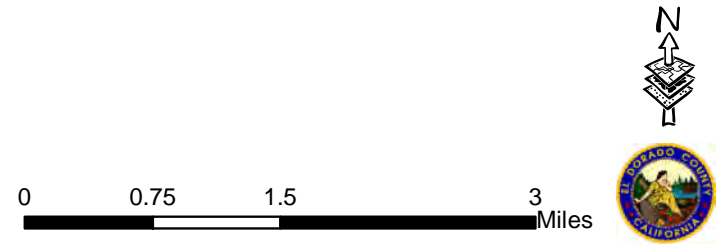
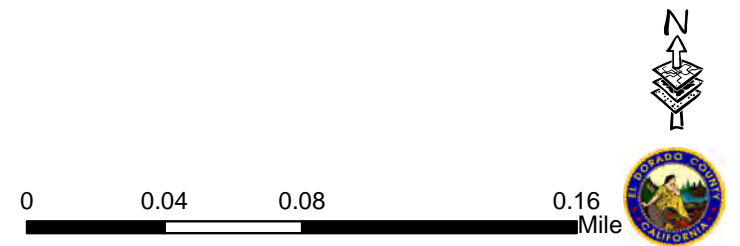


CCUP21-0002/Harde  
Vicinity Map  
Exhibit A



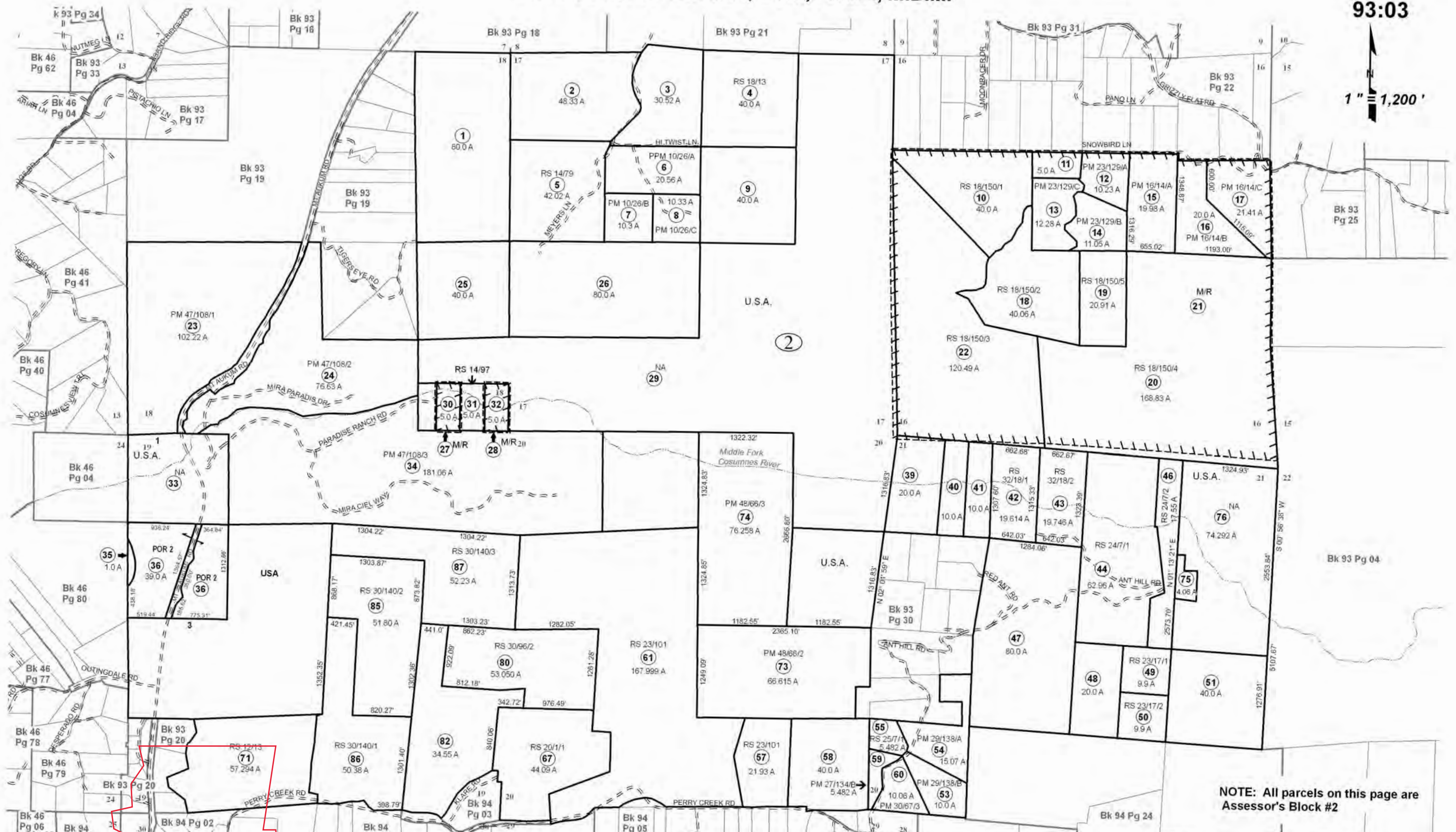


CCUP21-0002/Harde  
Aerial Map  
Exhibit B



POR. SECS. 16 THRU 21, T.9N., R.12E., M.D.M.

93:03



THIS MAP IS NOT A SURVEY. It is prepared by the El Dorado County Assessor's office for assessment purposes only. Area calculations and characteristics are not guaranteed. Users should verify items such as dimensions and acreage.

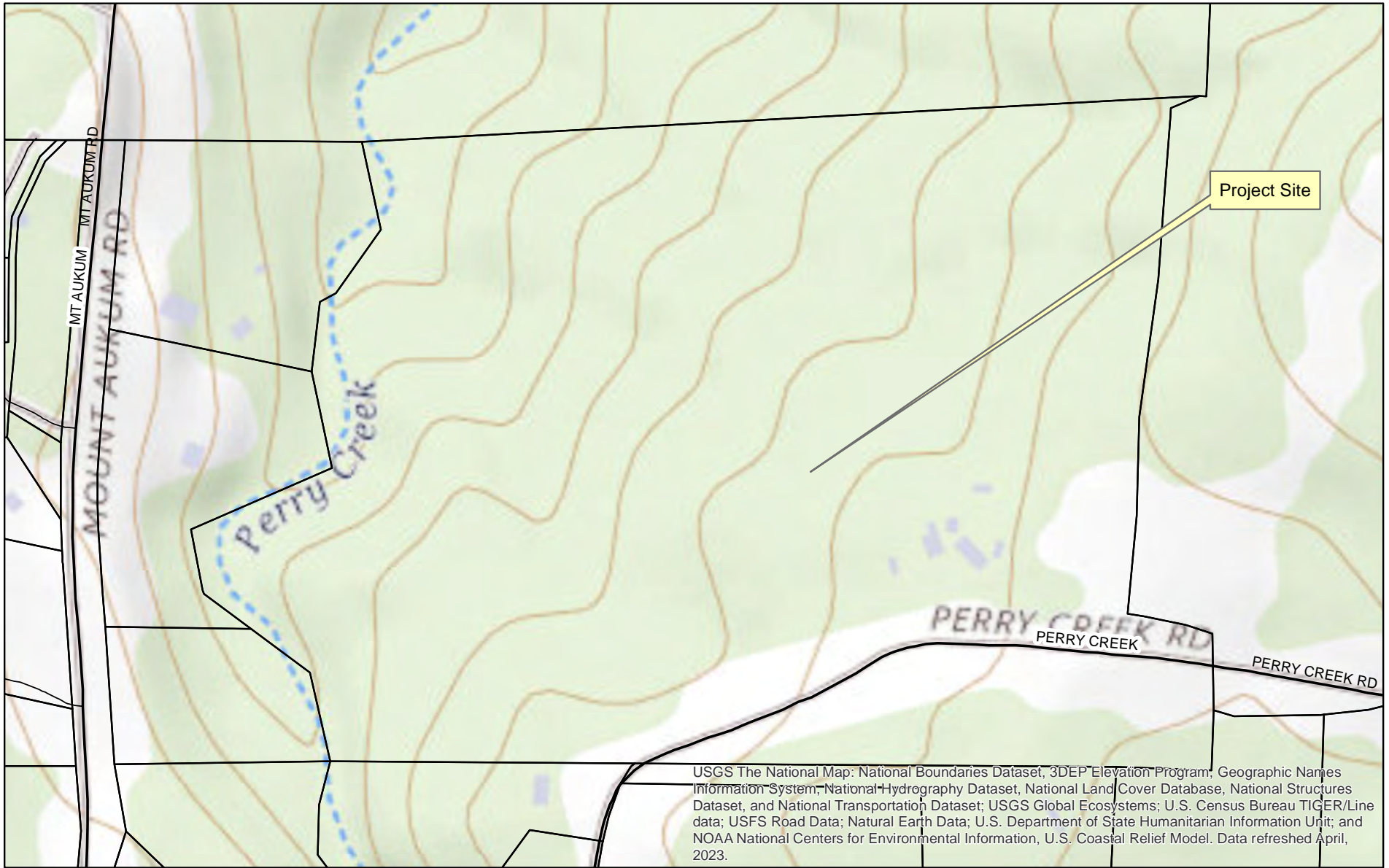
Acreages Are Estimates

CCUP21-0002 Harde  
APN Map  
Exhibit C

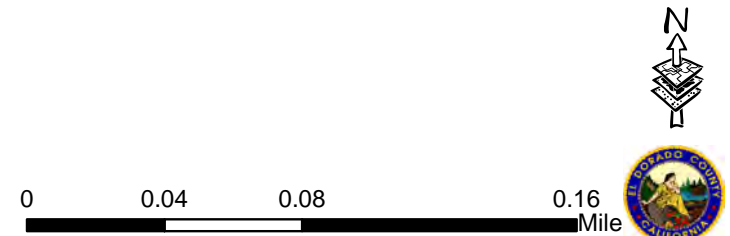
Adjacent Map Pages Shown in Grey Text  
Assessor's Block Numbers Shown in Ellipses  
Assessor's Parcel Numbers Shown in Circles

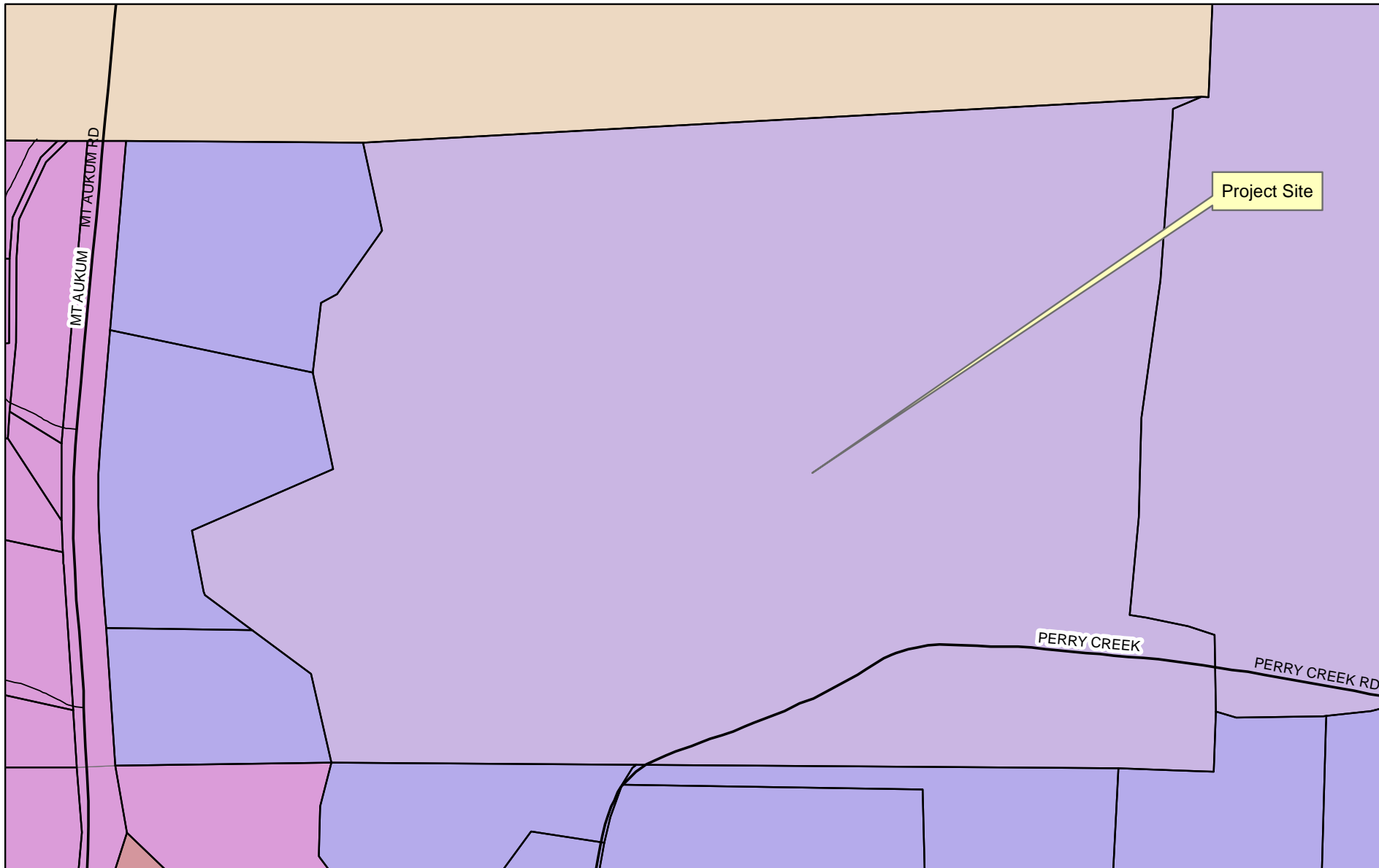
Rev. Dec. 16, 2009

NOTE: All parcels on this page are Assessor's Block #2  
Assessor's Map Bk. 093, Pg. 03  
County of El Dorado, CA



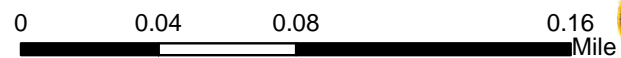
CCUP21-0002/Harde  
Topography Map  
Exhibit D

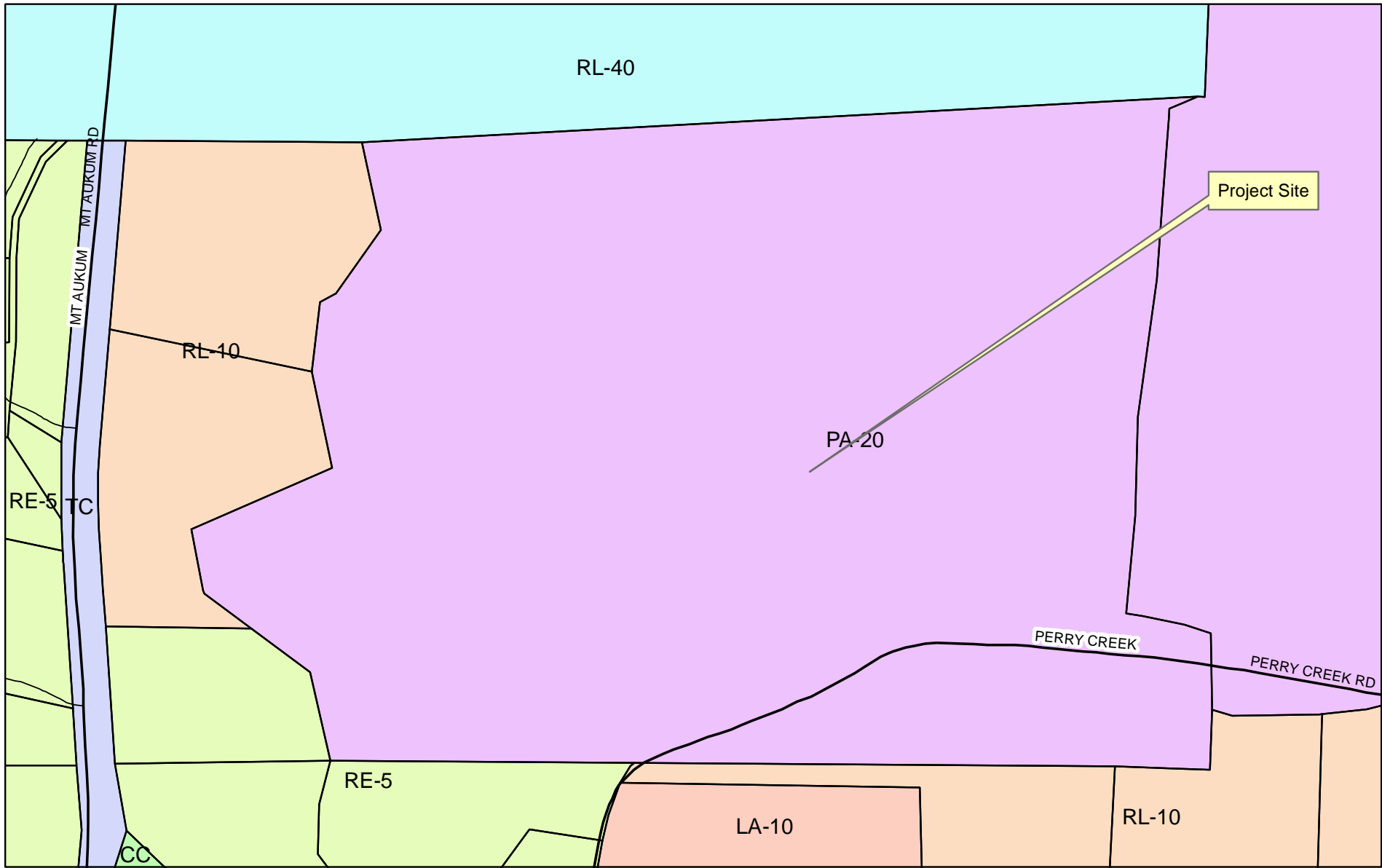




- AL
- OS
- C
- RR
- MDR

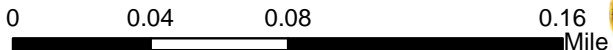
CCUP21-0002/Harde  
 General Plan Land Use Designation Map  
 Exhibit E

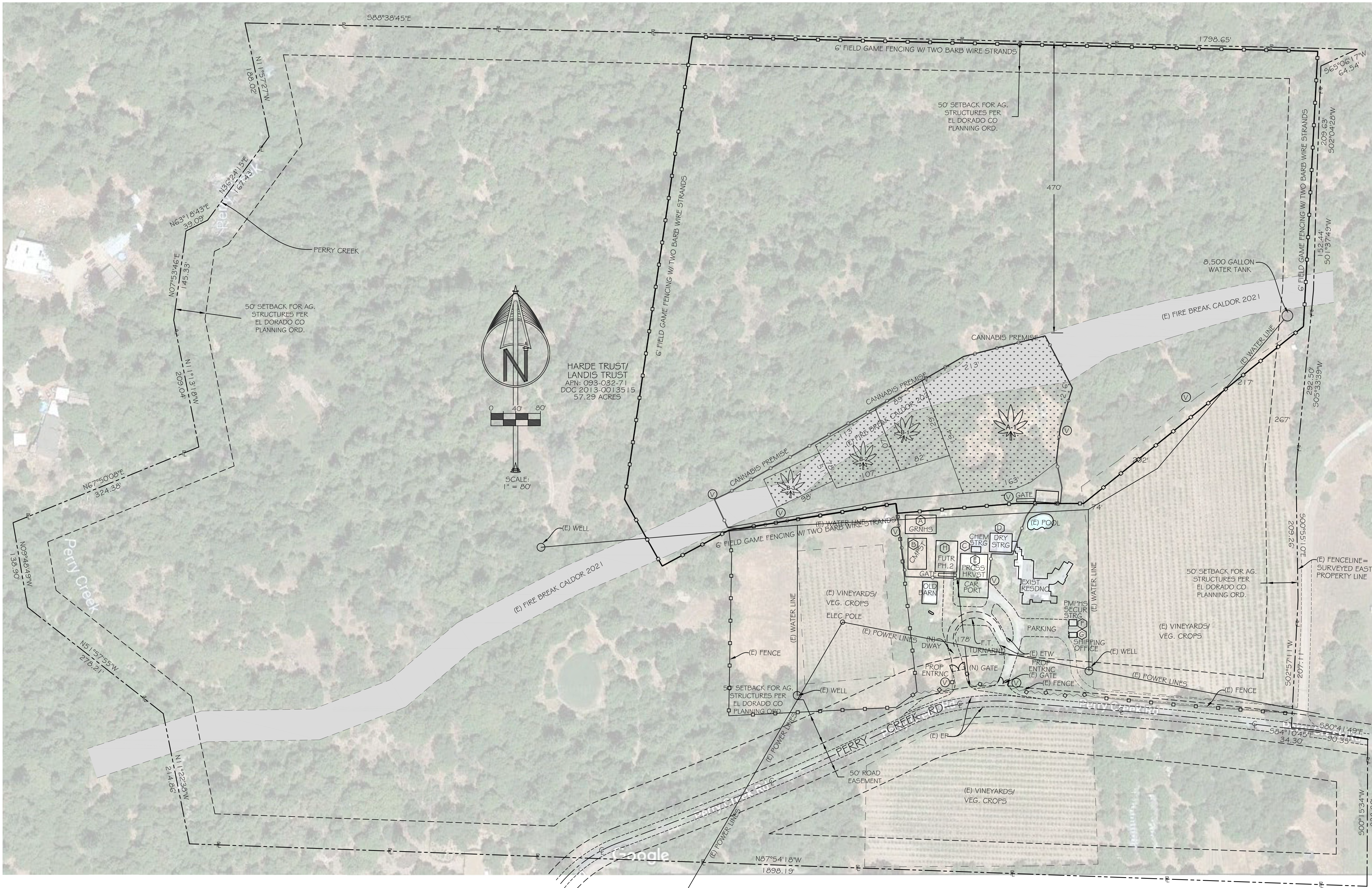




- CC
- LA-10
- PA-20
- RE-5
- RL-10
- RL-40
- TC

CCUP21-0002/Harde  
 Zoning Designation Map  
 Exhibit F





**\*\* CANNABIS FACILITIES \*\***

SYMBL#	DESCRIPTION
(A)	GREEN HOUSE- IMMATURE PLANTS 30' x 50'
(B)	COMPOST AREA 30' x 50'
(C)	CHEMICAL/ SECURE STORAGE 10' x 16'
(D)	DRY STORAGE 36' x 32'
(E)	PROCESS/ HARVEST BUILDING 44' x 40'
(F)	SECURE STORAGE VAULT 11' x 13'
(G)	OFFICE/ SHIPPING RECORDS 9' x 13'
(H)	*FUTURE PHASE 2 PROCESS/ HARVEST 35' x 50'

**\*\* OUTDOOR CULTIVATION \*\***

SYMBL#	TYPE/ AREA	DIMENSIONS
(I)	OUTDOOR CULTIVATION 43,000 SQ. FT.	200' x 215'
(J)	OUTDOOR CULTIVATION 10,000 SQ. FT.	89' x 112'
(K)	OUTDOOR CULTIVATION 10,000 SQ. FT.	107' x 91'
(L)	OUTDOOR CULTIVATION 5,000 SQ. FT.	51' x 98'
TOTAL:	68,000 SQ. FT.	

**\*\* LEGEND \*\***

- PROPERTY LINE
- (E) FENCE LINE
- EDGE TRAVELED WAY
- (E) VINE/ VEGETABLES
- CENTERLINE OF ROAD
- EDGE OF EASEMENT
- CNBS PRMS LIMIT
- 6' FNC W BARB WIRE
- (E) POWER LINE
- (E) WATER LINE
- UNDRGRND WTR LN
- OUTDR CULTIVATN AREA PER TABLE
- ADDT. CANNABIS FACILITY PER TABLE
- VIDEO CAMERAS/ ALARM SNDR

**PREMISE DIAGRAM SITE PLAN**  
 6540 PERRY CREEK ROAD  
 SOMERSET, CA 95684  
 APN: 093-032-71  
 DAVID HARDE, OWNER  
 EML: davidharde123@gmail.com  
 PH: 530-906-7892  
 FIRE DEPT: PIONEER FPD

CCUP21-0002/Harde  
 Exhibit G - Preliminary Site Plan

<p><b>REVISIONS:</b></p> <table border="1" style="width: 100%; height: 100px;"> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> </table>											<p><b>PREMISE DIAGRAM SITE PLAN</b>        CANNABIS CULTIVATION &amp; PROCESSING        APN #: 093-032-71        6540 PERRY CREEK ROAD        SOMERSET, CA 95684</p> <hr/> <p><b>OWNER:</b>        DAVID HARDE        6540 PERRY CREEK ROAD        SOMERSET, CA 95684        davidharde123@gmail.com        (530) 906-7892</p> <hr/> <p><b>DRAWN BY:</b>        PHILLIP GERONDAKIS        3051 NEWTON ROAD        PLACERVILLE, CA 95667        pgerondakis@gmail.com        (530) 906-0256</p> <hr/> <p><b>SHEET:</b>        C2</p>



## REVISED TECHNICAL MEMORANDUM

---

**To:** David Harde

**Date:** October 18, 2022

**From:** Ray Kapahi *RK*  
Tel: 916-687-8352  
Tel: 916-687-8352  
E-Mail: [ray.kapahi@gmail.com](mailto:ray.kapahi@gmail.com)

**Copies:** Arron Mount  
El Dorado County Planning

**Subject:** Analysis of Odor at the Proposed Outdoor Cannabis Cultivation Located in Somerset (El Dorado County), California

---

### INTRODUCTION AND SUMMARY

Environmental Permitting Specialists (EPS) has completed its review of potential odors at your proposed outdoor cultivation premises in Somerset. The site is located at 6540 Perry Creek Road, in Somerset.

The maximum area for outdoor cultivation is approximately 1.5 acres (68,560 square feet). The distance between the cultivation areas and the property lines varies between 1,650 feet to 20 feet. The nearest home is located 650 feet East of the property. A site map showing the cultivation areas and distances to the property lines is shown in Figure 1.

EPS used an air dispersion model, 1 year (2019) of hourly wind and temperature data at Somerset and on-site measurements of odor intensity at other locations to conduct this analysis. Data from 4 other outdoor cannabis and hemp cultivation facilities and one Tedlar bag sample were reviewed as part of the current analysis. Odor measurements taken at 0.75 acre outdoor cultivation site in Yolo County were used as baseline odors to predict odors at the property lines.

The results of our analysis indicate that maximum odor intensity along the property lines would range from 2.73 to 21.08 DT. Since there is a potential for odor intensity exceeding El Dorado



County's limit of 7 DT, EPS recommends the installation of an odor control system along a portion of the Eastern property line to mitigate the odors. See Figure 8.

This Technical Memorandum presents the methodology, data and assumptions used in this analysis. These are described in detail below. A description of the recommended odor control system is attached.

## SCOPE AND METHODOLOGY OF ODOR ANALYSIS

The overall methodology used in this analysis is to use an atmospheric dispersion model to predict the dilution of odors as they migrate away from the outdoor cultivation area. By calculating the relative concentration of odors adjacent to the cultivation area and at the property line(s), we can determine the dilution ratio defined as odor concentration at the cultivation area divided by concentration at the property line(s).

For example, if the maximum concentration at the cultivation area is 5,000 micrograms per cubic meter (ug/m<sup>3</sup>) and the relative concentration at the property line 2,000 ug/m<sup>3</sup>, the dilution ratio would equal:

$$\text{Dilution Ratio} = \frac{5,000 \text{ ug/m}^3}{2,000 \text{ ug/m}^3} = 2.5$$

In other words, the odors would be dilution by a factor of 2.5 as they migrate from the cultivation area towards the property line.

The dilution factor is used along with measurements at other outdoor cannabis cultivation sites to predict odor intensity at property lines. This methodology was reviewed by the staff at El Dorado County Air Quality Management District (AQMD) to confirm that this approach would be acceptable. The District agreed with this approach as noted in their August 28, 2020 letter to Aaron Mount at El Dorado County Planning.

## Modeling Methodology

We used the EPA and AQMD recommended AERMOD dispersion model (Version 19191) along with one year (2019) of hourly wind data for Somerset. The data (known as MM5) is derived from weather satellites to calculation winds and other parameters for all locations in the continental US. The data used was prepared by Lakes Environmental (Waterloo, Canada)<sup>1</sup>.

The main cultivation site was modeled as a single ground based area source. Concentration were calculated using a 20 meter grid using an emission rate of 1.00 x 10<sup>-4</sup> grams/sec-square meter. See Figure 7.

---

<sup>1</sup> Lakes Environmental. Waterloo, Canada. Information on the development of local wind data based on the MM5 for Somerset can be found at: [https://www.weblakes.com/services/met\\_data.html#aermetmm5](https://www.weblakes.com/services/met_data.html#aermetmm5)

The model results are concentrations in terms of micrograms per cubic meter at each grid location averaged over 1-hour. These concentrations are meaningful only in a relative sense to help establish the dilution pattern. It is recognized that the averaging time for odors is a few minutes, not 1 hour. Typically, peak concentrations over a few minutes are many times greater than those over 1 hour. However, the ratio of concentrations and the dilution factor will remain the same whether averaged over a few minutes or 1 hour averaging time.

Finally, we note that the maximum predicted concentration varies with both the distance and the direction from the cultivation site. Generally, the concentration decreases with distance from the cultivation site, however, since the canopy is modeled with a release height of 2 meters, the peak concentration occur some distance from the canopy. Figures 4 and 5 illustrate the spatial distribution of 1-hour relative concentration. These figures show an East-West alignment of maximum odors.

### Baseline Odor Used in the Analysis

We used odor measurements taken at a Yolo County outdoor cannabis site. This outdoor site covers 0.75 acres and is located at 22945 County Road 23, Esparto. At the time the measurements were taken, the plants were 2 weeks away from harvesting. Odor measurements were taken September 22, 2020 that indicated odor intensity of 15 DT. However, we noted that there were brief periods when odor intensity was above 15 but were not fully captures by the Nasal Ranger. We estimated the odor intensity to be closer to 20 DT and this is the value used in the current analysis. A complete documentation of the September 22<sup>nd</sup> odor survey is attached.

### CALCULATION OF ODOR INTENSITY AND RESULTS

The calculation of odor intensity at the property lines is as follows:

$$\text{Odor Intensity at Property Line} = \frac{\text{Baseline Odor Intensity (DT)}}{\text{Dilution Factor}}$$

For example, the odor intensity at the Eastern property line (Figure 6) would equal:

$$\frac{20 \text{ DT}}{1.08} = 18.59$$

The results for the closest property lines is summarized on the next page.

Location	Distance to Property Line		Maximum Conc.	Conc. At Property Line	Lowest Dilution Ratio	Fenceline DT
	(ft)	(m)				
Eastern Property Line	20	6.1	1,764	1,640	1.08	18.59 (uncontrolled)
						4.1 (controlled)
North Property Line	550	167.7	17,617	3,619	4.87	4.11
Western Property Line	1250	381.1	17,617	3,926	4.49	4.46
Southern Property Line	250	76.2	17,617	2,407	7.32	2.73
Nearest Home	650	198.2	17,617	367	48.1	0.42
Baseline DT	20					

The odor intensity at the Eastern property line would exceed the County’s threshold of 7. As a result, odor mitigation along this property line is required. A misting system that dispenses a fine atomized mist containing an odor neutralizer will be used to control odors. Information about the odor control system is attached.

### Effectiveness of Proposed Odor Mitigation

EPS has coordinated the measurements of odors<sup>2</sup> with and without odor mitigation using a misting system. A three-day odor survey was conducted on October 1-3, 2019 to measure the intensity of odors near greenhouses equipped with an odor neutralizing misting systems. The greenhouses were located in Chico, CA. A copy of the odor assessment report is attached.

Odor intensity was measured using a Nasal Ranger near the exhaust vents, at the property lines and at off-site locations with and without mitigation. Each greenhouse has several hundred cannabis plants that were approaching the harvest stage (See Figures 8 to 11). This is the stage when the maximum odors are known to occur.

To simulate the effectiveness of the odor control system, odors were allowed to accumulate overnight in the greenhouses with no ventilation. Then in the morning, exhaust fans were turned on and the intensity of odors were measured with and without the misting system in operation. See Figure 9. These measurements were repeated over 3 days to verify the effectiveness of the odor control system. See Test Rounds 1,2,6 and 7 on pages 8-10 in the attached odor assessment report.

The results of the survey indicated that odors declined from 7 DT to below 2 DT when the odor misting system was employed. Since the lowest odor intensity that can be measured with a Nasal

<sup>2</sup> Odor Assessment Study. Bosarge Environmental, LLC. November 1, 2019. Copy of report attached.

Ranger is 2 DT, it is not possible to distinguish odors that are 1 or 2 DT. If you assume odors were reduced to 1 DT, then that equates to a 86% reduction in odors. If the odors were reduced to 2 DT, then the reduction in odors is 71%. EPS assumed an average reduction in odors of 78% resulting in an odor intensity of 4.1 along the Eastern property line.

Once a permit has been issued and cannabis cultivation proceeds, EPS staff will be available to conduct odor monitoring at your property to confirm the effectiveness of the odor control system and that odors do not exceed the County limit of 7 DT.

As a way of comparison of odors that are associated with other industries, the following table lists typical odor intensities within 500 feet from each industry. EPS has been involved in several studies related to odor measurements at different industries.

Industry	Type of Odor	Odor Intensity (DT)
Meat Rendering	Rotting Animal Smell	Above 180
Pulp and Paper	Sulfur Compounds	Above 180
Wastewater Treatment Plants	Hydrogen Sulfide	60 to 120
Dairies	Rotten Egg	120+
Landfills	Rotten Egg	60+
Composting Facilities	Ammonia/sulfur	60+

## FIGURES

Figure 1: Site Map

Figure 2: Modeling Grid

Figure 3: Contours of Relative Concentrations

Figure 4: Contours of Relative Concentration (close-up)

Figure 5: Display of Numerical Concentration

Figure 6: Calculation of Dilution Factor

Figure 7: Summary of Results and Recommended Mitigation

Figures 8-11: Odor Assessment October 1-3, 2019 Chico, CA

# Figure 1

PROPERTY DIAGRAM SITE PLAN  
 6540 Perry Creek Rd  
 Somerset CA 95667  
 Parcel 1 ID: 093-032-071-000  
 Lot 1 area: 57.29 Acres  
 Plot Size: 24"x36"

● Water Tank  
 Owners: David Harde  
 6540 Perry Creek Road,  
 Somerset, CA 95667  
 530-906-7892  
 davidharde123@gmail.com  
 Pio-neer FPD  
 68,560 sqft. Cultivation

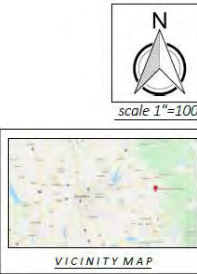
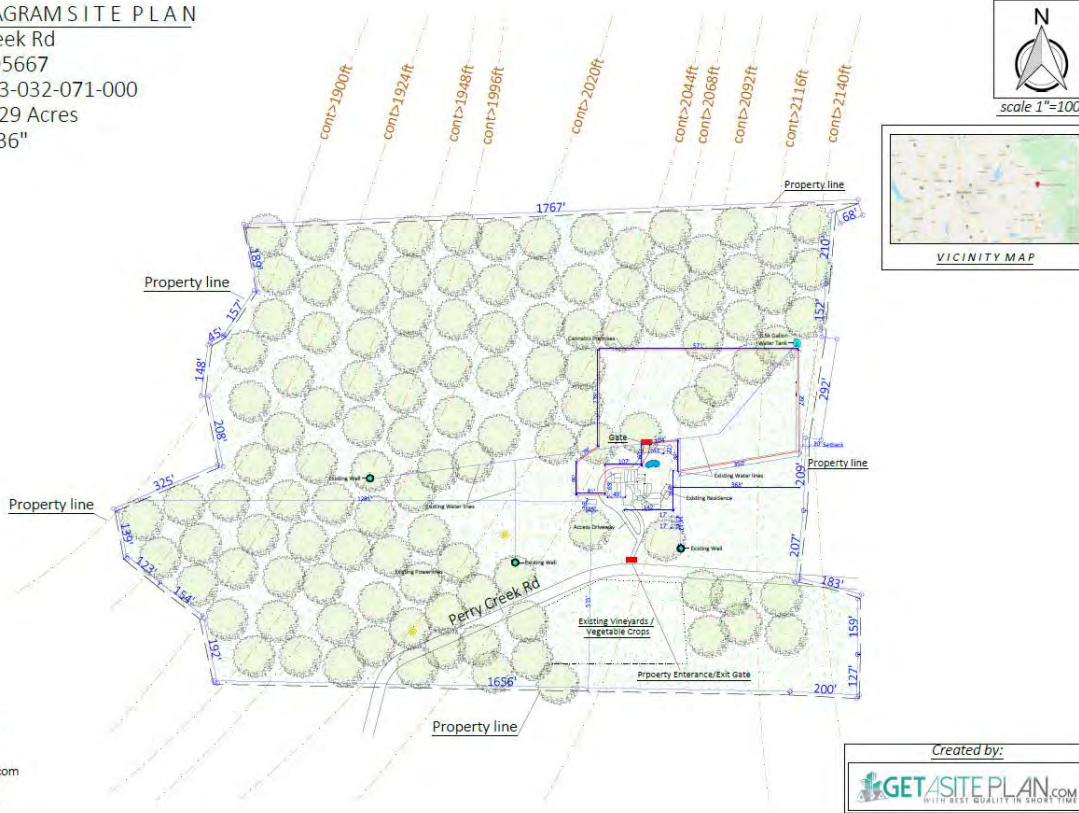


Figure 2  
Modeling Grid

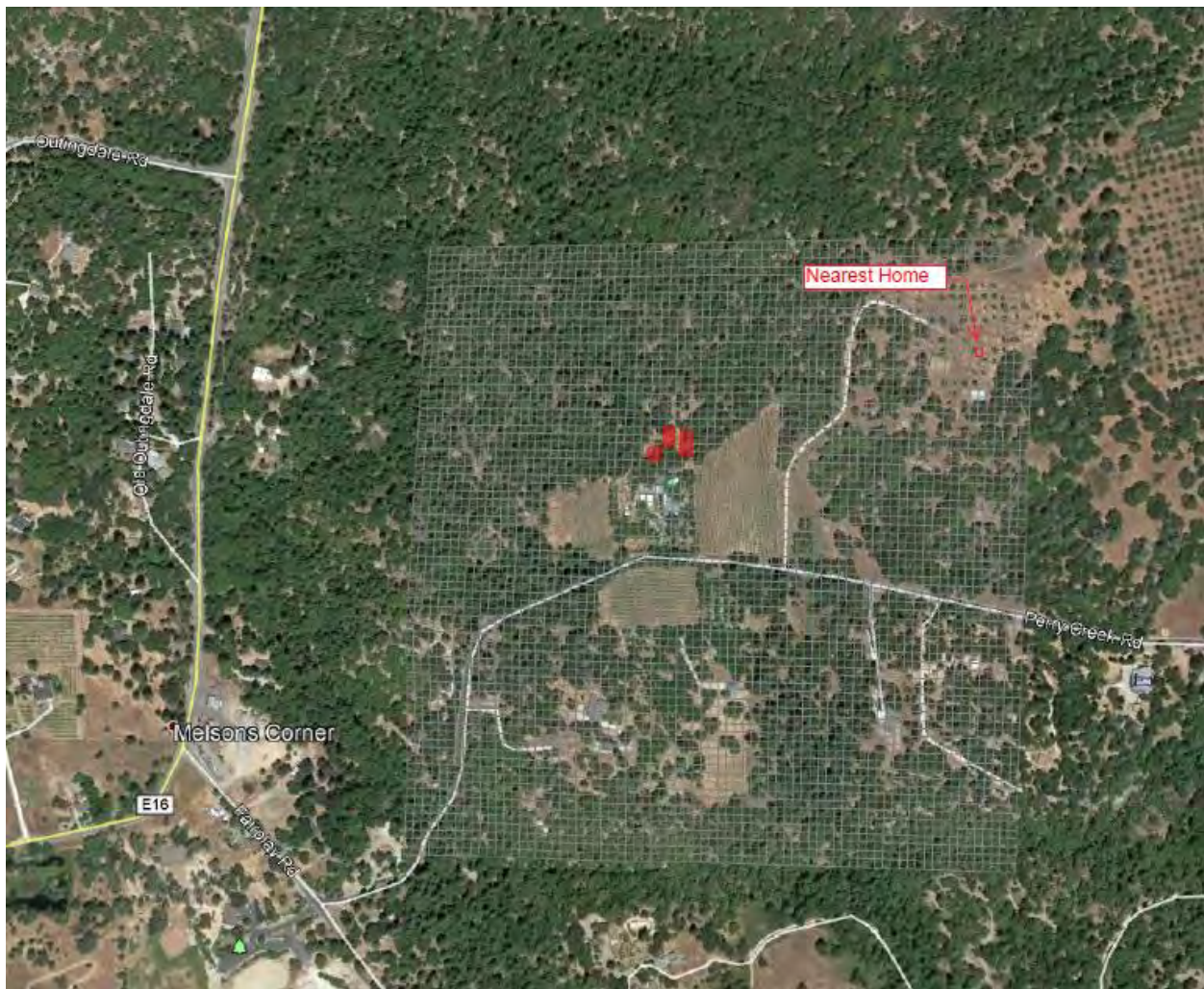


Figure 3

Contours of Relative 1-Hour Concentrations





Figure 4

Contours of Relative Concentration (close-up)

Showing Location of Nearby Home

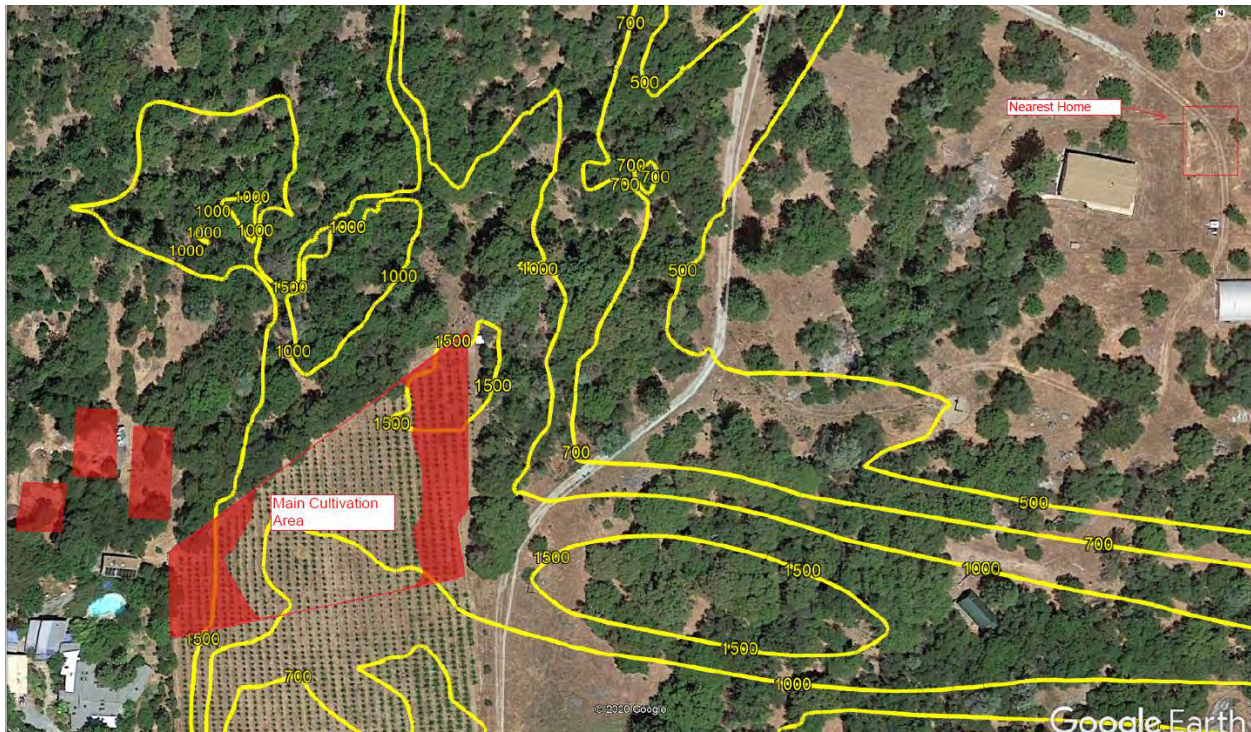


Figure 5

## Numerical Values of Relative Concentration



Figure 6

Sample Calculation of Dilution Factor at Eastern Property Line

Distance to Property Line 20 feet (6.1meters)

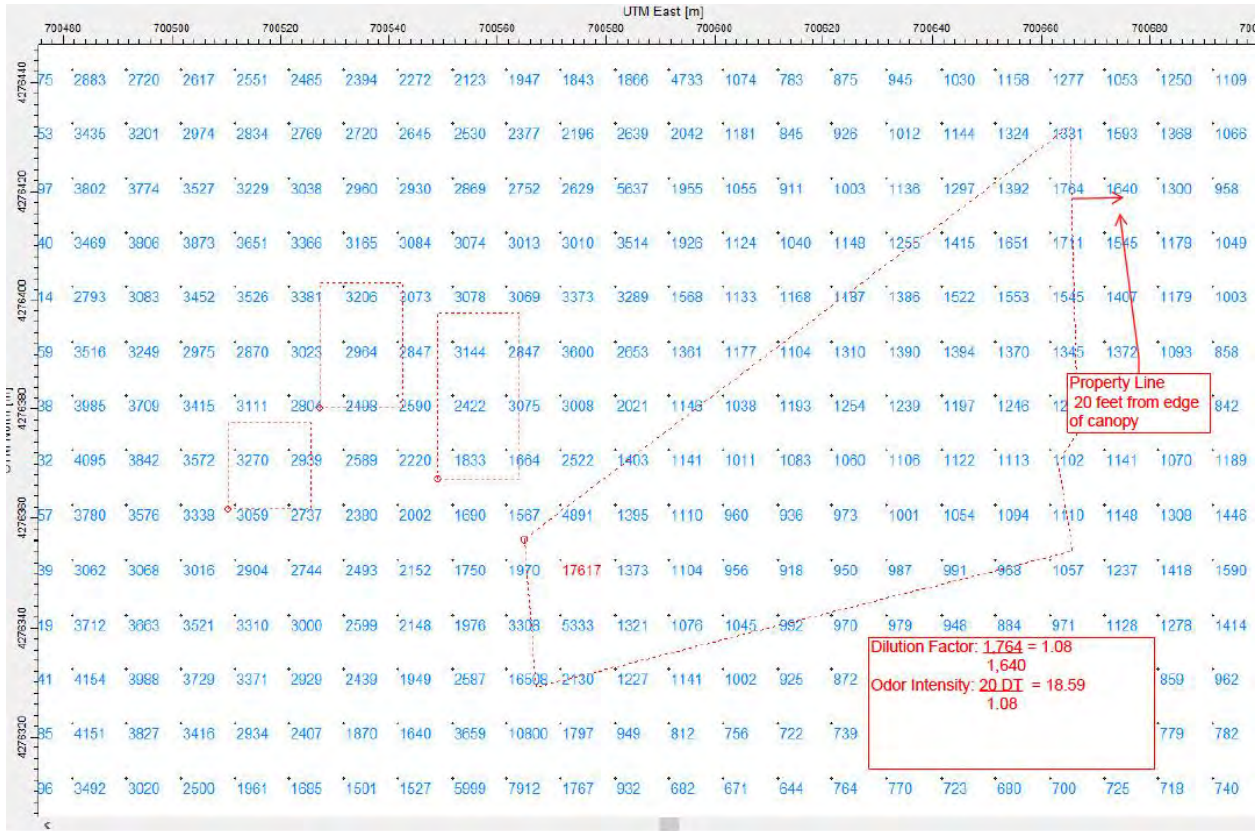


Figure 7

## Summary of Results and Recommended Mitigation

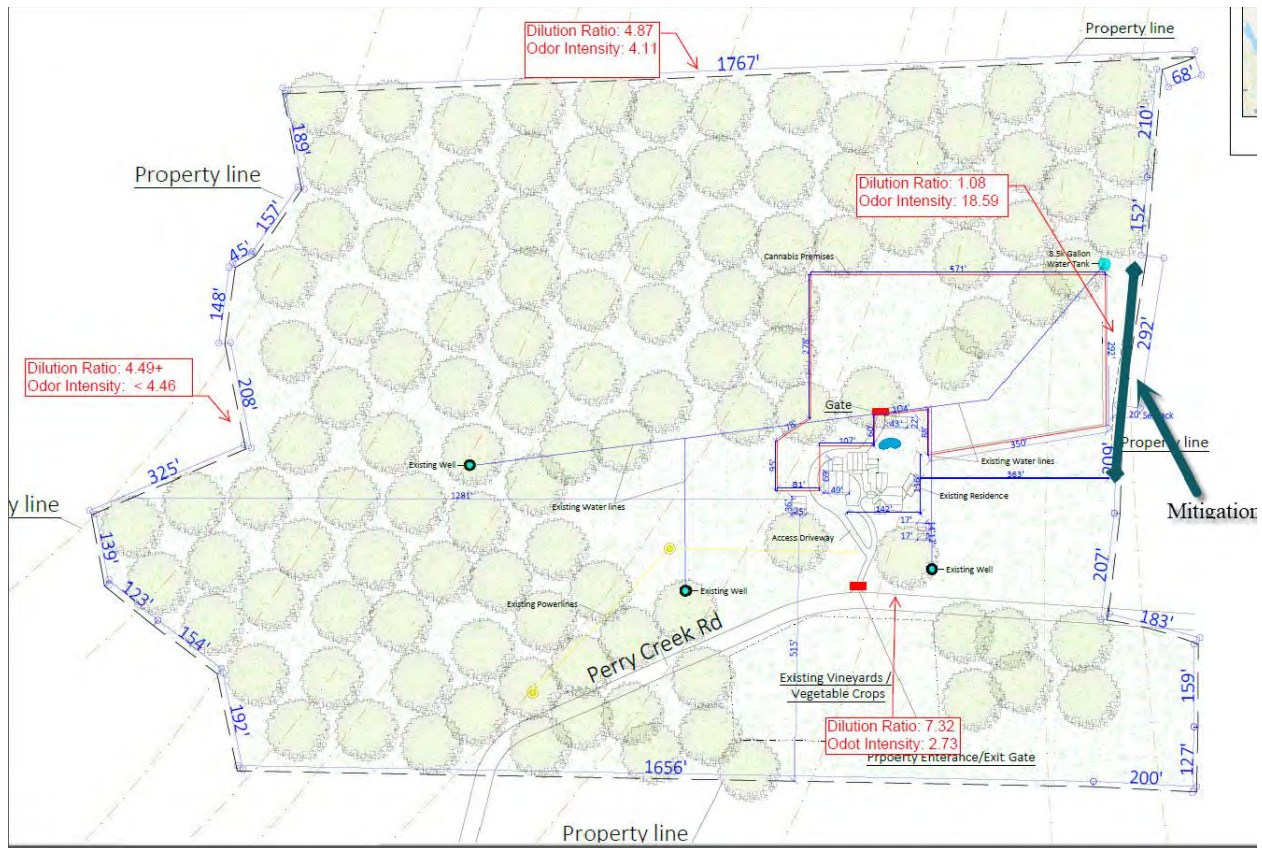


Figure 8  
Overview of Greenhouses Used in the Odor Neutralizer Assessment



Figure 9  
Interior of Greenhouses Used in the Odor Neutralizer Assessment



Figure 10  
Details of Odor Control Misting Nozzles



Figure 11  
Field Measurements of Odor Intensity Using Nasal Ranger  
Oct 1-3, 2019





## Description of Odor Mitigation System

Approximately 350 feet along the Eastern portion of the property require odor mitigation. This was shown in Figure 7.

There are two option for mitigating odors:

1. Use a misting system that sprays the odor neutralizer across the property line.
2. Use a fan that blows the neutralizer across and towards the canopy.

Information about these systems is attached.

Given the relatively small portion of the property that requires mitigation, the fan based mitigation is recommended. Three to six fans would be mounted along the Eastern portion of the property line. The amount of neutralizer that would be dispensed is adjusted to ensure that odors are neutralized. The effectiveness of the system will be confirmed by measuring the odor intensity using the Nasal Ranger olfactometer.

Sample Misting Systems that Spray Odor Neutralizer Mixed  
with Water

Misting System by NCM

<http://www.ncmodorcontrol.com/>



24-0114 D 29 of 88

Commercially Available Odor Neutralizer



BRANDS

PRODUCTS

SOLUTIONS

SDS

COVID-19 Response: *Committed to helping our customers as communities reopen*

## Odor Control Concentrate



Activate Windows

# Micro-Jet DM 7421



## Now, with motor-saver brushes for extended use applications

The Micro-Jet<sup>®</sup> DS 7421 drum mounted unit features precision control of particle size, from a dry, 7-micron ULV (ultra low volume) droplet to the larger particles of conventional fogging and misting equipment. ULV application provides greater penetration and diffusion of fog particles, allowing more concentrated solutions to be used and shortening application times. Also, the higher surface to volume ratio of small droplets makes them superior for odor control and other gas contact applications.

With precision control and variable output (0-10 oz/min), the Micro-Jet DM can handle both oil- or water-based solutions. It is easily calibrated in the field to accommodate differences in solution viscosity and density. Application sites include waste treatment plants, paper mills, parks, warehouses, and food storage centers.

Fog master's Micro-Jet DM 7421 -- technologically advanced fogging, with controlled flow and particle size.

### SPECIFICATIONS

<b>Motor</b>	1 Hp., 120VAC 50/60Hz, 8.0 amp. Optional: 240VAC, 4.0 amp
<b>Fogging Nozzle</b>	High-shear, vortex design nozzle
<b>Particle Size</b>	7-30 micron VMD, adjustable
<b>Chemicals</b>	Water- and oil-based solutions
<b>Liquid Flow Rate</b>	0-10 oz/min [0-300 ml/min], adjustable Nine-turn vernier control valve, memory lock
<b>Capacity</b>	Mounts to chemical drum (not included)
<b>Materials of Construction</b>	Power head, drum adapter - aluminum Tubing - fuel and oil resistant vinyl Control valve - glass filled nylon, stainless stem, Viton <sup>®</sup> seal Fittings - brass Nozzle - Celcon
<b>Dimensions</b>	H x L x Dia: 15.4 x 12.5 x 8.6 in [39 x 32 x 22 cm]
<b>Shipping Weight</b>	12 pounds





# GOC<sup>®</sup> Technologies

## We Solve the Tough Odor Problems

For over 25 years, GOC Technologies has been in the business of solving odor problems for landfills, compost sites, wastewater treatment facilities, transfer stations, industrial facilities, and remediation sites.

## Why GOC

We believe the best way to manage odors is to stop their formation or volatilization at the source of the problem. We accomplish this through the application of customized chemical solutions and proprietary systems. However, when these solutions are impractical or simply not feasible, GOC offers proven products and technologies for controlling odors in open air or exhaust situations.

## We Are:



### Environmentally Friendly

All GOC products are completely biodegradable.



### Science Based

GOC does not neutralize or mask odors: rather, we utilize chemical decomposition, addition, PH, and ionic reaction for the reduction and elimination of odor production.



### Results Oriented

GOC considers every situation to be unique. Our intent is to provide the products and applications that result in measurable reductions in odor and complaint levels.



# Our Odor Solutions

## Vapor Phase Odor Control

- No water consumption
- No nozzles
- Low maintenance
- All weather operation
- True deodorization - not masking
- More effective and economical than misting

## Misting

(Atomization with Water Dilution)

- QuikAir® 0900 Full Concentrate
- Lighter than water
- Evaporates faster than water
- Stays in the air longer
- No masking - true deodorization
- Available with or without fragrance
- Highly dilutable

## Topical Contact Deodorizers

- Immediate temporary deodorization
- Wide variety of application equipment options
- Concentrate is diluted with water for super cost effective use
- Odor specific variations

## QuikSoil® Additives

- Reduce odor
- Reduce turning
- Reduce fuel consumption
- Reduce carbon emissions
- Produce faster decomposition

**GOC effectively abates odors across a variety of industrial applications such as:**



LANDFILLS



TRANSFER STATIONS



LEACHATE TREATMENT AND STORAGE TANKS



INDUSTRIAL MANUFACTURING



COMPOSTING FACILITIES



WASTEWATER TREATMENT FACILITIES

## Contact GOC

[www.wcgrp.com/odor-control](http://www.wcgrp.com/odor-control) | [marketing@wcgrp.com](mailto:marketing@wcgrp.com) | (817) 735-9770

24-0114 D 34 of 88

# Odor Assessment Report

Bosarge Environmental, LLC

October 1 to 3, 2019



**Bosarge Environmental, LLC**  
**707 Bienville Blvd.**  
**Ocean Springs, MS 39564**  
**(228) 217-3180**

November 1, 2019

Fulcrum Enterprises, LLC  
390 Main Street  
Great Barrington, MA 01239

RE: Odor Assessment Study

**Introduction**

Fulcrum Enterprises, LLC, (Fulcrum) retained Bosarge Environmental, LLC, as a third-party Odor Expert, to analyze the cannabis odor impact of a facility in California that is similar to a project Fulcrum is proposing for approval in Great Barrington, MA. The California facility is much older, but very similar in building size and plant production, of the proposed new facility. The Fulcrum design incorporates the same measures for odor control as the California facility. Fulcrum plans to present this odor study of an existing operational facility as a model for permitting the new facility.

Ms. Melanie Bosarge conducted ambient odor surveys the three days of October 1- 3, 2019. This time frame was selected because the operation was in full flowering stage. During this period, the greenhouses would have a crop of fully formed flowering cannabis plants at the stage when terpene odor is the greatest, creating a “worst-case-scenario” of odor for the facility.

Ms. Bosarge is a Chemical Engineer and Owner/Manager of Bosarge Environmental, LLC. She has represented St. Croix Sensory (St. Croix) as a certified instructor and provided client training and odor assessment services, as an independent contractor, since 2002. For more than thirty-five (35) years, St. Croix has been assisting facility owners, consulting engineering firms, and regulatory agencies to quantify odors from a variety of industrial, agricultural, and municipal operations, including wastewater treatment, landfills, composting, and manufacturing in both field and laboratory settings. St. Croix manufactures and markets state-of-the-art odor sampling and measurement equipment, including the Nasal Ranger Olfactometer. St. Croix’s “ODOR SCHOOL”® is an internationally recognized program to prepare inspectors to conduct field evaluations of ambient odors.

## Ambient Odor Assessment Methodology

Odor surveys were conducted using a newly calibrated Nasal Ranger field olfactometer to quantify odor strength when odor was noticed at each monitoring location. The Calibration Certificate appears in the Appendix as *Exhibit 1*. Prior to odor observations, an inspector breathes through carbon cartridges for approximately one minute to “zero” nose to 100%. Upon arrival at each separate location, ambient odor is assessed with the “naked nose”. If no odor is detected, the current time and “non-detected” (ND) is recorded. If an odor is detected, a reading is then taken with Nasal Ranger Olfactometer.

Using the Nasal Ranger, odor strength is measured as dilution ratios, reported as Dilution-to-Threshold (D/T) values. The Nasal Ranger Dilution-to-Threshold odor measurement is an “instantaneous” measurement, which is a recognition threshold. For example, a 4-D/T is the dilution ratio of 4-volumes of carbon filtered odor free air mixed with one-volume of ambient (odorous) air that makes the ambient odorous air “just-barely-recognizable” as an odor.

The D/T dilution ratio steps of the Nasal Ranger olfactometer used for the odor surveys were 2, 4, 7, 15, 30, and 60. If an odor is detected with the “naked nose” at a location, a measurement is taken with the Nasal Ranger. An odor in the air that is not measured at the 2-D/T dilution ratio is reported as less than 2-D/T (<2). The absence of ambient odor is reported as “non-detected” (ND).

*Figure 1 – Nasal Ranger Olfactometer* is a photograph taken during an odor survey at a cannabis growing operation in Colorado.

### Figure No. 1 – Nasal Ranger Olfactometer



## **Building and Odor Control Specifications**

NCM Environmental Solutions (NCM) constructed the odor neutralizing mist system for the California facility and currently provides the odor neutralizing agent and ongoing maintenance of the system. The California facility is much older, but very similar in building size and plant production, of the proposed new Fulcrum facility. Fulcrum plans to incorporate the same measures for odor control as the California facility. Consequently, one of the objectives of this odor study was to evaluate the efficiency of the exhaust and odor neutralizing system.

The cannabis growing area is made up of seven (7) greenhouses, two hundred (200) feet in length and forty-two (42) feet in width. Each greenhouse has three (3) rows of four hundred (400) plants, totaling twelve hundred (1,200) plants per greenhouse. The greenhouses have multiple holes on the siding and roof, as shown in pictures in *Exhibit 2*.

NCM system specifications include an electric 1 HP system with a 1.75 GPM high pressure atomizing pump, operating at 800 PSI. During the odor study, the chemical injection pump was not automated. It was adjusted by hand using two knobs, as shown in photographs in *Exhibit 2*.

The exhaust vents are fifty-five inches, square shaped, and powered by a 1-HP motor. Each exhaust vent has three (3) NCM 1.9 GPH nozzles. The nozzles are located on the exhaust vents, centered and positioned in a straight line. The California facility maintains the odor neutralizer injection pump at their preferred setting of 1000:1 dilution ratio. This set dilution ratio achieves the level of odor control needed and works within operations budget. Growers have determined that the facility has low levels of cannabis odors without the system on; therefore, the 1000:1 dilution ratio is sufficient for that site.

## **Odor Survey – Introduction and Mapping**

Upon arrival at the facility on the afternoon of October 1, 2019, Ms. Bosarge was taken on an extensive tour of the site. Each step of the odor control system was identified and explained. A plan of action was developed and coordinated. The first odor survey was performed to test the efficiency of the odor control system. After concluding the onsite test, Ms. Bosarge investigated the area within the security fence, and along accessible residential, commercial and agricultural areas throughout neighborhood. Meteorological conditions were recorded and several locations were mapped and designated as survey locations. No odors were detected past the perimeter of the property during this initial investigation.

After the initial tour and first round of controlled test measurements of the odor neutralizer, Ms. Bosarge continued independently to develop a monitoring plan and complete several additional surveys during the three-day odor assessment study. Sixteen (16) onsite locations within the fenced area of the property and twelve (12) locations in the surrounding community were designated and mapped by recording latitude and longitude coordinates at each location. Unique identification codes were assigned to each location. The onsite locations were designated as Locations A through P. The offsite locations were designated as Locations 1 through 12. The center point of the cannabis greenhouses was designated as Location X. Latitude and longitude coordinates for each location were entered into Odor Tracker software to produce Google Earth Maps of the areas within the property and the surrounding community.

**Table No. 1 Cannabis Facility Odor Monitoring Locations** lists the center of the cannabis facility as Location X, along with twenty-eight (28) ambient odor survey locations. The table specifies an identification number, the latitude and longitude coordinates for each location and whether each location is onsite or offsite.

**Table 1 - Cannabis Facility Odor Monitoring Locations**

Loc #		Name	Latitude	Longitude
1	Offsite			
2	Offsite			
3	Offsite			
4	Offsite			
5	Offsite			
6	Offsite			
7	Offsite			
8	Offsite			
9	Offsite			
10	Offsite			
11	Offsite			
12	Offsite			
A	Onsite	Test Area 6 Ft from Exhaust		
B	Onsite	Test Area 12 FT From Exhaust		
C	Onsite	Test Area 24 Ft From Exhaust		
D	Onsite	West Corner of Greenhouses		
E	Onsite	South Corner of Greenhouses		
F	Onsite	South Midpoint of Greenhouses		
G	Onsite	East Corner of Greenhouses		
H	Onsite	East Corner of Whse		
I	Onsite	East Midpoint of Whse		
J	Onsite	North Corner of Whse		
K	Onsite	North Corner of Greenhouses		
L	Onsite	North Center of Greenhouses		
M	Onsite	Front Gate To Property		
N	Onsite	Post by Dumpster		
O	Onsite	Post Behind House		
P	Onsite	On Hill Behind House		
X	Onsite	Reference Center of Facility		

**Figure No. 2 - Odor Inspection Locations Full View** identifies the center of the cannabis facility as Location X and each of the twenty-eight (28) monitoring locations on a Google Earth map. The offsite Locations 1 through 12 are featured in this figure.

**Figure No. 2 - Odor Inspection Locations Full View (Google Earth Map)**





**Figure No. 3 - Onsite Odor Inspection Locations** identifies the center of the cannabis facility as Location X, and each of the sixteen (16) onsite monitoring Locations A through P on a Google Earth map.

**Figure No. 3 - Onsite Odor Inspection Locations (Google Earth Map)**



## Odor Survey – Discussion

Fourteen (14) ambient odor surveys were conducted during the three-day study. Seven (7) of the rounds were performed offsite, in the surrounding community, and seven (7) rounds were conducted onsite. Two (2) of the onsite rounds, referred to as Test Rounds, included locations on the side of the greenhouses where the odor control system is installed. The objective of these Test Rounds was to evaluate the efficiency of the exhaust and odor neutralizing system.

For the Test Rounds, Locations A, B and C were designated at points six feet, twelve feet and twenty-four feet away from the exhaust fan of the greenhouses with the most mature plants. The exhaust fan, when operational, was blowing from the greenhouses at approximately sixteen MPH. The Test Rounds were performed under different scenarios to test the efficiency of the exhaust and odor neutralizing system.

Five (5) additional odor surveys were conducted onsite, within the facility property over the three-day odor study. During each survey, the date, time, odor reading and meteorological conditions, including temperature, humidity, precipitation, sky conditions, wind speed and wind direction were recorded at each location. Each survey was recorded separately and odor survey data reports appear in the Appendix as *Exhibit 3*.

Approximately one hundred and sixty-eight (168) odor observations were recorded during the three-day study. During those days, seven offsite odor surveys were completed and seventy-nine (79) offsite observations were recorded. No cannabis odor was detected offsite at the property perimeter or in the community during those three days. The meteorological conditions, time of day and level of odor treatment varied between each offsite survey. Based on the results of the Odor Study, cannabis odor from the cultivation process does not leave the property.

During the same three-day timeframe, seven (7) onsite odor surveys were conducted and eighty-nine (89) onsite observations were recorded. No cannabis odor was detected during fifty-two (52) of those observations. Cannabis odor was detected at <2 D/T during twenty-three (23) observations and 2 D/T during nine (9) observations. Cannabis odor was detected at a level of 4 D/T during three (3) observations and 7 D/T during two (2) observations. During each observation of 4 D/T and 7D/T, the exhaust system had just been activated without odor neutralizer treatment, after cannabis odors had built up over night in the greenhouses. Those values returned to 2 D/T or less, within minutes after the greenhouses were properly vented and/or treated. These levels are extremely low for onsite operations.

Meteorological data and odor observation readings, from each Round, were loaded into the Odor Tracker software. *Exhibit 3* displays the results of each of the fourteen (14) Rounds. *Exhibit 4* contains several Maps that were created by the Odor Tracker Software, utilizing the entered data.

## Odor Rounds Summary

### Test Round 1 - Onsite

On the first afternoon, Test Round 1 was conducted from approximately 2:45 PM until 3:30 PM. In **Exhibit 3**, the Round 1 Onsite Data Sheet displays the test data. The sky was mostly sunny with no precipitation. The humidity was 30%, and the temperature was 74 degrees F. The wind was moderate and blowing from the west northwest. Prior to the odor observations, the exhaust and odor neutralizer systems were turned off. Cannabis odors were allowed to accumulate within the greenhouses. At 2:45 PM, the ventilation and exhaust system was turned on, without engaging the mist system. Measurements were taken at the three locations A, B and C, as the exhaust fans were turned on, but with no water mist or odor neutralizer. A reading of 7 D/T was taken at Location A with the Nasal Ranger. Within two minutes, a reading of 4 D/T was taken at Location B. Within two more minutes, a reading of 2 D/T was taken at Location C. These readings are higher than normal, because of the accumulation of cannabis odors, with an outdoor temperature of 74 degrees F and without any consistent ventilation in the greenhouses.

The next test was performed with the exhaust fans on and water mist only. After the system was on for approximately five minutes, a reading of 4 D/T was taken at Location A. Within two minutes, a reading of 2 D/T was taken at Location B. Within two more minutes, a reading of <2 D/T was taken at Location C. The lower readings were due to a combination of additional venting time and the water mist.

The odor control system was fully operational for the third and fourth set of readings. Each survey was within five to eight minutes of each other and results were identical at Locations A, B and C. A reading of <2 D/T was taken at Locations A and B. At Location C, no odor was detected. From these test results, it appears that a fully operational odor control system lowers the odor intensity readings from 7 D/T to <2 D/T, at six to twelve feet from the greenhouse ventilation fan. At twenty-four feet, the odor intensity goes from 2 D/T to non-detected.

### Round 2 - Onsite

Several more onsite locations were designated and observed that afternoon, during Round 2, from 3:36 PM until 4:11 PM. The sky was sunny with no precipitation. The humidity was 20%, and the temperature was 74 degrees F. The wind was moderate and blowing from the northwest. The odor control system was fully operational. Odor was observed at <2 D/T at Locations D, E and G. No odors were detected at Locations M or K.

### Round 3 - Offsite

After the initial onsite investigation, several offsite locations were designated and observed during Round 3, from approximately 4:13 PM until 5:06 PM. In **Exhibit 3**, the Round 3 Offsite Data Sheet displays the test data. The sky was mostly sunny with no precipitation. The humidity was 19%, and the temperature was 74 degrees F. The wind was moderate and blowing from the west northwest. The odor control system was fully operational. No odors were detected.

#### Round 4 - Offsite

On the second day of the odor study, a few more offsite locations were designated and observed during Round 4, from approximately 9:56 PM until 10:30 PM. In **Exhibit 3**, the Round 4 Offsite Data Sheet displays the test data. The sky was mostly sunny with no precipitation. The humidity was 51%, and the temperature was 55 degrees F. The wind was calm and blowing from the north. The odor control system was not operational yet. No odors were detected.

#### Test Round 5 - Onsite

Several more onsite locations were designated and observed during Round 5, from approximately 11:00 AM until 11:45 AM. In **Exhibit 3**, the Round 5 Offsite Data Sheet displays the test data. The sky was mostly sunny with no precipitation. The humidity was 30 - 36%, and the temperature was 63 - 64 degrees F. The wind was light and variable. The odor control system had been during the night and had not been turned on yet. Odor was detected at a level of 2 D/T at Location O. At that moment, this location was downwind of greenhouses. Odor was detected at a level of <2 D/T at Locations A, B and F. No odors were detected at the other onsite locations.

#### Test Round 6 - Onsite

On the second day, Test Round 6 was conducted from approximately 11:40 AM until 12:24 PM. Additional onsite Locations L & K were incorporated into Test Round 6. In **Exhibit 3**, the Round 6 Onsite Data Sheet displays the test data. The sky was mostly sunny with no precipitation. The humidity was 30%, and the temperature was 64 degrees F. The wind was light and blowing from the north. Prior to the odor observations, the exhaust and odor neutralizer systems were still turned off. Cannabis odors were accumulating within the greenhouses, but appeared to be staying within the greenhouses. Readings were taken at Locations A and B at a level of <2 D/T. No odor was detected at Locations C or L. At approximately 11:45 PM, the ventilation and exhaust system was turned on, without engaging the mist system and allowed to vent for ten minutes. A reading of 2 D/T was taken at Locations A, B and C, within two minutes of each other. Within five to six more minutes, a reading of <2 D/T was taken at Locations L and K. These readings are higher than the first set of readings, because of the discharge of accumulated cannabis odors in the greenhouses.

The odor control system was fully operational during the next set of readings. The system was allowed to operate for fifteen minutes before odor was measured. A reading of <2 D/T was taken at Locations A, B and C. At Locations L and K, no odor was detected. From these test results, it appears that a fully operational odor control system, operated for fifteen to twenty minutes, lowers the odor intensity readings to non-detectable up to <2 D/T, at six to twenty-four feet from the greenhouse perimeter.

### Round 7 – Onsite

After Test Round 6, one more set of observations were taken onsite, from approximately 12:26 PM until 12:51 PM. In **Exhibit 3**, the Round 7 Onsite Data Sheet displays the test data. The sky was mostly sunny with no precipitation. The humidity was 25%, and the temperature was 70 degrees F. The wind was light and blowing from the north. The odor control system was fully operational for approximately twenty to forty-five minutes. No odors were detected. This onsite round indicates that under the circumstances stated above, the odor control system, when operated consistently for less than one hour, reduces all onsite cannabis odor to zero.

### Round 8 – Offsite

Offsite locations were observed during Round 4, from approximately 12:58 PM until 1:28 PM. In **Exhibit 3**, the Round 8 Offsite Data Sheet displays the test data. The sky was mostly sunny with no precipitation. The humidity was 24%, and the temperature was 72 degrees F. The wind was light and blowing from the north. The odor control system was fully operational. No odors were detected.

### Round 9 – Offsite

Offsite locations were observed during Round 9, from approximately 6:09 PM until 6:34 PM. In **Exhibit 3**, the Round 9 Offsite Data Sheet displays the test data. The sky was mostly sunny with no precipitation. The humidity was 21%, and the temperature was 72 degrees F. The wind was moderate and blowing from the south southwest. The odor control system was not fully operational. The ventilation and exhaust system were operating; however, due to an issue with a pump, the odor neutralizer was not being used. No odors were detected.

### Round 10 – Offsite

On the third day of the odor study, offsite locations were observed during Round 10, from approximately 9:42 AM until 10:09 AM. In **Exhibit 3**, the Round 10 Offsite Data Sheet displays the test data. The sky was mostly cloudy and foggy. The humidity was 51%, and the temperature was 59 degrees F. The wind was moderate and blowing from the south. The ventilation exhaust and odor control system were not in operation. No odors were detected.

### Round 11 – Onsite

The next round was conducted from approximately 10:11 AM until 10:35 AM. In **Exhibit 3**, the Round 11 Onsite Data Sheet displays the test data. The sky was partly cloudy with no precipitation. The humidity was 37%, and the temperature was 60 degrees F. The wind was light and blowing from the north. Prior to the odor observations, the exhaust and odor neutralizer systems were still turned off. Cannabis odors had been accumulating within the greenhouses overnight.

At approximately 10:29 AM, the ventilation and exhaust system turned on automatically, because it was set to activate based on temperature in the greenhouses. The readings prior to the system coming on were relatively low. Readings at Locations J, O and K were <2 D/T. No odor was detected at any other locations before the system engaged. **Once the ventilation and exhaust system turned on, a reading of 7 D/T was taken at Location A.** A reading of 4 D/T was taken at Location B. A reading of 2 D/T was taken at Locations C and L. These readings are high and consistent with values obtained in Test Round 1, on the first day of the odor study, when the exhaust system was turned on, without the odor neutralizer. The elevated values are because of the discharge of accumulated cannabis odors in the greenhouses.

#### Round 12 – Onsite

After Round 11, one more set of observations were taken onsite, from approximately 11:20 AM until 11:50 AM. In **Exhibit 3**, the Round 12 Onsite Data Sheet displays the test data. The sky was partly cloudy with no precipitation. The humidity was 28%, and the temperature was 67 degrees F. The wind was light and blowing from the north. The ventilation and exhaust system had been operational for approximately fifty minutes to one hour and twenty minutes. The odor neutralizing system was still down because of the pump malfunction. Odors were detected at a level of 2 D/T at Location A. Odor was detected at a level of <2 D/T at Locations B, C, L and K. No odors were detected at any other locations. This onsite round indicates that under the circumstances stated above, the ventilation and exhaust system operating alone reduces the odor level onsite to a level of 2 D/T or less, when operated consistently.

#### Round 13 – Offsite

Offsite locations were observed during Round 13, from approximately 12:00 PM until 12:20 PM. In **Exhibit 3**, the Round 13 Offsite Data Sheet displays the test data. The sky was mostly sunny with no precipitation. The humidity was 26%, and the temperature was 68 degrees F. The wind was light and blowing from the north. The odor control system was not fully operational. The ventilation and exhaust system were operating; however, due to an issue with a pump, the odor neutralizer was not being used. No odors were detected.

#### Round 14 - Offsite

Offsite locations were observed during Round 14, from approximately 3:40 PM until 4:10 PM. In **Exhibit 3**, the Round 14 Offsite Data Sheet displays the test data. The sky was mostly sunny with no precipitation. The humidity was 16%, and the temperature was 77 degrees F. The wind was moderate and blowing from the south southeast. The odor control system was not fully operational. The ventilation and exhaust system were operating; however, due to an issue with a pump, the odor neutralizer was not being used. No odors were detected.

## Odor Survey Conclusions

No odors were detected at any of the designated locations throughout the California Community, during the three-day Odor Study. Seven (7) offsite surveys were conducted under three different operational conditions including 1) ventilation fan exhaust and odor neutralizer treatment 2) ventilation fan exhaust and no odor neutralizer treatment and 3) no ventilation fan exhaust and no odor neutralizer treatment. Based on these findings, this facility or one similar in size, construction, cultivation and basic odor control measures, should not adversely affect the surrounding community, even in times when odor control equipment is out-of-service for maintenance or not working properly.

In each case of onsite odor detection, where proper ventilation, exhaust and odor neutralizer treatment was in place, the odor was faint and intermittent at each location where  $<2$  D/T was recorded. These locations were along the exhaust side of the greenhouses and either next to the greenhouses or directly downwind of the exhaust fans. This value indicates a barely discernible odor with the “naked nose”, but under the threshold to be considered a recognizable odor with the Nasal Ranger Olfactometer on the lowest setting of 2-D/T.

Based on the findings in this Odor Study, Bosarge Environmental, LLC, concludes that “no discernible cannabis odor” was detected outside of this facility and is barely recognizable within 25 to 100 feet of the greenhouses. Consequently, this cannabis operation or one similar in size, construction, cultivation and odor control measures, should not adversely affect the surrounding community.

Submitted by,

*Melanie Bosarge*

Melanie Bosarge  
Bosarge Environmental, LLC

# APPENDIX



# **EXHIBIT 1**

## **Nasal Ranger Olfactometer Calibration Certificate**

# CERTIFICATE OF CALIBRATION

for the  
Nasal Ranger® Field Olfactometer

Serial Number : 90201429      Calibration Date : 7/15/2019

Dial D/T	Actual D/T	% Variance
60	60.02	0.0%
30	30.03	0.1%
15	15.07	0.5%
7	7.00	0.0%
4	4.00	0.0%
2	2.00	0.0%

This document certifies this Nasal Ranger® Field Olfactometer, specified by unique Serial Number, was calibrated using a NIST traceable primary gas flow standard by St. Croix Sensory, Inc.

St. Croix Sensory, Inc.  
1150 Stillwater Blvd. N.  
Stillwater, MN 55082 USA  
+1-651-439-0177  
info@nasalranger.com

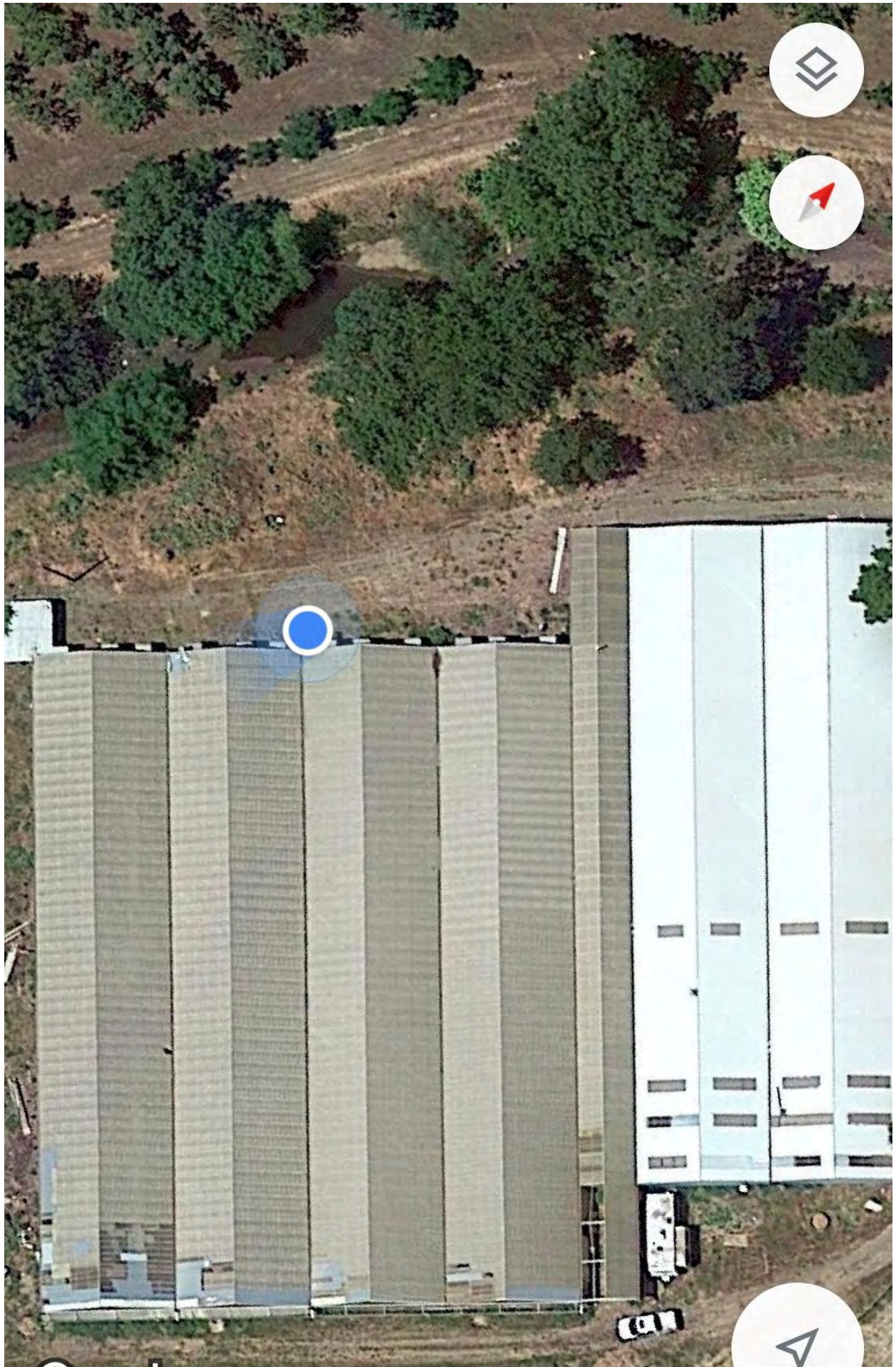


NASAL  
RANGER

*Benjamin Laine*  
Calibration Technician

## **Exhibit 2**

### **Photographs from the California Property**























## **Exhibit 3**

### **Onsite and Offsite Odor Survey Data Sheets**

ROUND 1 - ONSITE  
 10/1/19 2:50 PM - 3:26 PM

Date	Loc #	Location	D/T	Weather Condition	Precip	Wind Direction	Wind Speed	Temp	Humidity	Pressure
							mph	F	%	InHg
10/1/2019 15:26	C	Test Area 24 Ft From Exhaust	ND	Mostly Sunny	None	WNW	Moderate Wind (5-15 mph)	74	30	29.92
10/1/2019 15:24	B	Test Area 12 FT From Exhaust	<2	Mostly Sunny	None	WNW	Moderate Wind (5-15 mph)	74	30	29.92
10/1/2019 15:22	A	Test Area 6 Ft From Exhaust	<2	Mostly Sunny	None	WNW	Moderate Wind (5-15 mph)	74	30	29.92
10/1/2019 15:20	C	Test Area 24 Ft From Exhaust	ND	Mostly Sunny	None	WNW	Moderate Wind (5-15 mph)	74	30	29.92
10/1/2019 15:17	B	Test Area 12 FT From Exhaust	<2	Mostly Sunny	None	WNW	Moderate Wind (5-15 mph)	74	30	29.92
10/1/2019 15:14	A	Test Area 6 Ft From Exhaust	<2	Mostly Sunny	None	WNW	Moderate Wind (5-15 mph)	74	30	29.92
10/1/2019 15:06	C	Test Area 24 Ft From Exhaust	<2	Mostly Sunny	None	WNW	Moderate Wind (5-15 mph)	74	30	29.92
10/1/2019 15:04	B	Test Area 12 FT From Exhaust	2	Mostly Sunny	None	WNW	Moderate Wind (5-15 mph)	74	30	29.92
10/1/2019 15:02	A	Test Area 6 Ft From Exhaust	4	Mostly Sunny	None	WNW	Moderate Wind (5-15 mph)	74	30	29.92
10/1/2019 14:54	C	Test Area 24 Ft From Exhaust	2	Mostly Sunny	None	WNW	Moderate Wind (5-15 mph)	74	30	29.92
10/1/2019 14:52	B	Test Area 12 FT From Exhaust	4	Mostly Sunny	None	WNW	Moderate Wind (5-15 mph)	74	30	29.92
10/1/2019 14:50	A	Test Area 6 Ft From Exhaust	7	Mostly Sunny	None	WNW	Moderate Wind (5-15 mph)	74	30	29.92

ROUND 2 - ONSITE  
 10/1/19 3:36 PM - 4:11 PM

Date	Loc #	Location	D/T	Weather Condition	Precip	Wind Direction	Wind Speed	Temp	Humidity	Pressure
							mph	F	%	InHg
10/1/2019 16:11	M	Front Gate To Property	ND	Mostly Sunny	None	NW	Moderate Wind (5-15 mph)	74	20	29.95
10/1/2019 15:53	E	South Corner of Greenhouses	<2	Mostly Sunny	None	NW	Moderate Wind (5-15 mph)	74	20	29.95
10/1/2019 15:49	G	East Corner of Greenhouses	<2	Mostly Sunny	None	NW	Moderate Wind (5-15 mph)	74	20	29.95
10/1/2019 15:44	K	North Corner of Greenhouses	ND	Mostly Sunny	None	NW	Moderate Wind (5-15 mph)	74	20	29.95
10/1/2019 15:36	D	West Corner of Greenhouses	<2	Mostly Sunny	None	NW	Moderate Wind (5-15 mph)	74	20	29.95



ROUND 3 - OFFSITE  
 10/1/19 4:13 PM - 5:06 PM

Date	Loc #	Location	D/T	Weather Condition	Precip	Wind Direction	Wind Speed	Temp	Humidity	Pressure
							mph	F	%	InHg
10/1/2019 17:06	6		ND	Mostly Sunny	None	WNW	Moderate Wind (5-15 mph)	74	19	29.94
10/1/2019 17:02	10		ND	Mostly Sunny	None	WNW	Moderate Wind (5-15 mph)	74	19	29.94
10/1/2019 16:59	11		ND	Mostly Sunny	None	WNW	Moderate Wind (5-15 mph)	74	19	29.94
10/1/2019 16:56	12		ND	Mostly Sunny	None	WNW	Moderate Wind (5-15 mph)	74	19	29.94
10/1/2019 16:24	9		ND	Mostly Sunny	None	WNW	Moderate Wind (5-15 mph)	74	19	29.94
10/1/2019 16:20	8		ND	Mostly Sunny	None	WNW	Moderate Wind (5-15 mph)	74	19	29.94
10/1/2019 16:13	1		ND	Mostly Sunny	None	WNW	Moderate Wind (5-15 mph)	74	19	29.94

ROUND 4 - OFFSITE  
 10/2/19 9:56 AM - 10:30 AM

Date	Loc #	Location	D/T	Weather Condition	Precip	Wind Direction	Wind Speed	Temp	Humidity	Pressure
							mph	F	%	InHg
10/2/2019 10:30	1		ND	Mostly Sunny	None	N	Calm (<1 mph)	55	51	30.07
10/2/2019 10:28	2		ND	Mostly Sunny	None	N	Calm (<1 mph)	55	51	30.07
10/2/2019 10:24	3		ND	Mostly Sunny	None	N	Calm (<1 mph)	55	51	30.07
10/2/2019 10:21	6		ND	Mostly Sunny	None	N	Calm (<1 mph)	55	51	30.07
10/2/2019 10:19	4		ND	Mostly Sunny	None	N	Calm (<1 mph)	55	51	30.07
10/2/2019 10:17	5		ND	Mostly Sunny	None	N	Calm (<1 mph)	55	51	30.07
10/2/2019 10:15	7		ND	Mostly Sunny	None	N	Calm (<1 mph)	55	51	30.07
10/2/2019 10:12	8		ND	Mostly Sunny	None	N	Calm (<1 mph)	55	51	30.07
10/2/2019 10:08	9		ND	Mostly Sunny	None	N	Calm (<1 mph)	55	51	30.07
10/2/2019 10:04	10		ND	Mostly Sunny	None	N	Calm (<1 mph)	55	51	30.07
10/2/2019 10:00	11		ND	Mostly Sunny	None	N	Calm (<1 mph)	55	51	30.07
10/2/2019 9:56	12		ND	Mostly Sunny	None	N	Calm (<1 mph)	55	51	30.07

ROUND 5 - ONSITE

10/2/19 11:00 AM - 11:45 AM

Date	Loc #	Location	D/T	Weather Condition	Precip	Wind Direction	Wind Speed	Temp	Humidity	Pressure
							mph	F	%	InHg
10/2/2019 11:45	L	North Center of Greenhouses	ND	Mostly Sunny	None	N	Light Breeze (1-5 mph)	63	36	30.05
10/2/2019 11:43	C	Test Area 24 Ft From Exhaust	ND	Mostly Sunny	None	N	Light Breeze (1-5 mph)	64	30	30.05
10/2/2019 11:42	B	Test Area 12 FT From Exhaust	<2	Mostly Sunny	None	N	Light Breeze (1-5 mph)	64	30	30.05
10/2/2019 11:40	A	Test Area 6 Ft from Exhaust	<2	Mostly Sunny	None	N	Light Breeze (1-5 mph)	64	30	30.05
10/2/2019 11:38	D	West Corner of Greenhouses	ND	Mostly Sunny	None	N	Light Breeze (1-5 mph)	63	36	30.05
10/2/2019 11:36	O	Post Behind House	2	Mostly Sunny	None	N	Light Breeze (1-5 mph)	63	36	30.05
10/2/2019 11:33	P	On Hill Behind House	ND	Mostly Sunny	None	N	Light Breeze (1-5 mph)	63	36	30.05
10/2/2019 11:31	N	Post by Dumpster	ND	Mostly Sunny	None	N	Light Breeze (1-5 mph)	63	36	30.05
10/2/2019 11:27	E	South Corner of Greenhouses	ND	Mostly Sunny	None	N	Light Breeze (1-5 mph)	63	36	30.05
10/2/2019 11:26	F	South Midpoint of Greenhouses	<2	Mostly Sunny	None	N	Light Breeze (1-5 mph)	63	36	30.05
10/2/2019 11:24	G	East Corner of Greenhouses	ND	Mostly Sunny	None	N	Light Breeze (1-5 mph)	63	36	30.05
10/2/2019 11:22	H	East Corner of Whse	ND	Mostly Sunny	None	N	Light Breeze (1-5 mph)	63	36	30.05
10/2/2019 11:20	I	East Midpoint of Whse	ND	Mostly Sunny	None	N	Light Breeze (1-5 mph)	63	36	30.05
10/2/2019 11:18	J	North Corner of Whse	ND	Mostly Sunny	None	N	Light Breeze (1-5 mph)	63	36	30.05
10/2/2019 11:15	K	North Corner of Greenhouses	ND	Mostly Sunny	None	N	Light Breeze (1-5 mph)	63	36	30.05
10/2/2019 11:00	M	Front Gate To Property	ND	Mostly Sunny	None	N	Light Breeze (1-5 mph)	63	36	30.05

ROUND 6 - ONSITE  
 10/2/19 11:40 AM - 12:24 PM

Date	Loc #	Location	D/T	Weather Condition	Precip	Wind Direction	Wind Speed	Temp	Humidity	Pressure
							mph	F	%	InHg
10/2/2019 12:24	A	Test Area 6 Ft from Exhaust	<2	Mostly Sunny	None	N	Light Breeze (1-5 mph)	64	30	30.05
10/2/2019 12:23	B	Test Area 12 FT From Exhaust	<2	Mostly Sunny	None	N	Light Breeze (1-5 mph)	64	30	30.05
10/2/2019 12:22	C	Test Area 24 Ft From Exhaust	<2	Mostly Sunny	None	N	Light Breeze (1-5 mph)	64	30	30.05
10/2/2019 12:21	L	North Center of Greenhouses	ND	Mostly Sunny	None	N	Light Breeze (1-5 mph)	64	30	30.05
10/2/2019 12:19	K	North Corner of Greenhouses	ND	Mostly Sunny	None	N	Light Breeze (1-5 mph)	64	30	30.05
10/2/2019 12:05	K	North Corner of Greenhouses	<2	Mostly Sunny	None	N	Light Breeze (1-5 mph)	64	30	30.05
10/2/2019 12:05	K	North Corner of Greenhouses	<2	Mostly Sunny	None	N	Light Breeze (1-5 mph)	64	30	30.05
10/2/2019 12:04	L	North Center of Greenhouses	<2	Mostly Sunny	None	N	Light Breeze (1-5 mph)	64	30	30.05
10/2/2019 11:59	C	Test Area 24 Ft From Exhaust	2	Mostly Sunny	None	N	Light Breeze (1-5 mph)	64	30	30.05
10/2/2019 11:57	B	Test Area 12 FT From Exhaust	2	Mostly Sunny	None	N	Light Breeze (1-5 mph)	64	30	30.05
10/2/2019 11:55	A	Test Area 6 Ft from Exhaust	2	Mostly Sunny	None	N	Light Breeze (1-5 mph)	64	30	30.05
10/2/2019 11:45	L	North Center of Greenhouses	ND	Mostly Sunny	None	N	Light Breeze (1-5 mph)	63	36	30.05
10/2/2019 11:43	C	Test Area 24 Ft From Exhaust	ND	Mostly Sunny	None	N	Light Breeze (1-5 mph)	64	30	30.05
10/2/2019 11:42	B	Test Area 12 FT From Exhaust	<2	Mostly Sunny	None	N	Light Breeze (1-5 mph)	64	30	30.05
10/2/2019 11:40	A	Test Area 6 Ft from Exhaust	<2	Mostly Sunny	None	N	Light Breeze (1-5 mph)	64	30	30.05

ROUND 7 - ONSITE

10/2/19 12:26 PM - 12:51 PM

Date	Loc #	Location	D/T	Weather Condition	Precip	Wind Direction	Wind Speed	Temp	Humidity	Pressure
							mph	F	%	InHg
10/2/2019 12:51	E	South Corner of Greenhouses	ND	Mostly Sunny	None	N	Light Breeze (1-5 mph)	70	25	30.03
10/2/2019 12:50	F	South Midpoint of Greenhouses	ND	Mostly Sunny	None	N	Light Breeze (1-5 mph)	70	25	30.03
10/2/2019 12:48	G	East Corner of Greenhouses	ND	Mostly Sunny	None	N	Light Breeze (1-5 mph)	70	25	30.03
10/2/2019 12:47	H	East Corner of Whse	ND	Mostly Sunny	None	N	Light Breeze (1-5 mph)	70	25	30.03
10/2/2019 12:46	I	East Midpoint of Whse	ND	Mostly Sunny	None	N	Light Breeze (1-5 mph)	70	25	30.03
10/2/2019 12:44	N	Post by Dumpster	ND	Mostly Sunny	None	N	Light Breeze (1-5 mph)	70	25	30.03
10/2/2019 12:43	M	Front Gate To Property	ND	Mostly Sunny	None	N	Light Breeze (1-5 mph)	70	25	30.03
10/2/2019 12:42	P	On Hill Behind House	ND	Mostly Sunny	None	N	Light Breeze (1-5 mph)	70	25	30.03
10/2/2019 12:41	O	Post Behind House	ND	Mostly Sunny	None	N	Light Breeze (1-5 mph)	70	25	30.03
10/2/2019 12:40	J	North Corner of Whse	ND	Mostly Sunny	None	N	Light Breeze (1-5 mph)	70	25	30.03
10/2/2019 12:33	K	North Corner of Greenhouses	ND	Mostly Sunny	None	N	Light Breeze (1-5 mph)	70	25	30.03
10/2/2019 12:30	L	North Center of Greenhouses	ND	Mostly Sunny	None	N	Light Breeze (1-5 mph)	70	25	30.03
10/2/2019 12:26	D	West Corner of Greenhouses	ND	Mostly Sunny	None	N	Light Breeze (1-5 mph)	70	25	30.03

ROUND 8 - OFFSITE  
 10/2/19 12:58 PM - 1:20 PM

Date	Loc #	Location	D/T	Weather Condition	Precip	Wind Direction	Wind Speed	Temp	Humidity	Pressure
							mph	F	%	InHg
10/2/2019 13:28	11		ND	Mostly Sunny	None	N	Light Breeze (1-5 mph)	72	24	30.02
10/2/2019 13:25	12		ND	Mostly Sunny	None	N	Light Breeze (1-5 mph)	72	24	30.02
10/2/2019 13:21	10		ND	Mostly Sunny	None	N	Light Breeze (1-5 mph)	72	24	30.02
10/2/2019 13:19	8		ND	Mostly Sunny	None	N	Light Breeze (1-5 mph)	72	24	30.02
10/2/2019 13:18	9		ND	Mostly Sunny	None	N	Light Breeze (1-5 mph)	72	24	30.02
10/2/2019 13:16	7		ND	Mostly Sunny	None	N	Light Breeze (1-5 mph)	72	24	30.02
10/2/2019 13:14	6		ND	Mostly Sunny	None	N	Light Breeze (1-5 mph)	72	24	30.02
10/2/2019 13:12	5		ND	Mostly Sunny	None	N	Light Breeze (1-5 mph)	72	24	30.02
10/2/2019 13:10	4		ND	Mostly Sunny	None	N	Light Breeze (1-5 mph)	72	24	30.02
10/2/2019 13:06	3		ND	Mostly Sunny	None	N	Light Breeze (1-5 mph)	72	24	30.02
10/2/2019 13:04	2		ND	Mostly Sunny	None	N	Light Breeze (1-5 mph)	72	24	30.02
10/2/2019 12:58	1		ND	Mostly Sunny	None	N	Light Breeze (1-5 mph)	72	24	30.02

ROUND 9 - OFFSITE  
 10/2/19 6:09 PM - 6:34 PM

Date	Loc #	Location	D/T	Weather Condition	Precip	Wind Direction	Wind Speed	Temp	Humidity	Pressure
							mph	F	%	InHg
10/2/2019 18:34	12		ND	Mostly Sunny	None	SSW	Moderate Wind (5-15 mph)	72	21	29.95
10/2/2019 18:31	11		ND	Mostly Sunny	None	SSW	Moderate Wind (5-15 mph)	72	21	29.95
10/2/2019 18:29	10		ND	Mostly Sunny	None	SSW	Moderate Wind (5-15 mph)	72	21	29.95
10/2/2019 18:27	9		ND	Mostly Sunny	None	SSW	Moderate Wind (5-15 mph)	72	21	29.95
10/2/2019 18:25	8		ND	Mostly Sunny	None	SSW	Moderate Wind (5-15 mph)	72	21	29.95
10/2/2019 18:22	7		ND	Mostly Sunny	None	SSW	Moderate Wind (5-15 mph)	72	21	29.95
10/2/2019 18:20	6		ND	Mostly Sunny	None	SSW	Moderate Wind (5-15 mph)	72	21	29.95
10/2/2019 18:18	5		ND	Mostly Sunny	None	SSW	Moderate Wind (5-15 mph)	72	21	29.95
10/2/2019 18:16	4		ND	Mostly Sunny	None	SSW	Moderate Wind (5-15 mph)	72	21	29.95
10/2/2019 18:14	3		ND	Mostly Sunny	None	SSW	Moderate Wind (5-15 mph)	72	21	29.95
10/2/2019 18:12	2		ND	Mostly Sunny	None	SSW	Moderate Wind (5-15 mph)	72	21	29.95
10/2/2019 18:09	1		ND	Mostly Sunny	None	SSW	Moderate Wind (5-15 mph)	72	21	29.95

ROUND 10 - OFFSITE  
 10/3/19 9:42 AM - 10:09 AM

Date	Loc #	Location	D/T	Weather Condition	Precip	Wind Direction	Wind Speed	Temp	Humidity	Pressure
							mph	F	%	InHg
10/3/2019 10:09	1		ND	Mostly Cloudy	Fog	S	Moderate Wind (5-15 mph)	59	51	30.00
10/3/2019 10:08	2		ND	Mostly Cloudy	Fog	S	Moderate Wind (5-15 mph)	59	51	30.30
10/3/2019 10:07	3		ND	Mostly Cloudy	Fog	S	Moderate Wind (5-15 mph)	59	51	30.00
10/3/2019 10:06	4		ND	Mostly Cloudy	Fog	S	Moderate Wind (5-15 mph)	59	51	30.00
10/3/2019 10:05	5		ND	Mostly Cloudy	Fog	S	Moderate Wind (5-15 mph)	59	51	30.00
10/3/2019 10:04	6		ND	Mostly Cloudy	Fog	S	Moderate Wind (5-15 mph)	59	51	30.00
10/3/2019 9:56	12		ND	Mostly Cloudy	Fog	S	Moderate Wind (5-15 mph)	59	51	30.00
10/3/2019 9:54	11		ND	Mostly Cloudy	Fog	S	Moderate Wind (5-15 mph)	59	51	30.00
10/3/2019 9:50	10		ND	Mostly Cloudy	Fog	S	Moderate Wind (5-15 mph)	59	51	30.00
10/3/2019 9:46	9		ND	Mostly Cloudy	Fog	S	Moderate Wind (5-15 mph)	59	51	30.00
10/3/2019 9:44	8		ND	Mostly Cloudy	Fog	S	Moderate Wind (5-15 mph)	59	51	30.00
10/3/2019 9:42	7		ND	Mostly Cloudy	Fog	S	Moderate Wind (5-15 mph)	59	51	30.00



ROUND 11 - ONSITE

10/3/19 10:11 AM - 10:35 AM

Date	Loc #	Location	D/T	Weather Condition	Precip	Wind Direction	Wind Speed	Temp	Humidity	Pressure
							mph	F	%	InHg
10/3/2019 10:35	C	Test Area 24 Ft From Exhaust	2	Partly Cloudy	None	N	Light Breeze (1-5 mph)	60	37	30.00
10/3/2019 10:34	B	Test Area 12 FT From Exhaust	4	Partly Cloudy	None	N	Light Breeze (1-5 mph)	60	37	30.00
10/3/2019 10:33	A	Test Area 6 Ft From Exhaust	7	Partly Cloudy	None	N	Light Breeze (1-5 mph)	60	37	30.00
10/3/2019 10:31	D	West Corner of Greenhouses	ND	Partly Cloudy	None	N	Light Breeze (1-5 mph)	60	37	30.00
10/3/2019 10:29	L	North Center of Greenhouses	2	Partly Cloudy	None	N	Light Breeze (1-5 mph)	60	37	30.00
10/3/2019 10:27	K	North Corner of Greenhouses	<2	Partly Cloudy	None	N	Light Breeze (1-5 mph)	60	37	30.00
10/3/2019 10:25	O	Post Behind House	<2	Partly Cloudy	None	N	Light Breeze (1-5 mph)	60	37	30.00
10/3/2019 10:23	P	On Hill Behind House	ND	Partly Cloudy	None	N	Light Breeze (1-5 mph)	60	37	30.00
10/3/2019 10:21	J	North Corner of Whse	<2	Partly Cloudy	None	N	Light Breeze (1-5 mph)	60	37	30.00
10/3/2019 10:19	I	East Midpoint of Whse	ND	Partly Cloudy	None	N	Light Breeze (1-5 mph)	60	37	30.00
10/3/2019 10:17	E	South Corner of Greenhouses	ND	Partly Cloudy	None	N	Light Breeze (1-5 mph)	60	37	30.00
10/3/2019 10:16	F	South Midpoint of Greenhouses	ND	Partly Cloudy	None	N	Light Breeze (1-5 mph)	60	37	30.00
10/3/2019 10:15	G	East Corner of Greenhouses	ND	Partly Cloudy	None	N	Light Breeze (1-5 mph)	60	37	30.00
10/3/2019 10:14	H	East Corner of Whse	ND	Partly Cloudy	None	N	Light Breeze (1-5 mph)	60	37	30.00
10/3/2019 10:13	N	Post by Dumpster	ND	Partly Cloudy	None	N	Light Breeze (1-5 mph)	60	37	30.00
10/3/2019 10:11	M	Front Gate To Property	ND	Partly Cloudy	None	N	Light Breeze (1-5 mph)	60	37	30.00

ROUND 12 - ONSITE

10/3/19 11:20 AM - 11:50 AM

Date	Loc #	Location	D/T	Weather Condition	Precip	Wind Direction	Wind Speed	Temp	Humidity	Pressure
							mph	F	%	InHg
10/3/2019 11:50	M	Front Gate To Property	ND	Partly Cloudy	None	N	Light Breeze (1-5 mph)	67	28	29.99
10/3/2019 11:45	A	Test Area 6 Ft from Exhaust	2	Partly Cloudy	None	N	Light Breeze (1-5 mph)	67	28	29.99
10/3/2019 11:44	B	Test Area 12 FT From Exhaust	<2	Partly Cloudy	None	N	Light Breeze (1-5 mph)	67	28	29.99
10/3/2019 11:43	C	Test Area 24 Ft From Exhaust	<2	Partly Cloudy	None	N	Light Breeze (1-5 mph)	67	28	29.99
10/3/2019 11:41	D	West Corner of Greenhouses	ND	Partly Cloudy	None	N	Light Breeze (1-5 mph)	67	28	29.99
10/3/2019 11:39	L	North Center of Greenhouses	<2	Partly Cloudy	None	N	Light Breeze (1-5 mph)	67	28	29.99
10/3/2019 11:38	K	North Corner of Greenhouses	<2	Partly Cloudy	None	N	Light Breeze (1-5 mph)	67	28	29.99
10/3/2019 11:35	P	On Hill Behind House	ND	Partly Cloudy	None	N	Light Breeze (1-5 mph)	67	28	29.99
10/3/2019 11:34	O	Post Behind House	ND	Partly Cloudy	None	N	Light Breeze (1-5 mph)	67	28	29.99
10/3/2019 11:32	J	North Corner of Whse	ND	Partly Cloudy	None	N	Light Breeze (1-5 mph)	67	28	29.99
10/3/2019 11:29	N	Post by Dumpster	ND	Partly Cloudy	None	N	Light Breeze (1-5 mph)	67	28	29.99
10/3/2019 11:27	I	East Midpoint of Whse	ND	Partly Cloudy	None	N	Light Breeze (1-5 mph)	67	28	29.99
10/3/2019 11:25	H	East Corner of Whse	ND	Partly Cloudy	None	N	Light Breeze (1-5 mph)	67	28	29.99
10/3/2019 11:23	G	East Corner of Greenhouses	ND	Partly Cloudy	None	N	Light Breeze (1-5 mph)	67	28	29.99
10/3/2019 11:21	F	South Midpoint of Greenhouses	ND	Partly Cloudy	None	N	Light Breeze (1-5 mph)	67	28	29.99
10/3/2019 11:20	E	South Corner of Greenhouses	ND	Partly Cloudy	None	N	Light Breeze (1-5 mph)	67	28	29.99

ROUND 13 - OFFSITE  
 10/3/19 12:00 PM - 12:20 PM

Date	Loc #	Location	D/T	Weather Condition	Precip	Wind Direction	Wind Speed	Temp	Humidity	Pressure
							mph	F	%	InHg
10/3/2019 12:20	12		ND	Mostly Sunny	None	N	Light Breeze (1-5 mph)	68	26	29.98
10/3/2019 12:18	11		ND	Mostly Sunny	None	N	Light Breeze (1-5 mph)	68	26	29.98
10/3/2019 12:15	10		ND	Mostly Sunny	None	N	Light Breeze (1-5 mph)	68	26	29.98
10/3/2019 12:12	9		ND	Mostly Sunny	None	N	Light Breeze (1-5 mph)	68	26	29.98
10/3/2019 12:10	8		ND	Mostly Sunny	None	N	Light Breeze (1-5 mph)	68	26	29.98
10/3/2019 12:08	7		ND	Mostly Sunny	None	N	Light Breeze (1-5 mph)	68	26	29.98
10/3/2019 12:06	6		ND	Mostly Sunny	None	N	Light Breeze (1-5 mph)	68	26	29.98
10/3/2019 12:05	5		ND	Mostly Sunny	None	N	Light Breeze (1-5 mph)	68	26	29.98
10/3/2019 12:04	4		ND	Mostly Sunny	None	N	Light Breeze (1-5 mph)	68	26	29.98
10/3/2019 12:03	3		ND	Mostly Sunny	None	N	Light Breeze (1-5 mph)	68	26	29.98
10/3/2019 12:02	2		ND	Mostly Sunny	None	N	Light Breeze (1-5 mph)	68	26	29.98
10/3/2019 12:00	1		ND	Mostly Sunny	None	N	Light Breeze (1-5 mph)	68	26	29.98

ROUND 14 - OFFSITE  
 10/3/19 3:40 PM - 4:10 PM

Date	Loc #	Location	D/T	Weather Condition	Precip	Wind Direction	Wind Speed	Temp	Humidity	Pressure
							mph	F	%	InHg
10/3/2019 16:10	1		ND	Mostly Sunny	None	SSE	Moderate Wind (5-15 mph)	77	16	29.90
10/3/2019 16:08	2		ND	Mostly Sunny	None	SSE	Moderate Wind (5-15 mph)	77	16	29.90
10/3/2019 16:06	3		ND	Mostly Sunny	None	SSE	Moderate Wind (5-15 mph)	77	16	29.90
10/3/2019 16:04	4		ND	Mostly Sunny	None	SSE	Moderate Wind (5-15 mph)	77	16	29.90
10/3/2019 16:02	5		ND	Mostly Sunny	None	SSE	Moderate Wind (5-15 mph)	77	16	29.90
10/3/2019 16:00	6		ND	Mostly Sunny	None	SSE	Moderate Wind (5-15 mph)	77	16	29.90
10/3/2019 15:52	12		ND	Mostly Sunny	None	SSE	Moderate Wind (5-15 mph)	77	16	29.90
10/3/2019 15:50	11		ND	Mostly Sunny	None	SSE	Moderate Wind (5-15 mph)	77	16	29.90
10/3/2019 15:48	10		ND	Mostly Sunny	None	SSE	Moderate Wind (5-15 mph)	77	16	29.90
10/3/2019 15:44	9		ND	Mostly Sunny	None	SSE	Moderate Wind (5-15 mph)	77	16	29.90
10/3/2019 15:42	8		ND	Mostly Sunny	None	SSE	Moderate Wind (5-15 mph)	77	16	29.90
10/3/2019 15:40	7		ND	Mostly Sunny	None	SSE	Moderate Wind (5-15 mph)	77	16	29.90

# **Exhibit 4**

## **Onsite and Offsite Odor Data Maps**

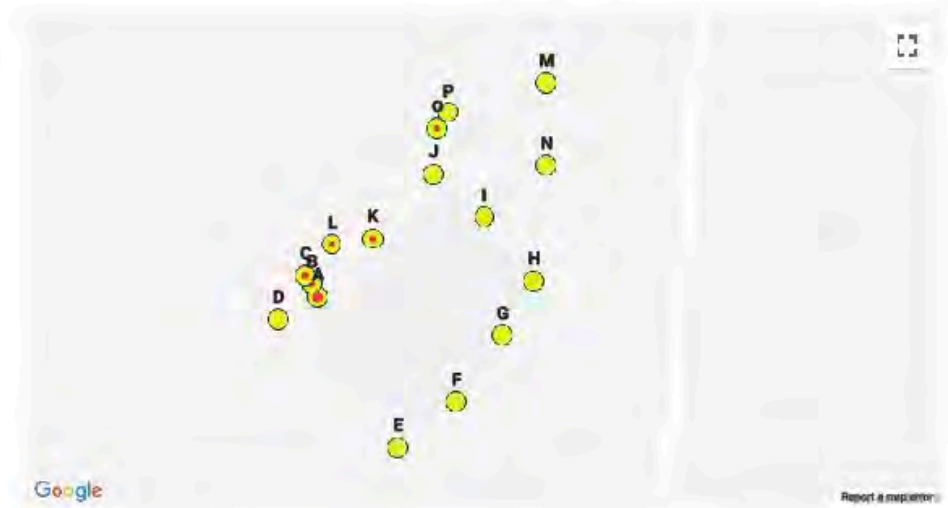






Odor DT Criteria (Eclipse Key)				Date Range: 10/1/2019 thru 10/3/2019
Avg. Log	Avg.	Eclipse Symbol	Description	Any Time of Day
0.000	= ND	☉	Full Sun	Assessment Type: Inspection (DT)
0.001-0.301	< 2	☾	1/4 Eclipse	Include Non-Detect
0.301-0.845	= 2	☽	1/2 Eclipse	
0.846-	= 7	☿	Full Eclipse	





Odor DT Criteria (Eclipse Key)				Date Range: 10/1/2019 thru 10/3/2019	
Avg. Log	Avg.	Eclipse Symbol	Description	Any Time of Day	Assessment Type: Inspection (DT)
0.000	= ND	☉	Full Sun		Include Non-Detect
0.001-0.301	< 2	☾	1/4 Eclipse		
0.301-0.845	>= 2	☽	1/2 Eclipse		
0.846-	>= 7	☀	Full Eclipse		



Odor DT Criteria (Eclipse Key)				Date Range: 10/1/2019 thru 10/3/2019
Avg. Log	Avg.	Eclipse Symbol	Description	Any Time of Day
0.000	= ND	☉	Full Sun	Assessment Type: Inspection (DT)
0.001-0.301	< 2	☾	1/4 Eclipse	Include Non-Detect
0.301-0.845	≥ 2	☽	1/2 Eclipse	
0.846-	≥ 7	☿	Full Eclipse	

GEOLOGIC LOG Permit Date 807059 6-28-02

STATE WELL NO. STATION NO. LATITUDE LONGITUDE

WELL OWNER HARDE David

Address 6540 Perry Creek Rd Somersett CA 95684

WELL LOCATION 6540 Perry Creek Rd Somersett El Dorado 93-030-41-19

APN Book 8N Page 12E Township or Latitude Range Section

DEG. MIN. SEC. NORTH Longitude

LOCATION SKETCH

DEG. MIN. SEC. NORTH Longitude

ACTIVITY (V) NEW WELL MODIFICATION/REPAIR Deepen Other (Specify)

DESTROY (Describe Procedures and Materials Under "GEOLOGIC LOG" MONITORING)

PLANNED USE(S) (V) WATER SUPPLY Domestic Public Irrigation Industrial \*TEST WELL\* CATHODIC PROTECTION OTHER (Specify)

W E S T

59' 30' 5'

Perry Creek Rd

Illustrate or Describe Distance of Well from Landmarks such as Roads, Buildings, Fences, Rivers, etc. PLEASE BE ACCURATE & COMPLETE.

DRILLING METHOD AIR ROTARY FLUID WATER

WATER LEVEL & YIELD OF COMPLETED WELL

DEPTH OF STATIC WATER LEVEL 45 (FL) & DATE MEASURED 7-13-02

ESTIMATED YIELD\* 4 (GPM) & TEST TYPE AIR LIFT

TEST LENGTH 4 (Hrs.) TOTAL DRAWDOWN 600 (FL)

\*May not be representative of a well's long-term yield.

DEPTH TO FIRST WATER 81 (FL) BELOW SURFACE

DEPTH FROM SURFACE	DESCRIPTION
0	Topsoil
4	Firm Decomposed Granite
81	FXD Gray Granite w/Decom Granite
96	Gray Granite
116	FX
117	GR Gran
127	FX
128	GR Gran
136	FX
137	GR Gran
173	FX
174	GR Gran
205	FX
206	GR Gran
231	FX
232	GR Gran
236	FX
267	GR Gran
323	FX
324	GR Gran
381	FX
382	GR Gran
402	FX
403	GR Gran
457	FX
458	GR Gran

TOTAL 4 G.P.M.

TOTAL DEPTH OF BORING 600 (Feet)

TOTAL DEPTH OF COMPLETED WELL 600 (Feet)

DEPTH FROM SURFACE	BORE HOLE DIA. (Inches)	TYPE (V)	MATERIAL GRADE	CASING(S)			SLOT SIZE IF ANY (Inches)	ANNULAR MATERIAL TYPE				
				INTERNAL DIAMETER (Inches)	Gauge OR WALL THICKNESS	DEPTH FROM SURFACE		FL. to FL.	CE-MENT (V)	BEN-TONITE (V)	FILL (V)	FILTER PACK (TYPE/SIZE)
+1	80	10-5/8	PVC	6	F480	0	0	25	X			
81	100	10-5/8	PVC	6	F480	1/16"						
U	400	6	PVC	4	F480	0						
400	600	6	PVC	4	F480	1/16"						

ATTACHMENTS (V)

Geologic Log

Well Construction Diagram

Geophysical Log(s)

Soil/Water Chemical Analysis

Other

ATTACH ADDITIONAL INFORMATION IF EXISTS.

CERTIFICATION STATEMENT

I, the undersigned, certify that this report is complete and accurate to the best of my knowledge and belief.

**ARROW WELL DRILLING**  
 P.O. Box 523  
 Placerville, CA 95667

Signed *[Signature]* WELL DRILLER/AUTHORIZED REPRESENTATIVE

8-15-02 DATE SIGNED

453362 0-67 LICENSE NUMBER

DWR 188 REV. 7-90 IF ADDITIONAL SPACE IS NEEDED, USE NEXT CONSECUTIVELY NUMBERED FORM

CCUP21-0002 Harde  
 Well and Septic  
 Exhibit I



PC 58358

EL DORADO COUNTY DIVISION OF ENVIRONMENTAL HEALTH PLACER COUNTY  
360 Fair Lane Placerville, CA 95667  
(916) 626-2411  
621-5300

RECEIVED

NOV 10 1988

COMMUNITY DEVELOPMENT  
DEPARTMENT

REPORT OF WELL PRODUCTION

Owner of Property: DAVID O. HARDE

Address of Owner: 6540 PERRY CREEK RD.  
SOMERSET, CA

Location of Property: \_\_\_\_\_

Assessor's Parcel Number: 093-030-41

Builder: \_\_\_\_\_

\*\*\*\*\*

TO BE COMPLETED BY WELL DRILLER

Results of four (4) hour well production test: 25 GPM

Date Performed 10-10-88

Depth of well 220 ft. Static water level 12 ft.

Diameter of well casing 48' x 6" + 220' x 4" in.

I HEREBY CERTIFY THAT THE ABOVE INFORMATION IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE.

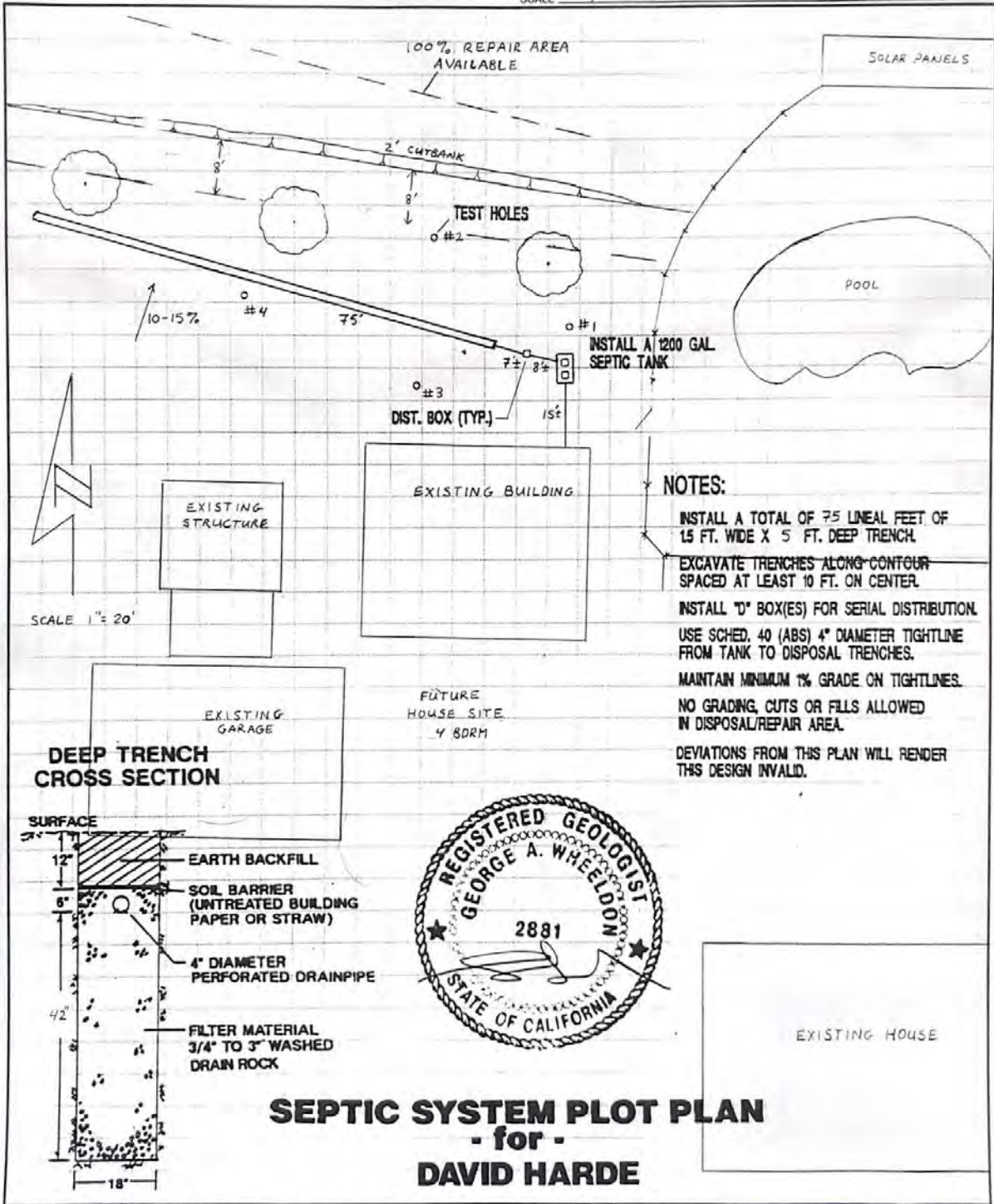
Test Performed by: SAM CRUM

State License Number: 373654

*Please complete both sides of this form and return in the enclosed envelope*

**WHEELDON & ASSOCIATES**  
 Geological Consultants  
 621 Placerville Drive  
 PLACERVILLE, CALIFORNIA 95667  
 (916) 622-9579

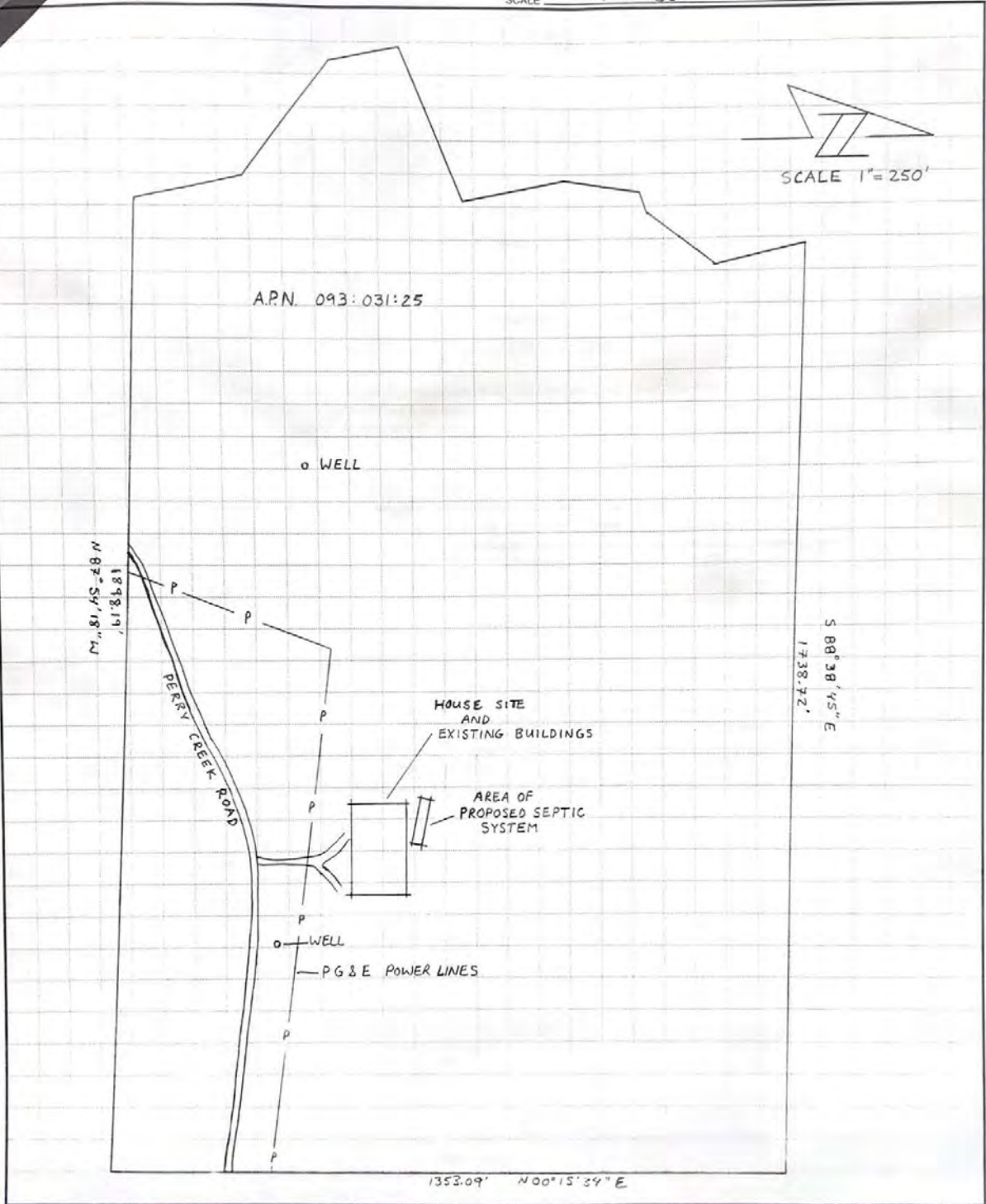
JOB 74-17 SHEET NO. \_\_\_\_\_ OF \_\_\_\_\_  
 CALCULATED BY TS DATE 4/20/94  
 CHECKED BY GA DATE 5/12/94  
 SCALE 1" = 20'



PRODUCT 204-1 (Single Sheet) 205-1 (P3000) Inc. Concord, Mass. 01471. To Order PHONE TOLL FREE 1-800-225-6300

**LDON & ASSOCIATES**  
 Geological Consultants  
 621 Placerville Drive  
 PLACERVILLE, CALIFORNIA 95667  
 (916) 622-9579

JOB HARDE 94-19  
 SHEET NO. SITE MAP OF \_\_\_\_\_  
 CALCULATED BY TSL DATE 5/11/94  
 CHECKED BY \_\_\_\_\_ DATE \_\_\_\_\_  
 SCALE 1" = 250'



PRODUCT 254-1 (Single Sheets) 205-1 (Plots) (AED) INC. Groton, Mass. 01471. To Order PHONE TOLL FREE 1-800-225-6300

CCUP21-0002/Harde  
Exhibit J - Security Plan

130.41.100.4.F.13 The security plan for the operation that includes adequate lighting, security video cameras with a minimum camera resolution of 1080 pixels and 360 degree coverage, alarm systems, and secure area for cannabis storage. The security plan shall include a requirement that there be at least 90 calendar days of surveillance video (that captures both inside and outside images) stored on an ongoing basis and made available to the County upon request. The County may require real-time access of the surveillance video for the Sheriff's Office. The video system for the security cameras must be located in a locked, tamper-proof compartment. ***The security plan shall remain confidential.***