



Memorandum

To: Mike Manieri, Principal Safety Engineer
Occupational Safety and Health Standards Board
2520 Venture Oaks Way, Suite 350
Sacramento, CA 95833

Date: September 7, 2018

From: Juliann Sum, Chief, Cal/OSHA

A handwritten signature in black ink that reads "Juliann Sum".

Subject: Cal/OSHA advisory committee findings and recommendations on the need to develop industry-specific regulations for marijuana (cannabis) establishments

1.0. Introduction

California Labor Code section 147.6¹ requires Cal/OSHA to convene an advisory committee to evaluate whether industry-specific regulations need to be developed for employers licensed under the Medicinal and Adult-Use Cannabis Regulation and Safety Act (hereafter called "cannabis establishments").² In particular, Cal/OSHA and the advisory committee must consider whether specific requirements are needed to address employee exposure to secondhand marijuana smoke where on-site consumption of marijuana is permitted and the potential risks of combustion, inhalation, armed robbery, or repetitive strain injuries. The advisory committee must present its findings and recommendations to the Occupational Safety and Health Standards Board (Standards Board) by October 1, 2018. This report sets forth findings and recommendations that are consistent with input received from the advisory committee convened by Cal/OSHA on January 31, 2018.

2.0. Preliminary Research and Coordination with Other California State Agencies

2.1. Coordination with Other California State Agencies

Since 2016, Cal/OSHA staff have been meeting with representatives from several state agencies created as part of the State's efforts to regulate the cannabis industry, including the Bureau of Cannabis Control (BCC),³ the California Department of Food and Agriculture (CDFA),⁴ and the California Department of

¹ Labor Code section 147.6:

http://leginfo.legislature.ca.gov/faces/codes_displaySection.xhtml?sectionNum=147.6.&lawCode=LAB.

² Employers licensed under the Act cultivate, distribute, transport, store, manufacture, process, and sell cannabis and cannabis products. See Business and Professions Code section 26000:

http://leginfo.legislature.ca.gov/faces/codes_displaySection.xhtml?sectionNum=26000.&lawCode=BPC.

³ Department of Consumer Affairs, Bureau of Cannabis Control, <https://bcc.ca.gov/>.

⁴ California Department of Food & Agriculture, CalCannabis Cultivation Licensing, <https://www.cdfa.ca.gov/is/mcccp/>.

Public Health Manufactured Cannabis Safety Branch (CDPH-MCSB).⁵ These agencies administer licensing programs and have adopted emergency regulations that govern cannabis cultivation, production, sales and use in California.⁶

Cal/OSHA staff track, review, and monitor these agencies' proposed regulations, in part to ensure that regulations are not developed that conflict with regulations enforced by Cal/OSHA, which are found in title 8 of the California Code of Regulations. Cal/OSHA submitted comments during the re-adoption of CDPH-MCSB emergency regulations found in California Code of Regulations, title 17, division 1, chapter 13.⁷ The CDPH-MCSB regulations cover cannabis manufacturing and product safety.

2.2. Research on the Activities of Other Government Agencies

Cal/OSHA contacted and communicated with the Washington State Department of Labor and Industries, the Colorado Department of Public Health and Environment, and the U.S. Centers for Disease Control and Prevention (CDC)–National Institute for Occupational Safety and Health (NIOSH) to gather information about activities that these agencies are undertaking to improve occupational safety and health in the cannabis industry. These agencies' activities are summarized below.

2.2.1. State of Washington

The State of Washington maintains a website that informs the cannabis industry about injury and illness prevention and applicable occupational safety and health regulations.⁸ The website lists the most common health and safety hazards faced by growers, processors, and retailers. In 2017, the Washington State Occupational Respiratory Disease Program released a factsheet that describes allergic reactions from exposure to marijuana plant dust, pollen, and smoke. Allergic reactions include asthma (reported in cannabis laboratory workers), rash, and anaphylactic shock.⁹

⁵ California Department of Public Health, Manufactured Cannabis Safety Branch, <https://www.cdph.ca.gov/Programs/CEH/DFDCS/MCSB/Pages/MCSB.aspx>.

⁶ Regulations adopted by BCC are found in California Code of Regulations, title 16, division 42: [https://govt.westlaw.com/calregs/Browse/Home/California/CaliforniaCodeofRegulations?guid=I57220DEBD2E54B1BB1EC67A6467E2F2E&originationContext=documenttoc&transitionType=Default&contextData=\(sc.Default\)&bhcp=1](https://govt.westlaw.com/calregs/Browse/Home/California/CaliforniaCodeofRegulations?guid=I57220DEBD2E54B1BB1EC67A6467E2F2E&originationContext=documenttoc&transitionType=Default&contextData=(sc.Default)&bhcp=1). Regulations adopted by CDFA are found in title 3, division 8: [https://govt.westlaw.com/calregs/Browse/Home/California/CaliforniaCodeofRegulations?guid=I724B0315C2AA47A0B6A1DC563BFC22E7&originationContext=documenttoc&transitionType=Default&contextData=\(sc.Default\)](https://govt.westlaw.com/calregs/Browse/Home/California/CaliforniaCodeofRegulations?guid=I724B0315C2AA47A0B6A1DC563BFC22E7&originationContext=documenttoc&transitionType=Default&contextData=(sc.Default)). Regulations adopted by CDPH-MCSB are found in title 17, division 1, chapter 13:

[https://govt.westlaw.com/calregs/Browse/Home/California/CaliforniaCodeofRegulations?guid=IF5AA7954F31F401B894186EB9CF86682&originationContext=documenttoc&transitionType=Default&contextData=\(sc.Default\)](https://govt.westlaw.com/calregs/Browse/Home/California/CaliforniaCodeofRegulations?guid=IF5AA7954F31F401B894186EB9CF86682&originationContext=documenttoc&transitionType=Default&contextData=(sc.Default)).

⁷ DPH-17-010E-Readoption-Manufactured Cannabis Safety Regulations Letter from the Division of Occupational Safety and Health submitted to OAL and CDPH Office of Regulations, May 30, 2018.

⁸ Washington State, Department of Labor and Industries (L&I), Cannabis Industry Safety and Health webpage, <http://www.lni.wa.gov/Safety/Topics/Industries/Marijuana/>.

⁹ Washington State, Department of L&I, Marijuana and Work-Related Asthma, 2017, http://www.lni.wa.gov/safety/research/files/42_04_2017_cannabis.pdf.

2.2.2. State of Colorado

In 2017, the State of Colorado released an occupational safety and health guide and webpage to educate employers and employees in the marijuana industry on worker safety and health.¹⁰ The guide assists employers and employees with the identification of the most common biological, chemical, and physical hazards faced by workers.¹¹ One recent addition to Colorado's marijuana webpage is an alert on smoking and secondhand smoke. The webpage warns that secondhand marijuana smoke contains many of the same cancer-causing chemicals that are found in secondhand tobacco smoke.¹²

2.2.3. CDC

The CDC maintains a website that provides information about the therapeutic benefits and the negative health effects of marijuana use.¹³ The website states that secondhand marijuana smoke contains tetrahydrocannabinol (THC), the psychoactive component in marijuana, as well as many of the same toxic chemicals found in tobacco smoke.¹⁴

2.2.4. NIOSH

NIOSH has conducted two health hazard evaluations (HHE) of potential occupational hazards associated with harvesting and processing cannabis. The first on-site evaluation, which was published in 2017, took place at an outdoor cannabis cultivation farm in the state of Washington.¹⁵ The second on-site evaluation took place at an indoor and outdoor cannabis facility located in Minnesota.¹⁶

2.2.4.1. NIOSH HHE in the State of Washington

In the first HHE, NIOSH found that none of the four employees at the cannabis cultivation farm reported any skin rashes, allergic reactions, or musculoskeletal problems. Nevertheless, NIOSH found that high-frequency motion in hand trimming could increase the risk for hand, wrist, and finger musculoskeletal disorders. NIOSH detected THC on many work surfaces. NIOSH also measured airborne exposures to endotoxins¹⁷ and various fungi and bacteria. Airborne exposures to endotoxins were below recommended limits. NIOSH did not comment on the level of bacterial and fungal airborne exposures

¹⁰ State of Colorado, DPH&E, Marijuana Occupational Safety and Health webpage and guide, <https://www.colorado.gov/pacific/cdphe/marijuana-occupational-safety-and-health/>.

¹¹ Presentation by Roberta Smith, Colorado Department of Public Health and the Environment, Berkeley-COEH-The Buzz on Cannabis: Health and Safety on the Workplace (slide 39), March 29, 2018.

¹² Colorado State, Marijuana Smoking and Secondhand Smoke webpage, <https://www.colorado.gov/pacific/marijuana/smoking-and-secondhand-smoke/>.

¹³ CDC, Marijuana and Public Health webpage, <https://www.cdc.gov/marijuana/index.htm>.

¹⁴ CDC, FAQ: Can Marijuana Smoke Affect Nonsmokers, Including Children? <https://www.cdc.gov/marijuana/faqs/secondhand-smoke.html>.

¹⁵ NIOSH, HHE Report No. 2015-0111-3271, Evaluation of Potential Hazards during Harvesting and Processing Cannabis at an Outdoor Organic Farm, April 2017, <https://www.cdc.gov/niosh/hhe/reports/pdfs/2015-0111-3271.pdf>.

¹⁶ NIOSH, HHE Report No. 2016-0090-3317, Evaluation of a Medicinal Cannabis Manufacturing Facility with an Indoor and Outdoor Grow Operation, June 2018, <https://www.cdc.gov/niosh/hhe/reports/pdfs/2016-0090-3317.pdf>

¹⁷ Endotoxins are compounds released by certain bacteria that can cause adverse respiratory effects such as chronic bronchitis and asthma.

except to note the types present and that exposures may cause hypersensitivity pneumonitis, chronic bronchitis, organic dust toxic syndrome, asthma, and allergic sensitization.

To address ergonomic concerns, NIOSH recommended that the employer provide frequent breaks for employees, develop a plan to rotate employees among jobs that use different muscle groups, and train employees on tool cleaning, lubrication, sharpening, and maintenance. To address exposure to potentially harmful substances, NIOSH recommended that the employer improve ventilation and develop a cleaning schedule to remove THC from work and tool surfaces. NIOSH also recommended that the employer encourage employees to report any work-related symptoms to their supervisor and to their health-care provider.

2.2.4.2. NIOSH HHE in Minnesota

In the second HHE, NIOSH interviewed 12 employees (of 13 present) and learned that three reported being injured on the job. The injuries were back strain, debris in an eye, and a laceration. NIOSH also found airborne exposure to microbial fungus and endotoxins that could increase the risk of allergic and respiratory symptoms. It also found potential diacetyl and 2,3-pentanedione exposure, especially during decarboxylation.¹⁸ NIOSH recommended the use of engineering controls (such as local exhaust ventilation) during decarboxylation and grinding activities, implementation of cleaning schedules to remove cannabis components from work and tool surfaces, and a system to encourage employees to report work-related symptoms to their supervisor and health-care provider.

3.0. Marijuana Advisory Meeting

On January 31, 2018, Cal/OSHA staff convened and chaired the advisory meeting required by Labor Code section 147.6. Cal/OSHA staff solicited input on whether specific requirements are needed to protect employees from secondhand marijuana smoke at facilities where the on-site consumption of marijuana is permitted. Cal/OSHA staff also solicited input on whether specific requirements are needed to address other hazards faced by employees at cannabis establishments, including the potential risks of combustion, inhalation of hazardous substances, armed robberies, and repetitive strain injuries.

3.1. Preparation for the Meeting

Cal/OSHA posted information about the advisory meeting on its public website and notified interested parties about the meeting through an email announcement that included a link to the main webpage about the meeting. The announcement was further publicized with assistance from BCC and CDFA.

3.2. Attendance and Facilitation

The advisory meeting was attended by employers, employees, legal representatives, labor unions, consultants, occupational health and safety experts, and representatives from other governmental agencies. At the meeting, Cal/OSHA reviewed existing occupational safety and health regulations,

¹⁸ Decarboxylation is the drying and heating of cannabis to increase the THC content.

provided information on Cal/OSHA Consultation Services, and explained the advisory and rule-making processes. Cal/OSHA distributed several educational materials and other publications.

3.3. Advisory Comments and Cal/OSHA Responses

Cal/OSHA encouraged attendees to voice comments during the meeting. Cal/OSHA requested that stakeholders submit any written comments by March 1, 2018. Numerous stakeholders spoke at the meeting, and six organizations submitted written comments after the meeting. The written comments and meeting information, including a copy of the agenda and meeting minutes, are posted on the Cal/OSHA marijuana advisory committee webpage: <https://www.dir.ca.gov/dosh/doshreg/Marijuana/>.

The comments that Cal/OSHA received during and after the meeting covered a wide range of issues. The comments that pertained to occupational health and safety issues are summarized in parts [3.3.1](#) through [3.3.6](#) below.

3.3.1. Employee Exposure to Secondhand Marijuana Smoke

On the subject of secondhand marijuana smoke exposure, different stakeholders focused on (1) protecting workers from secondhand smoke and (2) allowing marijuana to be smoked where the workplace holds a city permit that allows on-site consumption.

Several stakeholders advocated protecting workers from second-hand marijuana smoke by amending title 8 section 5148 (Prohibition of Smoking in the Workplace)¹⁹ to include marijuana.^{20, 21, 22} The Tobacco Education and Research Oversight Committee (TEROC) commented that secondhand cannabis smoke contains many of the same chemicals and carcinogens found in secondhand tobacco smoke.²³ TEROC stated that in a recent study, one-third of adults in the study reported exposure to secondhand marijuana smoke in a two-week period. Furthermore, among adult marijuana users, 80.2 percent smoke marijuana and 31.3 percent vaporize marijuana.

TEROC commented that title 8 section 5148, which prohibits the smoking of tobacco products in certain enclosed spaces in certain places of employments, should be updated to reflect the current content and numbering of subsections in Labor Code section 6404.5. In particular, exceptions to the definition of “place of employment,” previously contained in Labor Code section 6404.5, subsections (d)(1) through (d)(14), have been amended and are now contained in subsections (e)(1) through (e)(7). TEROC also recommended that title 8 section 5148 be amended to cover cannabis and cannabis products and that

¹⁹ Title 8, California Code of Regulations, section 5148, Prohibition of Smoking in the Workplace.
<https://www.dir.ca.gov/title8/5148.html>.

²⁰ American Non-Smokers’ Rights Foundation, Secondhand Marijuana Smoke Fact Sheet, 2018, <https://no-smoke.org/secondhand-marijuana-smoke-fact-sheet/>.

²¹ State of California, Tobacco Education and Research Oversight Committee, Comments, February 28, 2018, <https://www.dir.ca.gov/dosh/doshreg/Marijuana/Comments/TEROC.pdf>.

²² Worksafe comments, March 1, 2018, <https://www.dir.ca.gov/dosh/doshreg/Marijuana/Comments/Worksafe-Cannabis-Letter.pdf>.

²³ State of California, Tobacco Education and Research Oversight Committee, comments, February 28, 2018, <https://www.dir.ca.gov/dosh/doshreg/Marijuana/Comments/TEROC.pdf>.

covered parking lots be included in the definition of “enclosed space.” Finally, TEROC recommended that title 8 section 5148 include language based on Health and Safety Code section 11362.3, which prohibits persons from smoking cannabis and cannabis products in a location where tobacco smoking is prohibited.

Worksafe also supported protecting workers from secondhand marijuana smoke, stating that sufficient evidence exists to show that secondhand marijuana smoke has detrimental health effects and that the evidence supports its inclusion into rules on secondhand smoke.²⁴

Cannabis industry representatives stated that some establishments should be exempt from smoking prohibitions. They asserted that some cannabis establishments are in the process of obtaining or have already obtained city permits specifically allowing on-site consumption at these establishments. The representatives listed controls that could be used to reduce exposure to secondhand marijuana smoke. Examples included HVAC systems, carbon filters, negative ion generators, and staff training. They also expressed the belief that employees in the cannabis industry, particularly in retail smokers’ lounges, may not be concerned about exposure to secondhand cannabis smoke or vaporizer emissions. This assertion was opposed by Worksafe.

One industry representative suggested that to decrease exposure, employers could rotate employees between non-smoking and smoking areas. Another suggestion was made to allow employee exposure to secondhand pollution if the employee signed a waiver. However, Worksafe opposed such a worker “opt-out” as problematic. Worksafe argued that such a provision would place workers at significant risk of exposure to secondhand marijuana smoke, which would set a dangerous precedent for other industries.

Response:

During the meeting, Cal/OSHA staff explained that title 8 section 5148 prohibits smoking tobacco in enclosed spaces but does not cover workplaces exempted from Labor Code section 6404.5, such as retail tobacco shops and private smokers’ lounges.²⁵ Cal/OSHA staff also explained that title 8 section 5148 does not currently prohibit the smoking of marijuana in places of employment.

Secondhand marijuana smoke is a hazard to employees. As stated by commenters and noted on the Office of Environmental Health Hazard Assessment (OEHHA) website, marijuana smoke is currently listed as a carcinogen under the Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65).²⁶ Governmental agencies, such as the CDC, the Washington State Department of Labor and Industries, and the Colorado Department of Public Health and the Environment, agree that many of the cancer-causing chemicals contained in tobacco smoke are also present in secondhand marijuana smoke.

²⁴ X. Wang et al., One Minute of Marijuana Secondhand Smoke Exposure Substantially Impairs Vascular Endothelial Function, *Journal of the American Heart Association*; 2016; reference provided by Worksafe, <https://tobacco.ucsf.edu/sites/tobacco.ucsf.edu/files/u9/Springer-JAHA%20marijuana.pdf>.

²⁵ In title 8 section 5148, “smoking,” which is defined as having the same meaning as in Business and Professions Code section 22950.5(c), includes the use of an electronic smoking device that creates an aerosol or vapor.

²⁶ OEHHA Proposition 65, <https://oehha.ca.gov/proposition-65/chemicals/marijuana-smoke/>.

According to the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE), at present the only means of effectively eliminating health risk associated with indoor exposure is to ban smoking activity. Adverse health effects for the occupants of a smoking room cannot be controlled by ventilation. No other engineering approaches, including current and advanced dilution ventilation or air cleaning technologies, have been demonstrated or should be relied upon to control health risks from environmental tobacco smoke exposure in spaces where smoking occurs.²⁷

3.3.2. Potential Risks of Combustion

Stakeholders expressed concern over the lack of awareness among employers, workers, and firefighters of fire hazards associated with cannabis operations, particularly in the manufacturing of cannabis products. Manufacturing operations often use flammable solvents and pressurized equipment. Both emergency workers and cannabis facility employees may be unfamiliar with the hazards. A United Food and Commercial Workers (UFCW) representative commented that it might be difficult to obtain information on extraction methods because some methods are considered trade secrets. One firefighter noted that his agency had responded to many fires involving cannabis operations. He stated that his agency did not have information on extraction-room operations, so firefighters would appreciate guidance from Cal/OSHA on firefighter safety. Stakeholders commented that cannabis establishments should have equipment specification requirements to prevent fires and that Cal/OSHA use regulations or guidelines developed in other states.

Response:

Cal/OSHA currently enforces regulations, found in title 8, General Industry Safety Orders, group 20 (Flammable Liquids, Gases and Vapors) that include requirements to prevent fires and explosions.²⁸ Cal/OSHA has participated in several workshops convened by the BCC to help provide an overview of these requirements to new licensees. Also, at the end of June 2018, Cal/OSHA launched a cannabis industry health and safety webpage.²⁹ The webpage provides relevant information to employers and workers, including applicable regulations and links to Cal/OSHA Consultation Services and other resources. Cal/OSHA Consultation Services staff provide free consultative assistance to employers and employees.

In addition, under the emergency regulations adopted by CDPH-MCSB, employers licensed under the Medicinal and Adult-Use Cannabis Regulation and Safety Act must comply with the following regulations in title 17 of the California Code of Regulations, which relate to fire safety:

- Section 40220. Permissible Extractions
- Section 40222. Volatile Solvent Extractions
- Section 40223. Ethanol Extractions

²⁷ Environmental Tobacco Smoke (ASHRAE position document), updated July 2016, https://www.ashrae.org/File%20Library/About/Position%20Documents/ASHRAE_PD_Environmental_Tobacco_Smoke_2016.pdf.

²⁸ Title 8, General Industry Safety Orders, group 20: <https://www.dir.ca.gov/title8/sb7g20.html>.

²⁹ Cal/OSHA, Cannabis Industry Health and Safety webpage, <https://www.dir.ca.gov/dosh/cannabis-industry-health-and-safety.html>.

- Section 40225. Closed-Loop Extraction System Requirements
- Section 40256. Hazard Analysis
- Section 40258. Preventive Controls
- Section 40260. Equipment and Machinery Qualification
- Section 40275. Standard Operating Procedures

3.3.3. Exposure to Airborne Contaminants (Other than Secondhand Marijuana Smoke) and Surface Contaminants

Stakeholders commented on potential respiratory and dermal hazards and control measures in the cannabis industry. They commented that very few studies have been conducted regarding the occupational health hazards in the cannabis industry. Therefore, potential respiratory hazards are not fully known and exposure limits do not necessarily exist for all airborne contaminants in cannabis operations. One industry representative noted that during harvesting or while moving plants, some people experience skin irritation or develop allergic reactions to the product. An industry consultant noted that contact with trichomes³⁰ on the cannabis plant can cause itchiness, rashes, skin irritation, and mild allergic reactions.

Commenters provided examples of control measures that can be used to protect employees from skin, eye, and respiratory exposure hazards. Control measures include the use of personal protective equipment (PPE) such as puncture-proof gloves, respirators, and splash-proof goggles. Commenters also noted that hazards can be addressed through worker training on PPE and the implementation of a respiratory protection program. Also, stakeholders noted that new regulations might not be necessary or useful, and existing regulations could suffice.

Response:

The State of Washington and NIOSH have identified airborne and surface contaminants found in workplaces in the cannabis industry (see parts [2.2.1](#) and [2.2.4](#) above). Current regulations addressing the risks of exposure to these contaminants are in title 8, General Industry Safety Orders, article 10 (Personal Safety Devices and Safeguards)³¹ and article 107 (Dust, Fumes, Mists, Vapors, and Gases).³² The regulations require employers to identify and evaluate hazards and implement engineering and administrative controls and the use of personal protective equipment, as necessary and appropriate.

In addition, CDFA has adopted emergency regulations related to cannabis cultivation that include pesticide use requirements, which are in title 3 section 8307.³³

³⁰ Trichomes are small outgrowths on the surface of a cannabis plant.

³¹ Title 8, General Industry Safety Orders, article 10, Personal Safety Devices and Safeguards, <https://www.dir.ca.gov/Title8/sb7g2a10.html>.

³² Title 8, General Industry Safety Orders, article 107, Dusts, Fumes, Mists, Vapors, and Gases, <https://www.dir.ca.gov/Title8/sb7g16a107.html>.

³³ Title 3 section 8307:

[https://govt.westlaw.com/calregs/Document/I2BB9BE75531145448F328CFF45C7463A?viewType=FullText&originationContext=documenttoc&transitionType=CategoryPageItem&contextData=\(sc.Default\)](https://govt.westlaw.com/calregs/Document/I2BB9BE75531145448F328CFF45C7463A?viewType=FullText&originationContext=documenttoc&transitionType=CategoryPageItem&contextData=(sc.Default)).

3.3.4. Potential Risks of Armed Robbery

Stakeholders' comments focused mainly on the high prevalence of cash transactions in the cannabis industry and the high risk of robbery and associated workplace violence.

One industry representative commented that roughly 80 percent of companies in this industry do not have bank accounts, and therefore, large amounts of cash are handled, creating a danger for businesses and employees. The representative commented that delivery services and dispensaries are frequent robbery targets.

One business owner commented that his company uses GPS-tracked vehicles with alarms. The vehicles can be remotely locked from a computer. The owner explained that those devices serve as a preventive measure during the transportation of products to retail establishments. He also commented that armored car services to transport cash are available but expensive.

Worker advocates requested that Cal/OSHA promulgate rules specific to violence in the cannabis industry.

Response:

Cal/OSHA agrees that workplace violence prevention is a significant hazard for cannabis establishments. Under title 8 section 3203, Injury and Illness Prevention Program (IIPP), all employers must identify, evaluate, and correct workplace hazards and provide training to employees. Where workplace violence is an issue in the workplace, it must be addressed in the employer's IIPP. A model IIPP that expressly addresses workplace security is available at https://www.dir.ca.gov/dosh/dosh_publications/iipsecurity.html.

In addition, Cal/OSHA has been holding advisory committee meetings to assist in developing a workplace violence prevention standard for general industry that would include cannabis establishments. Advisory committee meeting minutes, supporting documentation, and dates of future meetings are available at <https://www.dir.ca.gov/dosh/doshreg/Workplace-Violence-in-General-Industry/>.

Cannabis manufacturers must also comply with CDPH-MCSB emergency regulations in title 17 that include safety and security requirements.³⁴ These title 17 regulations include section 40200 (Security Plan) and section 40205 (Video Surveillance). For non-manufacturers in the cannabis industry, BCC emergency regulations in title 16 contain similar security requirements, including section 5042 (Limited-Access Areas), section 5043 (Licensee Employee Badge Requirement), section 5044 (Video Surveillance System), section 5045 (Security Personnel), section 5046 (Locks), and section 5047 (Alarm System).³⁵ Compliance with these regulations can reduce the risk of robbery and workplace violence.

³⁴ CDPH-MCSB approved emergency regulations, https://oal.ca.gov/wp-content/uploads/sites/28/2018/06/2018-0525-02EE_App.pdf.

³⁵ Title 16 sections 5042–5047:

[https://govt.westlaw.com/calregs/Browse/Home/California/CaliforniaCodeofRegulations?guid=I4FC02AA9293248F395B357AE7A26FC80&originationContext=documenttoc&transitionType=Default&contextData=\(sc.Default\)](https://govt.westlaw.com/calregs/Browse/Home/California/CaliforniaCodeofRegulations?guid=I4FC02AA9293248F395B357AE7A26FC80&originationContext=documenttoc&transitionType=Default&contextData=(sc.Default)).

3.3.5. Repetitive Strain Injuries

One industry representative commented that trimmers can work continuously for 10 to 14 hours. Others commented that low-level tasks (e.g., marijuana plant cutting or bud trimming) are performed manually and that the risk of repetitive motion injuries exist throughout the supply chain because at present there is little automation in the cannabis industry. One commenter did not know of any workers' compensation cases resulting from repetitive motion but stated that in time, repetitive motion injuries are likely to occur. One participant commented that applicable regulations need to be identified and summarized. The participant suggested that recommendations should be made to encourage employers to adopt more stringent and detailed policies regarding repetitive motion injuries.

Response:

The stakeholders' comments were consistent with NIOSH findings that high-frequency motion in hand trimming could increase the risk for hand, wrist, and finger musculoskeletal disorders (see part [2.2.4.1](#) above).

During the meeting, Cal/OSHA staff reminded stakeholders that cannabis establishments must take steps to protect workers from all occupational health and safety hazards, as required by title 8 section 3203 (IIPP). In addition, title 8 section 5110 addresses the risk of repetitive motion injuries.³⁶ As discussed above, Cal/OSHA has participated in several education and outreach events to inform employers in the industry about existing Cal/OSHA regulations and has posted a webpage (<https://www.dir.ca.gov/dosh/cannabis-industry-health-and-safety.html>) that provides links to existing occupational safety and health regulations that apply in the cannabis industry.

3.3.6. Other Health and Safety Issues

Worker advocates stated that there is insufficient injury and illness data to conclude that the current health and safety regulations are sufficient to protect workers in the cannabis industry.³⁷ They commented that no information is available regarding the impact of current laws on worker protection, no information on the potential workers' compensation issues that may emerge in the industry, and no data regarding on-the-job injuries. Therefore, they believe that it is too early to definitively conclude that current health and safety regulations are sufficient to protect workers in the industry.

Stakeholders commented that it was difficult to determine which regulations apply to cannabis establishments. An industry representative commented that business owners would benefit from Cal/OSHA's assistance because the industry is transitioning from a black market to a young, compliant market, and that they would welcome guidelines, audit checklists, and a summary of regulations applicable to each part of the process chain. They also cautioned that if the regulations create economic burdens, smaller employers will go into the black market.

³⁶ Title 8, General Industry Safety Orders, section 5110, Repetitive Motion Injuries, <https://www.dir.ca.gov/title8/5110.html>.

³⁷ Worksafe comments, March 1, 2018, <https://www.dir.ca.gov/dosh/doshreg/Marijuana/Comments/Worksafe-Cannabis-Letter.pdf>; UFCW comments, February 26, 2018, <https://www.dir.ca.gov/dosh/doshreg/Marijuana/Comments/UFCW-Western-States-Council.pdf>.

Worker advocates requested that 30 hours of safety and health training, taught by an OSHA-authorized training provider, be required for one supervisor and one frontline employee at each cannabis establishment. The advocates commented that such training is important and necessary because the industry is in its infancy, on-site training is not yet adequate, and licensing regulations do not require proof of compliance with regulations enforced by Cal/OSHA.

Response:

Regarding the lack of sufficient occupational injury and illness data for the cannabis industry, the commenters are correct that such data is currently limited. However, as discussed earlier in this report, many hazards in the industry have been identified, and existing regulations address most of the identified hazards (with the exception of specific requirements needed to protect employees from exposure to secondhand marijuana smoke in certain settings, discussed below).

Regarding the confusion over which regulations apply to cannabis establishments, as discussed above, Cal/OSHA has participated in workshops convened by the BCC to help provide an overview of Cal/OSHA's requirements to new licensees and has posted a cannabis industry health and safety webpage.³⁸ The webpage provides relevant information to employers and workers, including applicable regulations, and links to Cal/OSHA Consultation Services and other resources. In addition, Cal/OSHA Consultation Services staff provide free consultative assistance to employers and employees.

Regarding the importance of supervisor and employee health and safety training, Cal/OSHA agrees that training plays a critical role in controlling hazards and preventing accidents. Existing regulations in title 8 that require training include the following:³⁹

- Section 3203. Injury and Illness Prevention Program
- Section 3204. Access to Employee Exposure and Medical Records
- Section 3220. Emergency Action Plan
- Section 3221. Fire Prevention Plan
- Section 3314. The Control of Hazardous Energy for the Cleaning, Repairing, Servicing, Setting-Up, and Adjusting Operations of Prime Movers, Machinery and Equipment, Including Lockout/Tagout
- Section 3395. Heat Illness Prevention
- Section 5110. Repetitive Motion Injuries
- Section 5194. Hazard Communication

Cannabis manufacturers must also comply with the following title 17 emergency regulations adopted by CDPH-MCSB related to employee training:

- Section 40280. Training Program
- Section 40500. Record Keeping Requirements

³⁸ Cal/OSHA, Cannabis Industry Health and Safety webpage, <https://www.dir.ca.gov/dosh/cannabis-industry-health-and-safety.html>.

³⁹ To do a search for regulations in title 8, go to <https://www.dir.ca.gov/samples/search/query.htm>.

In addition, if Assembly Bill 2799 is enacted, employers licensed under the Medicinal and Adult-Use Cannabis Regulation and Safety Act will be required to provide a signed statement under penalty of perjury that one supervisor and one employee will have successfully completed 30 hours of safety and health training taught by a training provider approved by an OSHA Training Institute Education Center.

4.0. Recommendations on the Need to Develop Industry-Specific Regulations

In certain enclosed work spaces, title 8 section 5148 prohibits the smoking of tobacco products, including the use of certain electronic smoking devices, but does not prohibit the smoking of marijuana/cannabis products, even though secondhand marijuana smoke contains many of the same hazardous chemicals present in tobacco smoke. Cal/OSHA will propose that the Standards Board undertake rulemaking to amend title 8 section 5148 to prohibit the smoking of marijuana in enclosed spaces of places of employment and will assist in the rulemaking effort. Prior to rulemaking, Cal/OSHA will organize and facilitate one or more additional advisory meetings of stakeholders to gather input on the content of proposed amended language, particularly on the issue of which enclosed spaces and places of employment should be included in the prohibition.

Existing regulations currently address the potential risks of combustion, inhalation of harmful substances other than secondhand marijuana smoke, armed robbery, and repetitive strain injuries and the lack of sufficient training for employees. Employers in the cannabis industry are already covered by these regulations. Therefore, regulations to address these hazards and deficiencies in the cannabis industry are not needed at this time. This recommendation is consistent with the actions of other governmental agencies (such as NIOSH, Colorado, and the State of Washington), which have not recommended or developed new regulations, but have published guidelines instead. If Cal/OSHA later finds that the existing regulations in these areas are insufficient to protect employees in the cannabis industry, Cal/OSHA will recommend that the Standards Board undertake rulemaking to adopt additional requirements.

cc: Amalia Neidhardt
Chris Kirkham
Eric Berg