



Five Cities Fire Authority

Fire & Life Safety Requirements

CANNABIS CULTIVATION, MANUFACTURING AND LABORATORY FACILITIES

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fivecitiesfireauthority.org

This handout outlines fire and life safety requirements for cannabis cultivation, manufacturing and laboratory facilities. Other than discretionary or voluntary compliance as allowed within these regulations, applicants for Commercial Cannabis Permits will be required to comply with these regulations. For questions regarding these regulations, please contact the Five Cities Fire Authority at 805-473-5490.

AUTHORITY

Codes and standards regulating medical cannabis facilities currently adopted by the City of Grover Beach include, but are not limited to:

- California Building Code
- California Electrical Code
- California Mechanical Code
- California Occupational Health and Safety Regulations
- California Plumbing Code
- California Energy Code
- California Existing Building Code
- California Green Building Standards Code
- California Fire Code
- California Health and Safety Code
- National Fire Protection Association Standards
- City of Grover Beach Municipal Code

CULTIVATION OPERATION REQUIREMENTS

Applicants submitting an application for Cultivation Operations shall provide proof of compliance with the following requirements:

- Provide cultivation requirements including site and cultivation plans as described in state regulations for cultivation.
- Partition material between grow spaces shall be made of an approved fire resistant material and rating.
- Carbon Dioxide (CO₂) enrichment systems shall be listed and labeled, properly installed and functioning with a concentration level of no more than 1500 ppm (parts per million)
- Any compressed gasses used in the enrichment process shall not be stored in containers that exceed a 150-pound tank size and shall be industry conforming.
- Compressed gas tanks shall be seismically restrained with cable or chain.
- Backflow prevention on hose bibs and faucets shall be required.
- All cultivation facilities shall be organized in orderly rows with aisles of at least three feet in width, and at least eight feet between aisle and next aisle or the aisle and a wall. Facility shall maintain clear access to all exits.
- Electrical:
 - Luminaries shall be approved for application.
 - Luminaries shall be properly installed/restrained.
 - All 120 volt outlets shall be GFI protected.
 - No cords shall be installed through holes, sleeves, ceilings, or where otherwise prohibited.
 - “No Storage” areas shall be outlined on floor in front of electrical panels.
- Clearly posted signage prohibiting employees from performing any manufacturing processes if under the influence of alcohol, cannabis, illegal drugs or other prescription medicines.

MANUFACTURING OPERATION REQUIREMENTS

Applicants submitting an application for Manufacturing Operations shall meet the following requirements:

- A Certified Industrial Hygienist (CIH) shall provide a detailed report for the specific facility. The CIH shall be certified by the American Board of Industrial Hygiene and provide their “wet stamp” approval on the detailed report. The CIH shall identify hazards, engineering and administrative controls necessary to control hazards, specifications for ventilation controls for extracting cannabinoids from cannabis plant products with flammable solvents and under pressure using CO₂ and liquefied petroleum gas (LPG) flammable solvents. The scope of the stamped report shall include:
 - Process and operations.
 - Extraction and manufacturing equipment.
 - Hazards of processes and operations.
 - List the types and quantities of anticipated hazardous materials by hazard class.
 - Engineering and administrative controls to mitigate hazards.
 - Ventilation controls.
 - Potential employee exposure to chemical substances and plan to maintain compliance with Cal OSHA limits.
 - Personal Protective Equipment (PPE).
 - Training plan/documentation related to PPE.
 - Odor control or odor management plan.
 - Warning sign types and locations.
 - Need for atmospheric monitoring equipment, type and location.
 - Calculations and basis for engineering controls.
 - List of specific recommendations to implement controls.
 - Clearly posted signage prohibiting employees from performing any manufacturing processes if under the influence of alcohol, cannabis, illegal drugs or other prescription medicines.
- The CIH retained to provide the report shall be required to perform an on-site inspection of the facility to verify compliance with the requirements identified in the report prior to approval to begin operations and final occupancy.
- Any “Research and Development” or “Trials” involving processes, equipment and solvents that differ from those identified in the approved CIH report of record requires notification of the Five Cities Fire Authority prior to the commencement of such activity. Any approved change shall trigger a revised CIH review and report to reflect all modifications to process and equipment.
- A hazardous materials management plan shall be completed that includes:
 - List of specific recommendations to implement controls.
 - Identification of hazard classes.
 - Quantities.
 - Location of materials.
 - Determination of storage plan.
 - Plans showing materials locations in facility.
 - All containment specifications for all gases.
 - Occupancy classification; if mixed occupancies provide required separation.
- In cases where the concentrations of flammable vapors and gases may be in excess of 25% of the lower flammability limit, the facility design shall be in compliance with requirements to mitigate the potential for explosion or fire.
- Only closed-loop type extraction equipment shall be permitted.
- Extraction equipment either employing a flammable liquid or compressed (liquefied gas) shall be conducted in an industry standard closed-loop system. The system shall be commercially manufactured, safe for its intended use, bear a permanently affixed and visible serial number, and built to codes and/or practices of generally accepted best engineering practices consistent with:
 - The American Society of Mechanical Engineers (ASME).
 - American National Standards Institute (ANSI).

MANUFACTURING OPERATION REQUIREMENTS - continued

- Underwriters Laboratories (UL).
- The American Society for Testing and Materials (ASTM).

The certification document shall contain the signature and stamp of a professional engineer and the serial number of the extraction unit being certified.

- Only extraction equipment that includes an owner's operation manual with specific instructions regarding proper use of the equipment and safety provisions identified shall be used.
- Standard operating procedures (SOP's) for all major equipment operations shall be provided, including:
 - Start Up
 - Shut Down
 - Setup
 - Emergency situations
- Refrigerated storage or processing of flammable liquids including oil-laden with flammable liquids shall only use refrigerators/freezers rated to store flammable liquids. At a minimum, "lab safe" or "flammable safe" products shall be utilized.
- Equipment exhaust from vacuum pumps, ovens or any other equipment that may contain solvent vapors or products of combustion created when cannabis products are heated or processed shall be conveyed by an appropriate exhaust system to the outside of the building. Note: general dilution ventilation is not acceptable.
- Any compressed gases used in the manufacturing process shall not be stored in containers that exceed 150 pound tanks in size and shall be industry conforming. Reference storage requirements.
- Ethanol used in the manufacturing process shall not be stored in containers that exceed 55-gallon drum size. Reference storage requirements on Page 6.
- Equipment exhaust discharge shall be at least ten feet from any fresh air intakes.
- Equipment exhaust discharge shall be at least 25 feet from property lines.
- Extraction Room:
 - If flammable liquids are utilized, extraction shall be performed within properly fire rated enclosed room based on the appropriate occupancy classification.
 - Shall have smooth cleanable surfaces, with cleanable painted surfaces and a sealed floor
 - Signage shall be posted to limit ignition sources and prohibit any open flames.
- Spent plant material shall either be composted or mixed with compost, shredded paper or similar products to render it unrecognizable. The ground material shall be blended with a non-cannabis material so that the resulting mixture is at least 50% non-cannabis product by volume.
- Storage and transport of intermediate or finished cannabis extraction shall be in sealed containers that will provide protection against physical, chemical and microbial contamination. Containers shall be designed to be secure against the entry of microorganisms.
- Facilities used for extraction or processing of cannabis materials shall follow proper and industry laboratory practices.

INFUSED PRODUCT FACILITY REQUIREMENTS

Applicants submitting an application for an Infused Product Facility shall meet the following requirements:

- A Certified Industrial Hygienist (CIH) shall provide a detailed report for the specific facility. The CIH shall be certified by the American Board of Industrial Hygiene and provide their “wet stamp” approval on the detailed report. The CIH shall identify hazards, engineering and administrative controls necessary to control hazards, specifications for ventilation controls for infusing cannabinoid derived from cannabis plant products into foods, beverages, salves, inhalants, and tinctures to be ingested or applied topically. The scope of the stamped report shall include:
 - Process and operations.
 - Infusion operations and associated equipment.
 - Hazards of process and operations.
 - List the types and quantities of anticipated hazardous materials by hazard class.
 - Engineering and administrative controls to mitigate hazards.
 - Ventilation controls.
 - Potential employee exposure to chemical substances and plan to maintain compliance with Cal OSHA limits.
 - Personal Protective Equipment (PPE).
 - Training plan/documentation related to PPE.
 - Odor control or odor management plan.
 - Warning sign types and locations.
 - Identify required occupancy classification for the type of hazards involved.
 - Clearly posted signage prohibiting employees from performing any manufacturing processes if under the influence of alcohol, cannabis, illegal drugs or other prescription medicines.
 - Need for atmospheric monitoring equipment, type and location.
 - Sanitation requirements for processing into foods, beverages, salves, inhalants, and tinctures shall include:
 - Location of hand wash sinks.
 - How dishes will be washed, including requirements that all food handling and health care related fixtures, devices and equipment discharge through indirect waste lines into a floor sink.
 - Contact surfaces shall be smooth, free of breaks, open seams, cracks, chips, pits and similar imperfections; free from sharp internal angles, corners, and crevices. Finishes are to have smooth welds and joints.
 - Equipment containing bearings and gears shall be designed, constructed and maintained to ensure that food and health requirements are satisfied.
 - All rooms shall have sufficient ventilation to keep them free from excessive heat, steam, condensation, vapors, odors, smoke and fumes.
 - Table or counter mounted equipment shall be installed to facilitate the cleaning of the equipment and adjacent areas be being sealed to the surface or elevated by at least four inches.
 - Three compartment sinks shall be required for washing, rinsing, and sanitizing equipment and utensils.
 - Hand sinks shall be conveniently located for employees.
 - Hand sinks shall only be used for hand washing (maximum water temperature of 110 degrees is to be maintained through an appropriate mixing valve).
 - Sinks used for food or medicine preparation or for washing equipment shall not be used for hand washing.
 - At least one utility or mop sink shall be provided.
 - Garbage and refuse shall be stored in a manner to be inaccessible to insects and rodents.
 - Floors shall be smooth, durable, nonabsorbent, light colored and maintained in good repair.
 - The juncture between the floor and wall shall be closed and sealed.
 - Walls and ceilings shall be smooth and easily cleanable.
 - Calculations and basis for engineering controls.

INFUSED PRODUCT FACILITY REQUIREMENTS - continued

- List of specific recommendations to implement controls.
- The CIH retained to provide the report shall be required to perform an on-site inspection of the facility to verify compliance with the requirements identified in the report prior to approval to begin operations.
- A hazardous materials management plan shall be completed that includes:
 - Identification of hazard classes.
 - Quantities.
 - Location of materials.
 - Determination of storage plan.
 - Sketch of materials locations in facility.
- Concentrations of grease, smoke, heat steam or products of combustion created when medical cannabis products are processed into foods, beverages, salves, inhalants and tinctures shall be contained by code required hood systems.

TESTING LABORATORY FACILITY REQUIREMENTS

Applicants submitting an application for a Testing Laboratory Facility shall meet the following requirements:

- A Certified Industrial Hygienist (CIH) shall provide a detailed report for the specific facility. The CIH shall be certified by the American Board of Industrial Hygiene and provide their “wet stamp” approval on the detailed report. The CIH shall identify hazards, engineering and administrative controls necessary to control hazards, specifications for ventilation controls for performing the work of a testing laboratory. The scope of the stamped report shall include:
 - Process and operations
 - Hazards of process and operations
 - List the types and quantities of anticipated hazardous materials by hazard class
 - Engineering and administrative controls to mitigate hazards
 - Ventilation controls
 - Potential employee exposure to chemical substances and plan to maintain compliance with Cal OSHA limits
 - Personal Protective Equipment (PPE)
 - Training plan/documentation related to PPE
 - Warning sign types and locations
 - Need for atmospheric monitoring equipment, type and location
 - Calculations and basis for engineering controls
 - Clearly posted signage prohibiting employees from performing any testing processes if under the influence of alcohol, cannabis, illegal drugs or other medicines
 - List of specific recommendations to implement controls
 - Identify required occupancy classification for the type of hazards involved
- The CIH retained to provide the report shall be required to perform an on-site inspection of the facility to verify compliance with the requirements identified in the report prior to approval to begin operations.
- A hazardous materials management plan shall be completed that includes:
 - Identification of hazard classes
 - Quantities
 - Location of materials
 - Determination of storage plan
 - Sketch of materials locations in facility
- A chemical hygiene program shall be created and then implemented for the facility.
- Refrigerated storage or processing of flammable liquids including oil-laden with flammable liquids shall only use refrigerators/freezers rated to store flammable liquids. At a minimum, “lab safe” or “flammable safe” products shall be utilized.
- Equipment exhaust from analytical equipment, vacuum pumps, ovens or other equipment that may contain solvent vapors or products of combustion shall be conveyed by an appropriate exhaust system to the outside of the building. General dilution ventilation is not acceptable.
- Testing laboratory areas with equipment that uses gases, equipment detectors employing combustion or high-performance liquid chromatography (HPLC) mobile phase fluids containing acetonitrile shall have general ventilation that provides a minimum of 15 air changes per hour in addition to any necessary point source ventilation to control airborne contaminants.

QUESTIONS

Please call 805.473.5490 or email: fcfaadmin@fivecitiesfire.org.