ODOR MITIGATION PLAN

StonyPoint Wellness
411 Stony Point Road, Santa Rosa CA

Abstract

The following plan has been developed to comply with City of Santa Rosa Title-20, Division 4, Chapter 20-46.050 General operating Requirements, paragraph 'H' Odor Control requirements.

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Introduction

The following plan has been developed to comply with City of Santa Rosa Title-20, Division 4, Chapter 20-46.050 General Operating Requirements, paragraph 'H' Odor Control Requirements.

This plan has been developed based on the applicant's proposed operational criteria as outlined in the general application. Administrative, operational and engineering controls noted are consistent with the commonly accepted best available cannabis-industry-specific technologies designed to mitigate cannabis odors.

Successful application of this plan will effectively mitigate cannabis odor detection outside the structure in which the proposed business is to operate.

Project Details

Storefront Retail (Type 10): Flower material stored in air-tight packaging intended for retail sales does not emit noticeable, persistent cannabis odors and therefor mechanical odor mitigation systems are not necessary. Owner may choose to implement a circulation fan with carbon filtration to eliminate any product odors resulting from packaging material contamination.

On-site consumption through incineration (smoking and vaping) will not be permitted. This plan does not address incineration related odors.

Engineering Controls

Mechanical plans developed for building permit application will include the following features and capabilities:

1. Carbon filter(s) will be specified to maintain an acceptable contact time for cannabis odor exhaust and recirculation air stream(s).
2. Odors will be contained within the building through system air balancing techniques to eliminate uncontrolled exfiltration of odor to the outdoor environment.
3. Environmental exhaust fans in non-cannabis odor intensive areas (break room, rest room, etc.) will not be filtered.
4. System testing and balancing will be required of the installing contractor to demonstrate air balancing effectiveness.
5. Contractor operational training shall be the basis for routine maintenance and

testing standard operating procedures.

Operational Processes and Maintenance Plan

Detailed operational and maintenance plans should be developed by the applicant. The following items should be included for odor mitigation purposes:

1. Routine verification of odor mitigation effectiveness through inspection of odors in the general vicinity of the building.

Staff Training

Standard operating procedures, including staff training, should be developed by the applicant. The following items should be included for odor mitigation purposes:

1. Routine verification of odor mitigation effectiveness monitoring: It should be clear who is responsible for this activity, where and how data is collected and cataloged. A map with clearly indicated data collection test points should be available for reference. Testing should be conducted while processing is occurring and exhaust systems are active. Testing should occur both in the morning (when winds are calm); and in the afternoons (when winds are typically greater). Results should be recorded in a log and should include: operator name, time of day, date, results by test location, relative wind speed and weather conditions.
2. Reporting of cannabis odors outside the building: It should be clear what an employee is to do in the event cannabis odors are detected outside the building. The General Manager or other supervisor should be notified immediately upon detection. The person responsible for receiving notifications should take immediate steps to remedy the problem including, but not limited to, notifying service personnel for repairs or routine maintenance. If odors persist, odor producing operations should be stopped until an effective solution can be implemented.
3. Odor mitigation effectiveness monitoring training: All employees should be trained to conduct odor mitigation effectiveness tests. Training procedures should be included in readily available employee handbooks for reference.

Supplemental Mechanical Design Considerations

Carbon filtration is commonly accepted throughout the cannabis industry as the current best engineering control technology for mitigating odors. Odors are generally captured by locating exhaust air/filter intake points in areas of the facility where odor generating activities or raw material product (flower) handling is expected; in conjunction with the implementation of common air balancing techniques. Air balancing effectively eliminates uncontrolled exfiltration of cannabis odors to the exterior of the building.

Additional systems include combination recirculation fan/filtration systems. Recirculation systems are often applied where moderate odor sources are expected. Recirculation equipment may be fans with passive carbon filters or powered electric air purification units.

Carbon filtration odor removal effectiveness depends on three criteria:

1. Exhaust air contact time
2. Filter cleanliness
3. Containment

Contact time is a function of air velocity through the filter and filter surface area. The contact time should be designed to meet or exceed the filter manufacturer's specified minimum. Filter effectiveness decreases with decreased contact time and odors are passed through the filter to the environment.

Filter cleanliness can be quantified by monitoring system pressure drop across the filter and should not exceed a manufacturer's published performance rating for a given filter. This measurement quantifies the degree to which the filter media has been occluded (becomes dirty). As a filter becomes occluded the pressure drop increases and the fan exhaust rate is reduced. Reductions in the exhaust rate change the air balance and can lead to exfiltration of odor.

Containment is achieved through common air balancing techniques. Proper air balancing allows for negatively pressurizing a room (removing more air than is mechanically supplied) and insures odors pass through filters, eliminating the exfiltration of odors to the environment or to adjacent rooms through random openings in the building (cracks, doors, etc.). These techniques are commonly and successfully implemented in many non-cannabis applications to eliminate the migration of odors to other part of the building, including commercial kitchen and rest room applications.