of other cannabinoids that are determined to cause intoxication.

> (l) "THC" or "THC or comparable cannabinoid" means any of the following:
> (1) Tetrahydrocannabinolic acid.
> (2) Any tetrahydrocannabinol, including, but not limited to, Delta-8-tetrahydrocannabinol, Delta-9-tetrahydrocannabinol, and Delta-10-tetrahydrocannabinol, however derived, except

[3] https://www.insidehook.com/article/food-and-drink/cann-thc-soda-mild-bubbly-beverage
[4] https://www.leafly.com/news/cannabis-101/cannabis-edibles-dosage-guide-chart
[5] https://www.latimes.com/local/abcarian/la-me-abcarian-edible-cannabis-20180319-story.html
[6] https://www.nytimes.com/2021/02/27/health/marijuana-hemp-delta-8-thc.html
[7] https://fivethirtyeight.com/features/how-mitch-mcconnell-accidentally-created-an-unregulated-thc-market/

that the department may exclude one or more isomers of tetrahydrocannabinol from this definition under subdivision (a) of Section 111921.7.
(3) Any other cannabinoid, except cannabidiol, that the department determines, under subdivision (b) of Section 111921.7, to cause intoxication.

In addition to delta-8 and delta-10 THC, we recommend that DPH restrict, at a minimum, the following intoxicating cannabinoids. Following each cannabinoid is a citation substantiating that these cannabinoids are already being marketed and sold as intoxicating "hemp" products.

- THC-O-Acetate[8]
- HHC[9]
- THC-P[10]

3. **DPH should maintain testing parity between cannabis and hemp on all contaminants currently tested for under DCC regulations, including but not limited to pesticides, heavy metals, residual solvents, and other contaminants**

Prior to implementation of the MAUCRSA in 2018, California cannabis products sold under Proposition 215 were not tested or otherwise regulated for safety. Despite a voluntary testing regime, it was common for adulterated cannabis products to be sold at retail, including to patients with significant health conditions. Some cultivators utilized toxic pesticides and rodenticides that poisoned rivers, fish, and wildlife in addition to consumers.[11] Since the establishment of cannabis testing standards, the situation has improved drastically. One study found that the rate of cannabis contamination fell from 24% to 3% within months of the implementation of state-mandated cannabis testing.[12]

From a health perspective, there is no difference between pesticides, heavy metals, and solvents in a cannabis product as compared to a similar hemp-derived product. Organophosphates or lead are equally toxic regardless of whether they are found in a high-THC cannabis tincture or a low- THC, high-CBD hemp tincture, and the same pesticides and processing chemicals are relevant for use in hemp and cannabis production. These considerations have led Oregon to require all hemp products intended for human consumption to be tested to the same standards as cannabis (2017 ORS 571.330(3)).

AB 45 requires that cannabis and hemp are tested at parity initially, but gives DPH authority to change these requirements.

111925.4. (a) As of the effective date of the act adding this chapter, testing requirements for contaminant levels shall be the same as those for cannabis, as established in paragraph (2)

[8] https://www.hempgrower.com/article/thc-o-acetate-q-and-a-dr-ethan-russo-credo-science/
[9] https://www.prnewswire.com/news-releases/boston-hemp-explains-hhc-and-its-effects-301438573.html
[10] https://www.delta8us.com/thcp-faq
[11] Wood, Trina. "Pot, Rat Poison and Wildlife Don't Mix." UC Davis, January 23, 2018. https://www.ucdavis.edu/one-health/pot-rat-poison-wildlife-dont-mix/
[12] Adlin, Ben. "Can Washington Fix Its Broken Cannabis Lab Testing System?" Leafly, June 17, 2019. https://www.leafly.com/news/industry/can-washington-fix-its-broken-cannabis-lab-testing-system

of subdivision (d) of Section 26100 of the Business and Professions Code and regulations adopted pursuant thereto.
(b) The department may adjust the specific contaminant levels for industrial hemp by regulation to protect consumers.

We strongly recommend that DPH retain identical contaminant testing levels for hemp and for cannabis and do not see any rationale for a “two-tiered” system that regulates contaminants in these products differently. Additionally, we recommend that DPH adopt procedures for representative sampling of hemp products that mirror representative sampling procedures in cannabis, to ensure that tested batches accurately reflect the composition of the full hemp batch.

Thank you for your consideration,

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