



April 4, 2018

Mr. Mark Setterland

Chief Building Official
City of Santa Rosa, Building Division
100 Santa Rosa Avenue
Santa Rosa, CA 95404

City of Santa Rosa

APR 15 2019

Planning & Economic
Development Department

**Subject: Cannabis Dispensary Conditional Use Application
1061 North Dutton Ave., Santa Rosa, CA
Cannabis Odor Mitigation Plan**

Dear Mr. Setterland,

Introduction

A combination of engineering and administrative controls is proposed to effectively mitigate cannabis odors. Engineering controls include carbon filtration via a dedicated environmental exhaust fan; and negatively pressurizing odor sources. Carbon filtration is commonly accepted throughout the cannabis industry as the current best engineering control technology for mitigating odors in facilities generating marijuana odors with exhaust air/filter intake points located in areas of the facility where odor-generating activities take place. As such, this engineering control strategy will effectively mitigate odors for all cannabis odor sources within the facility.

Design Considerations

Carbon filtration odor removal effectiveness depends on three criteria:

1. Exhaust air contact time
2. Filter cleanliness
3. Negative room pressurization

Contact time is a function of air velocity through the filter and should be designed to maintain a minimum contact time of 0.2 seconds, or as specified by the manufacturer. 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. Areas of high odor concentration are typically negatively pressurized to allow for the control of odors through carbon filter(s).

Retail facility cannabis odor is most likely to be present in secure storage/vault rooms [essentially stock rooms] where packaged products are more densely stored. Retail sales areas, although displaying packaged products for sale, have lower product densities [products per square foot of floor area] and therefore are less likely to be a significant source of cannabis odors.

System Design

The following summarizes the administrative and engineering controls proposed to mitigate cannabis odors:

1. Administrative Controls
 - A. Standard operating procedures will require routine monitoring of carbon filter differential static pressure.
 - B. Filter replacement will be required any time monitoring yields unacceptable pressure monitoring results.
 - C. Monitoring results and filter replacement dates will be documented in an odor control log available to a building inspector in the event of a complaint or routine inspection.
2. Engineering Controls

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- A. Carbon filter(s) and environmental exhaust fan(s) will be specified to maintain an acceptable contact time.
- B. Carbon filter(s) exhaust air inlet(s) will be located in storage room(s), creating a negative pressure in this space.
- C. Intermittently operated environmental exhaust fans (break room, rest room, etc.) will not be filtered.
- D. Exhaust fan make-up air will be via mandatory ventilation air at space conditioning equipment.
- E. Exhaust fan and space conditioning equipment shall be required to operate continuously during occupied hours.
- F. System testing and balancing will be required of the installing contractor.
- G. Contractor shall provide a test and balance report to the owner including: initial system pressure drop; outdoor air rates at space conditioning equipment; and environmental exhaust rates.
- H. Installing contractor shall provide written monitoring instructions and provide operational training to the owner upon placing the system in service.

Summary

It is worth noting the Denver Department of Environmental Health has found that most marijuana related odor complaints arise from grow facilities rather than dispensary/retail facilities. Based on this finding we feel the odor control mitigation plan presented here exceeds what one might expect for a retail facility. This plan is consistent with accepted and best available cannabis-industry-specific technologies designed to mitigate cannabis odors.

I am available to discuss this plan at your convenience.

Sincerely,

Jeff Warner, PE
Warner Mechanical Engineering, Inc.
CEO, Principal Engineer
CA No: M32903

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Odor Mitigation Supplement

The following detailed operational and maintenance plan has been developed by Responsible Patient Care, Inc dba SPARC, based upon the recommendations made by Warner Mechanical Engineering in the Cannabis Odor Mitigation Plan dated 18 April, 2018.

SPARC will employ operational processes and routine maintenance to ensure ongoing functionality of the odor control system. The processes and training plan listed below will assure that no odors are detected outside the project area.

Operational Processes and Maintenance Plan

Quarterly verification of odor mitigation effectiveness:

The store Supervisors shall share responsibility for quarterly inspections of odors in the vicinity of the proposed project, as well as additional inspections on an as-needed basis. If any odors are detected during inspection, the Supervisor shall investigate the cause and source of the odors. If the odors are determined to be originating from SPARC's project, the Supervisor will alert the store Manager who will work with appropriate contractors and staff to implement additional odor control measures to immediately eliminate any odors.

Quarterly monitoring of exhaust system:

On a quarterly basis, the store Supervisors shall verify carbon filter condition and effectiveness by checking and logging carbon filter differential static pressure. If differential static pressure is insufficient, the Supervisor and/or appropriate staff and contractors shall replace filters to ensure acceptable pressure monitoring results. If the replacement of filters is insufficient to yield satisfactory pressure monitoring results, the store Manager shall work with contractors to determine and rectify the cause of the problem.

Procedure for resolving odor complaints:

A contact number for the store Manager will be available upon request for odor reporting by neighbors and visitors. Any reports of odors detected outside the facility will be reported to the store Manager who will ensure that filter effectiveness is tested and the source of the odor is determined. Upon conclusion of the odor source investigation, if the odors are determined to originate from SPARC's facility, the store Manager will ensure that corrective measures are taken and the reporting individual receives followup communication. Corrective measures may include but are not limited to ceasing odor-producing activities and replacing or cleaning filters, as recommended by manufacturers. If odors are determined not to originate from SPARC's facility, SPARC will follow up with the reporting individual to inform them of this conclusion.

Staff Training

SPARC staff will be trained on the importance of odor reporting and mitigation, as well as their role in maintaining an odor-free facility. Staff training on odor reporting will be provided within 30 days of onboarding for all new SPARC employees. This training will include procedures for reporting odors detected by employees, as well as procedures for reports made by non-staff members. In addition to onboarding training, all employees at the facility will receive annual training on odor reporting processes. Additionally, procedures for odor reporting will be readily available for reference at all times in employee handbooks kept on-site.

1. Quarterly verification of odor mitigation effectiveness monitoring:

The store Supervisors share the responsibility for the quarterly verification of odor mitigation effectiveness through monitoring. Results should be recorded in a log and should include: operator name, time of day, date, results.

2. Reporting of cannabis odors outside the building:

All staff will be trained to notify the store Manager and their direct Supervisor in the event that cannabis odors are detected outside the building. If the report is made to a Supervisor, the Supervisor shall notify the store Manager immediately. The store Manager will 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 will be trained to conduct odor mitigation effectiveness tests. Training procedures will be included in readily available employee handbooks for reference.

4. Quarterly carbon filter testing:

The store Supervisors share responsibility for quarterly carbon filter testing. Carbon filter differential pressure measurements will be recorded on a quarterly basis in a log specific to each filter. Measurement records will include: operator name, values, date and time.

5. Replacing carbon filters

Filters will be replaced immediately as pressure differential measurements exceed routine carbon filter testing limits. The maintenance team will be trained to perform this task. Training procedures will be included in readily available employee handbooks for

reference. Filter replacement dates will be recorded in a service log including operator name, date, initial and final pressure readings. Replacement filters will be kept on-site at all times.