Ray Kapahi April 5, 2021 Summary of Odor Measurements at Outdoor Hemp Facilities



DRAFT TECHNICAL MEMORANDUM

Date: April 5, 2021

To: Charlene Carveth

Agricultural Commissioner El Dorado County, California

From: Ray Kapahi

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Subject: Summary of Odor Measurements at Outdoor Hemp Cultivation Facilities

Per your request, I have attached the odor measurements at three locations in El Dorado County that have outdoor hemp growing operations. I have also attached the results of cannabis odor measurements at a ¾ acre site in Yolo County (Esparto).

The measurements were taken along 4 corners of each property using the Nasal Ranger olfactometer.

Based on the odor intensity measurements and our own on-site observations, we found no significant difference in odors that are present near a hemp versus cannabis cultivation site. Most of the odor measurements were below 7 DT. We found that odors do fluctuate and there were brief periods (1-2 seconds) of higher intensity odors that were not detected during the use of the Nasal Ranger.

We are looking for other hemp cultivation sites to supplement the data we have collected to date.

Let me know if you have any questions or require additional information.

Acknowledgement

We wish to thank David Harde, David Ross and Casey Labitt for allowing our staff access to their sites to conduct odor measurements.

Hemp Odor Measurements 1.5 Acres 6540 Perry Creek Rd Somerset, CA 95684 September 3, 2020

Date	Time	Wind Speed	Wind Direction	Temp	Relative Humidity
		(MPH0	(Dir From)	(F)	(%)
3-Sep	8:30	3	SE	62	83
	8:36	3	SE	62	83
	8:44	3	SE	62	83
	8:50	3	SE	63	83

	Nasal Ranger Reading							
60	30	15	7	4	2	<2	ND	
						Χ		
						Χ		
					Х			
						Χ		

Notes:

1. Odor measurements taken at the edge of the flowering canopy.

Hemp Odor Measurements (Apple Hill) 2 Acre Site 2160 Carson Road Placerville, CA 95667 September 3, 2020

Date	Time	Wind Speed	Wind Direction	Temp	Relative Humidity
		(MPH0	(Dir From)	(F)	(%)
3-Sep	10:39	5.2	SE	71	59
	10:47	4.8	SE	71	55
	11:10	5	SE	75	52
	11:27	3	SE	78	44
		_			

	Nasal Ranger Reading									
60	30	15	7	4	2	<2	ND			
		Х								
			Х							
					Х					
				Χ	Х					
		- 5								
		- 3								

Notes:

- 1. Odor measurements taken at the edge of the flowering canopy along each of the property lines.
- 2. There were brief periods (1 to 2 sec) when stronger odors were observed. There were not recorded in the Nasal Ranger readings.
- 3. Slight smoke visible. Very faint smoke smell.

Hemp Odor Measurements (Apple Hill) 8 Acre Site Located at 5661 Thompson Hill Road Placerville, CA 95667 September 3, 2020

Date	Time	Wind Speed	Wind Direction	Temp	Relative Humidity
		(MPH)	(Dir From)	(F)	(%)
3-Sep	12:50	12	SE	78	59
	13:00	12	SE	78	55
	13:05	12	SE	78	52
	13:10	12	SE	78	44

	Nasal Ranger Reading							
60	30	15	7	4	2	<2	ND	
		Х						
				Х				
				Х				
					Χ			

Notes:

- 1. Odor measurements taken at the edge of the flowering canopy.
- 2. There were brief periods (1 to 2 sec) when stronger odors were observed. There were not recorded in the Nasal Ranger readings.
- 3. Slight smoke visible. Very faint smoke smell.

Cannabis Odor Measurements (Yolo County) 0.75 Acres Located at 22945 County Road 23, Esparto, CA 95627 September22, 2020

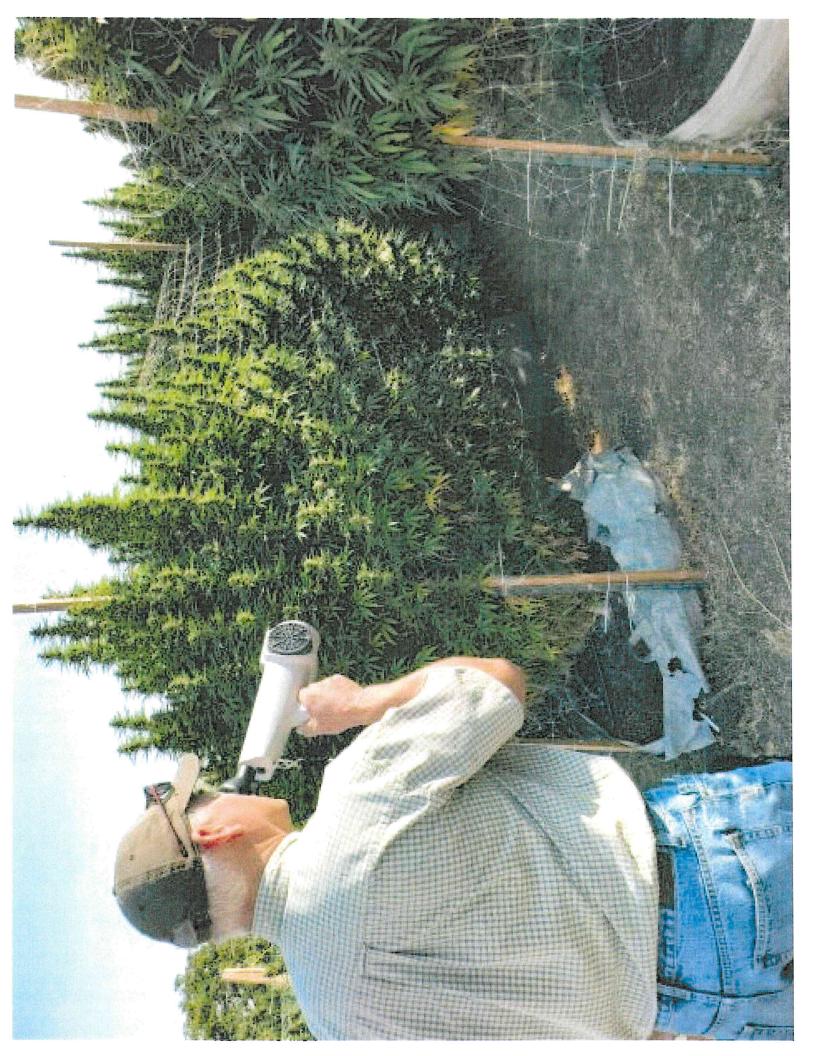
Date	Time	Wind Speed	Wind Direction	Temp	Relative Humidity
		(MPH)	(Dir From)	(F)	(%)
22-Sep	9:55			79	55.6
	9:58			80	54.6
	10:00			81	52.4
	10:10			80	47.6
	10:15			81	45.9

60	20	15	7	1	ر ا	<2	ND				
60	30	15		4		<2	עאו				
			Х								
					Х						
				Х							
			Х								
				Х							

Nasal Ranger Reading

Notes:

- 1. Odor measurements taken at the edge of the flowering canopy.
- 2. There were brief periods (1 to 2 sec) when stronger odors were observed. There were not recorded in the Nasal Ranger readings.
- 3. Smoke in the air. Very little smoke odor.



Certificate of Completion

Richard Ensminger

Completed the "ODOR SCHOOL"® course

Nasal Ranger Inspector

Odor Assessment & Measurement for Ambient Odors

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







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