Safety and Industrial Hygiene in the Marijuana Industry

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Disclaimer

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Objectives

• Understand how health and safety stakeholders came together to produce a guideline for worker safety.

• Understand the challenges involved in identifying health and safety standards in a new industry.

• Describe hazards identified in the marijuana industry and how they are addressed in federal safety standards and regulations.
Background

• Colorado Legalization
  • Passed in 2012, Implemented in 2013

• Expanded beyond medical marijuana to recreational use, commercial grows and retail sales

• “Basement growers” scaling up to warehouses

• Hash oil explosions occurring in homes pose risk for large scale operations.

• A new industry was created
  • Aspects of retail, agriculture, manufacturing
  • OSHA oversight but no specific industry guidance.
Worker safety & health concerns

- Colorado occupational health and safety community had much concern and wanted to be involved in assisting the new industry.

- March 2014, Marijuana Industries Health and Safety Workgroup was formed.
  - Primary output goal: A report that details best-practice guidelines and recommendations to protect and promote the health and safety of marijuana industry workers.

- Original Structure included 6 sub-work groups
  - Existing knowledge
  - Industrial hygiene
  - Local & Environmental health issues
  - Occupational medicine
  - Safety & Security
  - Wellness & Safety Culture
Workgroup objectives

- Convene a broad-based stakeholder group (including industry) to solicit input on best practices
- Conduct on-site technical tours of marijuana growers, dispensaries, and infused product manufacturers
- Developing a comprehensive summary of occupational health and safety best practices
- Provide industry training
Different perspectives

• IH professionals (CIH)- health focused

• Safety professionals (ASP, CSP)- safety focused

• Industry partners- legal expertise, operation focused

• Medical professionals- occupational medicine focused

• Insurance providers (TPAs)- claims related, workers’ compensation focused
Finding partners

- Occupational Health and Safety organizations
  - Local sections of ASSE, AIHA
  - Center for Health, Work and Environment (MAP ERC)

- Industry partners
  - Cultivation & extraction facilities
  - Industry group (legal)
  - Workers’ Comp Insurers
  - Private Safety Consultants

- Local and Federal government partners
  - NIOSH
  - State & Local PH Departments
  - OSHA & OSHA consultation
  - State environmental programs (waste, air)
  - State Department of Agriculture
Identifying Hazards

Hash Oil Blamed In Another Home Explosion
March 12, 2017 10:46 AM

(credit: Platte Canyon Fire Protection District)
Guide to Worker Safety and Health in the Marijuana Industry
Marijuana Occupational Health and Safety Work Group
January 2017

Report published in January 2017:
Guideline Layout

• **Background and Establishing a Safety and Health Program**
  - Illness and injury notification and reporting
  - Establishing a safety and health program
  - Hierarchy of controls

• **Guide to Worker Health and Safety**
  - Section I: Hazards
  - Section II: Health and Safety Programs
Hazard Categories Addressed

- Biological
- Chemical
- Physical
### Common occupations and potential hazards

<table>
<thead>
<tr>
<th>Job</th>
<th>Duties</th>
<th>Potential Hazards</th>
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</thead>
<tbody>
<tr>
<td>Cultivator</td>
<td>Planting, transplanting, physically relocating plants, watering, nutrient mixing and feeding, mixing and applying pesticides, cleaning, harvesting plants, drying plants</td>
<td>Mold, sensitizers/allergens CO₂, CO, pesticides/fungicides, ergonomics, walking/working surfaces, lighting hazards, chemical exposures</td>
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<tr>
<td>Trimmer</td>
<td>Trimming, packaging, shipping, data entry, cleaning</td>
<td>Mold, sensitizers/allergens, CO₂, CO, pesticides, ergonomics, occupational injuries (cuts), chemical exposures, machinery</td>
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<tr>
<td>Extraction technician</td>
<td>Extracting marijuana concentrates</td>
<td>Machinery, IAQ, allergens, noise, ergonomics, chemical exposures, use of explosive/flammable chemicals such as butane</td>
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<td>Budtender</td>
<td>Sales representative who sells marijuana and marijuana products to customers</td>
<td>Sensitizers/allergens, ergonomics, workplace violence</td>
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<tr>
<td>Edible producer, infused product confectioner/artisan/ chef</td>
<td>Cooking, baking, packaging, bottling, and labeling marijuana infused products</td>
<td>Occupational injuries (burns), noise, chemicals</td>
</tr>
</tbody>
</table>
Hierarchy of Controls

- Elimination
- Engineering Controls
- Work practice controls
- PPE

Decreasing Effectiveness
Biological Hazards Addressed

• **Mold**
  - **Issue:** Nasal congestion, throat irritation, coughing, wheezing, eye irritation, skin irritation
  - **Controls:** Good housekeeping (moisture and dampness control), engineering controls (local and general exhaust ventilation), PPE

• **Sensitizers/allergens (dermal)**
  - **Issue:** Irritant contact dermatitis, Allergic contact dermatitis
  - **Controls:** Medical surveillance, good housekeeping, proper PPE

• **Sensitizers/allergens (respiratory)**
  - **Issue:** Itchy, runny, or congested nose; sneezing; coughing; wheezing
  - **Controls:** Engineering controls, proper PPE
Harvesting Process
Chemical Hazards Addressed

- Carbon dioxide (CO₂)
- Carbon monoxide (CO)
- IAQ (volatile organic compounds)
- Pesticides
- Disinfectants/ cleaning chemicals
- Nutrients- Corrosives
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<th>EPA Registration Number</th>
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<th>Half-Mask</th>
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Physical Hazards

- Compressed gases
- Occupational injuries
- Ergonomics, body mechanics
- Workplace violence
- Walking/working surfaces
- Working at heights
- Electrical
- Noise

- Environment
- Powered industrial trucks (forklifts)
- Lighting hazards
- Machines
- Extraction equipment
- Confined spaces
Physical Hazards
OSHA Programs Outlined

- Hazard Communication Plan
- Hearing Conservation Plan
- Personal Protective Equipment Assessment
- Respiratory Protection Plan
- Lockout/ Tagout
- Fire Protection Plan
- Emergency Action Plan

Safety and Industrial Hygiene in the Marijuana Industry
Putting the Guide into Practice

• Partnership with guideline authors and the Center for Work, Health and Environment to develop a training for marijuana workers.

• June 28, 2017

• High level overview with experts from OSHA, insurance providers, and industrial hygiene and safety experts.
Challenges with the Process

- Stakeholder management & engagement
- Vastly different scales of industry
- Politics & priorities
- Change in leadership
- Writing as one voice
Contact

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