



RECORD OF CANNABIS ODOR MEASUREMENTS

El Dorado County, California

Grower: Cybele Holdings

Location: 3029 Freshwater Lane
El Dorado, CA 95623

Date/Time: October 13, 2024
1:00 pm to 3:00 pm

Contact: Lee Tannenbaum

SUMMARY OF FINDINGS

EPS measured the intensity of odors at various indoor and outdoor locations. Indoor locations were inside two buildings used to store and process cannabis. Outside locations include the property lines, areas immediately adjacent to the two buildings, areas within the outdoor cannabis growing fields and various other locations inside the property. Odor measurements were conducted during the harvesting period when odor intensity is known to be the highest.

The results of the measurements are as follows:

- The maximum odor intensity to equal 60 dilution to threshold (DT) inside Building # 2. However, the odor was not that of cannabis, but of cut grass. These buildings are (50 ft wide x 40 ft long x 12-16 feet high) are used to store harvested cannabis. The maximum odor intensity outside and immediately adjacent the building was 7 D/T.
- The maximum odor within the outdoor grow canopies ranged from 0 to 15 D/T. The odor intensity declined rapidly with distance from the edge of the outdoor grow canopy. As little as 20' outside of the canopy the odor intensity ranged from 0 to 4 D/T.

- There were no detectible odors along the property lines, including the entrance on Freshwater Lane.

WEATHER CONDITIONS

EPS measured the intensity of odors at various indoor and outdoor locations. Indoor locations were inside two buildings used to store and process cannabis. Outside locations include the property

The following weather was sunny with light winds, variable direction. The following conditions were recorded at the site.

Temperature:	75 F to 80 F
Humidity:	41 to 45%
Aver. Wind Speed:	3 to-6 mph variable direction
Pressure:	30.04 inch Hg

GENERAL OBSERVATIONS

The entrance to the site is from the North on an unpaved road. There were no detectible odors at the entrance. No odors were detected as you approach the admin building. Odors were detected in Building #2 that is used to store harvested cannabis leaves.

Very slight odors were detected as you walk towards the outdoor grow area. Stronger odors were detected within the canopy.

See Figure 3 for the sampling locations and results. A description of the Nasal Ranger Olfactometer is attached.

Figure 1
VICINITY MAP

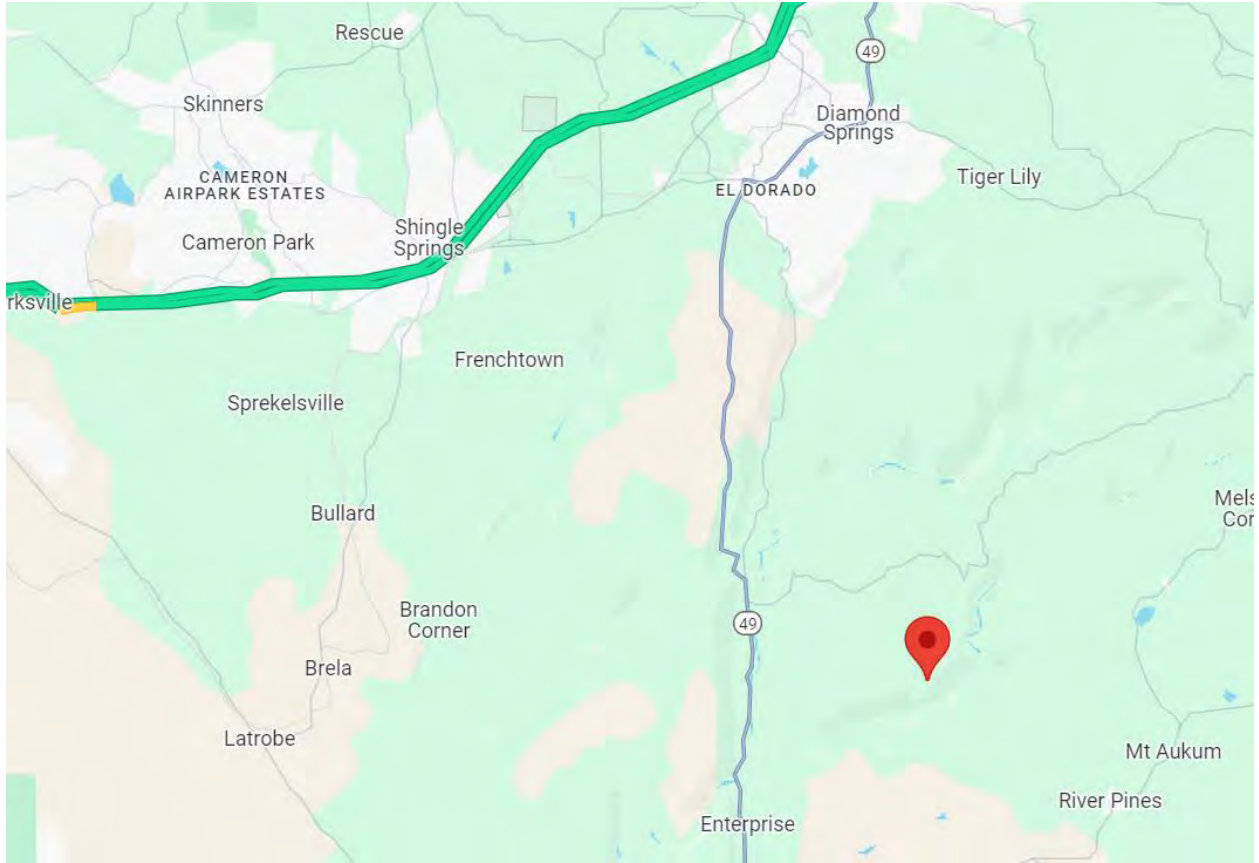


Figure 2
SITE MAP

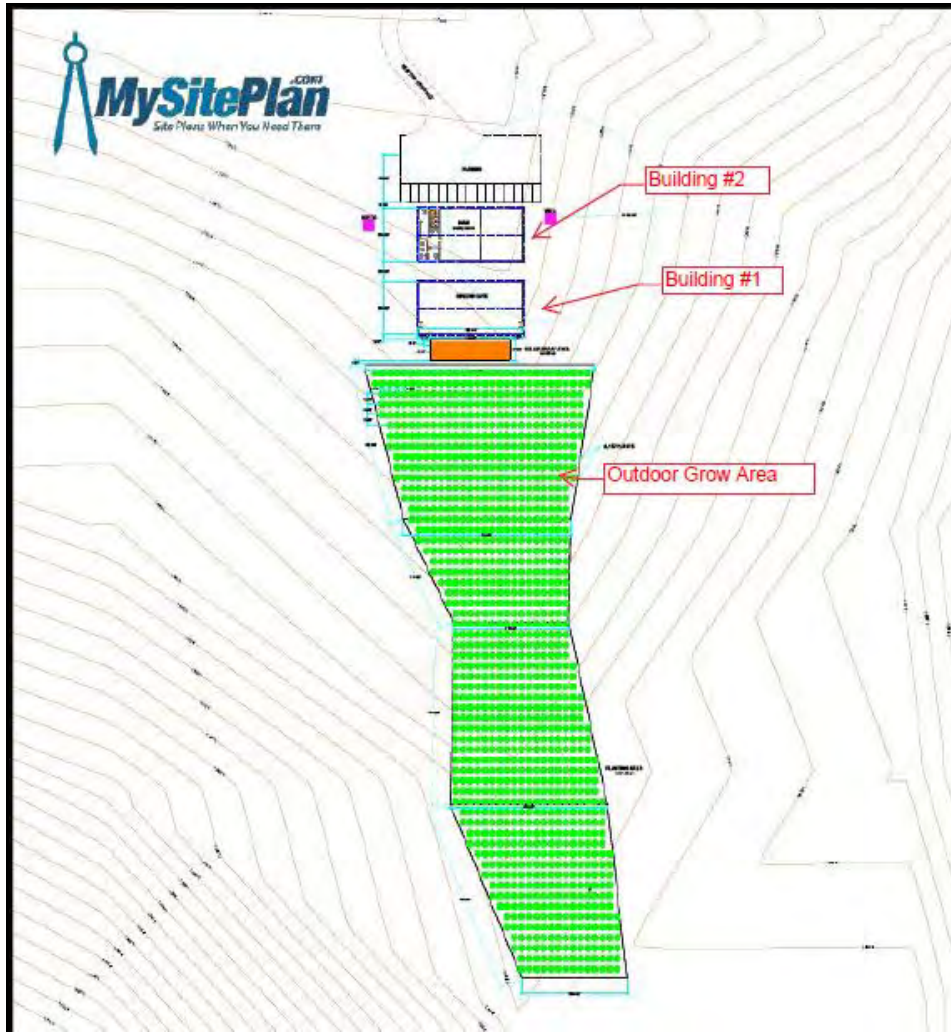
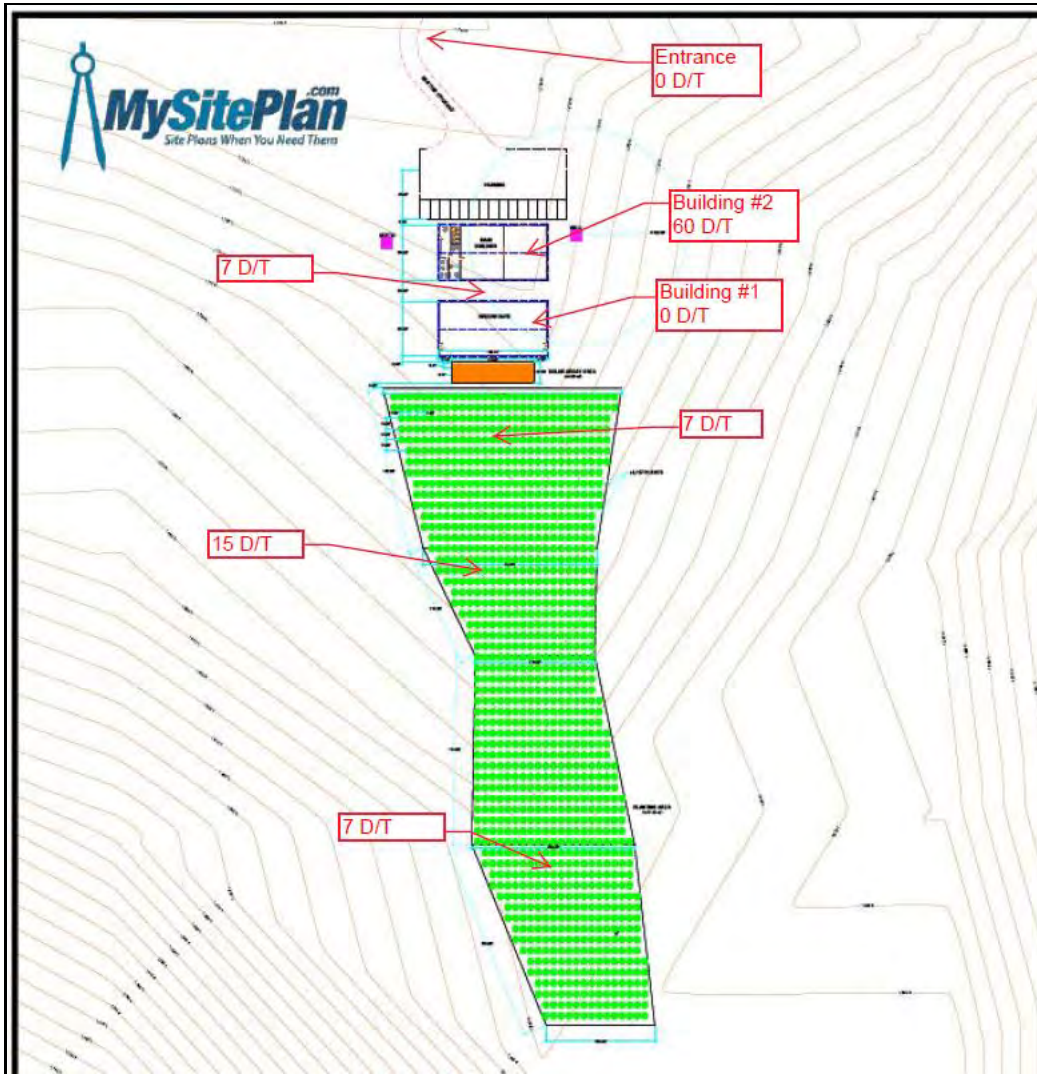


Figure 3
ODOR SAMPLING LOCATIONS AND RESULTS



SITE PHOTOGRAPHS



Outdoor Canopy





Odor Measurements Between Buildings 1 and 2



Interior Building #1



Interior Building #2

Reported By: *Ray Kapahi*

Ray Kapahi
Principal
EPS

Oct 19, 2024



Nasal Ranger® Field Olfactometer



*Measure odors
with precision.*



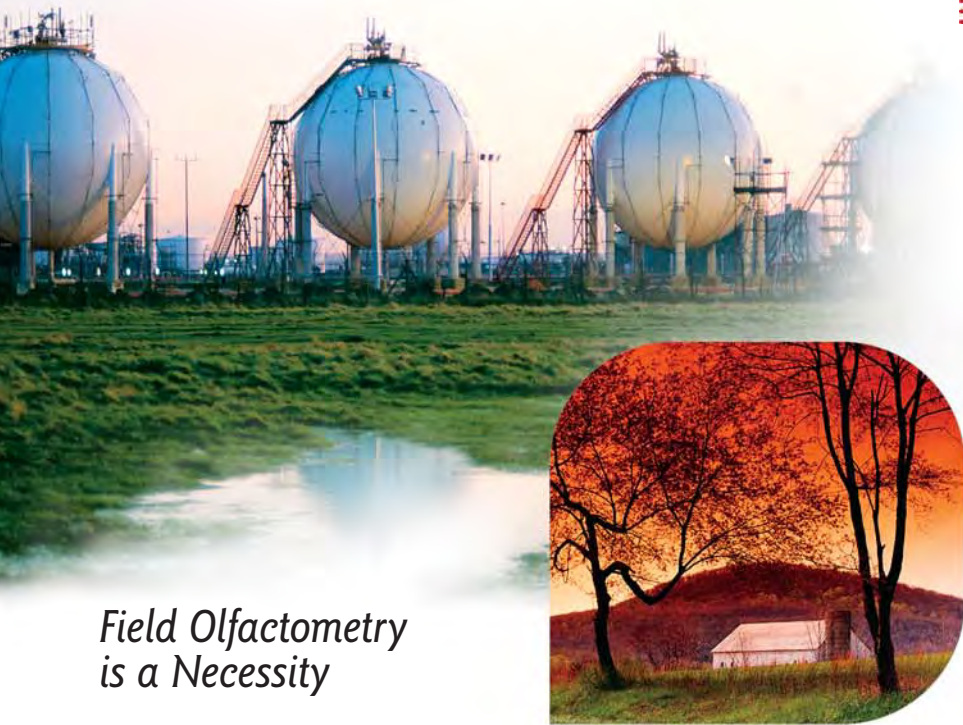
Nasal Ranger® Field Olfactometer

The Nasal Ranger® is a portable odor-measuring device that allows users to quantify odor strength in nearly any location or circumstance. This essential tool offers an innovative, easy-to-use alternative to guessing at odor strength.

Now, facility operators, community inspectors and neighborhood citizens can conduct complete odor monitoring, regulation, enforcement and documentation in the field. The Nasal Ranger® goes beyond traditional estimation methods, easily measuring odor strength at specific locations surrounding a facility.

In 2003, Central Davis Sewer District (Salt Lake City, UT) implemented odor monitoring with the Nasal Ranger into a comprehensive facility-wide odor management plan at their 10 MGD waste water treatment plant (WWTP). The Nasal Ranger was utilized to assist in identifying odor sources throughout the facility, and, after mitigation actions were taken, the Nasal Ranger was used to quantify the success of these changes through weekly community monitoring. With these changes and a new aggressive complaint response program, the WWTP significantly reduced community odor complaints. CDSO plans to continue use of the Nasal Ranger to maintain their good relationship with the neighboring citizens.

BioCycle, Journal of Composting & Organics Recycling, September 2004



Field Olfactometry is a Necessity

Measuring odor strength is crucial for determining specific odor sources, verifying complaints, monitoring daily industrial operations and documenting specific odor episodes. Its applications are endless: industrial, agricultural, and municipal operations including wastewater treatment, landfills, composting, manufacturing and much more.

With the Nasal Ranger® you can:

- Monitor daily industrial operations
- Evaluate odor mitigation methods
- Create credible, defensible evidence
- Determine and monitor compliance
- Investigate odor control effectiveness
- Verify odor dispersion modeling
- Determine specific odor sources
- Verify odor complaints



How the Nasal Ranger® Works

The Nasal Ranger® provides a precise odor strength measurement that is consistent from place to place, facility to facility and user to user. It takes the subjectivity out of odor measurement and provides a universal standard for personnel to document odor strength in the field. The Nasal Ranger® provides a cost-effective method to confidently measure odors.

Dilution-to-Threshold

Using the Nasal Ranger® is a reliable way to quantify odor strength in terms of "Dilution-to-Threshold" (D/T) ratios. The D/T measurement is the most common method of measuring odors. This allows experts to quantify odors on a commonly recognized scale.

To make a D/T measurement, carbon-filtered air is mixed with specific volumes of odorous ambient air. The D/T ratio is a measure of the number of dilutions needed to take the odorous air to its threshold.

Calibrated for Accuracy

Because sniff rates vary from user to user, the Nasal Ranger® includes a calibrated flow sensor to increase measurement consistency. When in use, the flow sensor assures users that their "sniff rate reading" is at the inhalation target. Each Nasal Ranger® comes with a calibration certificate to guarantee accuracy.



"The portability and ease of use of the Nasal Ranger allowed the County to quantify odors around a municipal waste handling facility before and after odor mitigation efforts were introduced. The data gave us the confidence that our mitigation efforts were successful and odors from the facility would not impact the neighborhood."

Jake Smith
Senior Environmentalist
Hennepin County, Minnesota

"We have successfully used the Nasal Ranger to determine odor thresholds at animal feeding operations and other odorous industries in the Southern United States."

Susan Schiffman, Ph.D.,
Durham, NC

Researcher in the area of taste and smell and their relation to mood and well-being. She is recognized in the sensory field and specifically in the area of agricultural odors research.



Nasal Ranger® Training

A focused Nasal Ranger® training course is available through the St. Croix Sensory "ODOR SCHOOL®". This complete training program gives Nasal Ranger® users extensive knowledge and experience with its various monitoring and measuring capabilities.

Accessories



The Nasal Ranger® comes complete with Odor Filter Cartridges (4), Nasal Mask with Check Valves, Comfort Seal and storage pouch, Additional Comfort Seals (5), Isopropyl Alcohol Mask Wipes (10), Barrel Cleaning Brush, 9-Volt Battery, Shoulder Strap and Carrying Case.



St. Croix Sensory, Inc.

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[Nasal Mask]

Teflon coated, replaceable Nasal Mask is ergonomically designed to fit your nose comfortably. Check valves allow comfortable breathing through the mask.

[Comfort Seal]

The Comfort Seal is a disposable foam seal designed to ensure comfort of the Nasal Mask.

[Mask Wipes]

Individual isopropyl alcohol wipes are used to clean Nasal Masks between uses.

[Universal Odor-Filter Cartridges]

The replaceable odor-filter cartridges contain a proprietary blend of granular activated carbon, which is designed to remove odors from the ambient air to create the odor-free dilution air. Individually wrapped pairs of replacement cartridges attach easily to the Nasal Ranger®.

[High D/T Dial]

An alternate orifice dial allows you to expand your measurement capabilities with D/T's of 60, 100, 200, 300, 400 and 500

[Odor Sensitivity Kit]

Originally designed for physicians to measure the sense of smell, this kit has been adapted for use in the olfactometry field to measure a user's sensitivity and to provide measurable proof of a user's appropriateness for odor detection tasks.



Call today to learn
more about the Nasal Ranger®
1-800-879-9231 or visit www.nasal-ranger.com

Certificate of Completion

Richard Ensminger

Completed the "ODOR SCHOOL"[®] course

Nasal Ranger Inspector

Odor Assessment & Measurement for Ambient Odors

This course prepares the individual to make odor observations and investigations, to record pertinent information, and to report the data and findings to management or officials. (3.5TCH)



01/07/2020

www.fivesenses.com

