

#7

Ramirez, Angelica

From: jay caplan <jaycaplan@gmail.com>
Sent: Friday, May 1, 2020 12:23 PM
To: sbcob
Subject: Email 1 of 2 —Written submission for B of S meeting on Tuesday - item 7 Santa Rita Valley Ag appeal
Attachments: Busy Bee - Odor Report.pdf; ATT00001.htm



Caution: This email originated from a source outside of the County of Santa Barbara. Do not click links or open attachments unless you verify the sender and know the content is safe.

"Although the findings in these odor studies are site-specific to Busy Bee's location, the findings can be reasonably applied to the Santa Rita Valley Ag given their close proximity".

"Please attach to the public record of this appeal."

468 Poli Street, Suite 2E • Ventura, California 93001

Date: October 18, 2019

To: Ms. Sara Rotman, Busy Bee Organics

From: Scott Cohen, P.E., C.I.H. and Andre Almeida, P.E.

Re: **Cannabis Odor Modeling**

Sespe was hired to perform independent air quality analysis to clarify relative odor impacts from the subject property (Figure 1) and provide expert testimony regarding methods that were used and findings of the analytical effort.

Methods used in preparing this memo are the same as those used for industrial projects that emit air pollutants. Air pollution engineering and analysis is one of Sespe's core services and staff has assessed many industrial projects for significance of air quality impacts and air quality health risk assessment impacts. Resumes for Sespe staff that performed this work and briefs describing similar air quality projects are provided in Attachment 3.

In order to determine the relative impact of odor on various locations surrounding the Busy Bee Organics site, this document describes the existing setting and quantifies the severity and frequency of potential odor episodes.

1.0 EXISTING SETTING

The Project proposes to cultivate cannabis on 22 acres of the 64 acre parcel or approximately one-third of the available space. The parcel is located within lands zoned for agricultural use and specifically cannabis cultivation as described in applicable County Ordinances, Programs guidelines, and an existing programmatic environmental impact report (PEIR) that assessed impacts from cannabis cultivation during approval of those ordinances and programs. As discussed in the Staff Report, the Project including potential odor is consistent with the Ordinance and PEIR. Thus, additional analysis may not be required.

In addition to the land use and cannabis related ordinances and requirements, the County Air Pollution Control District Rule 303 (and California Health & Safety Code from which it derives its authority) prohibits nuisance as follows:

A person shall not discharge from any source whatsoever such quantities of air contaminants or other material in violation of Section 41700 of the Health and Safety Code which cause injury, detriment, nuisance or annoyance to any considerable number of persons or to the public or which endanger the comfort, repose, health or safety or any such persons or the public or which cause or have a natural tendency to cause injury or damage to business or property.

<https://www.ourair.org/wp-content/uploads/rule303.pdf>

Accordingly, odor emissions may be a nuisance if the following are true:

1. Injury, detriment, nuisance or annoyance results from the odor and the odor affects a considerable number of persons or the public; or
2. The odor endangers the comfort, repose, health or safety or any such [considerable number of] persons or the public; or
3. The odor causes or has a natural tendency to cause injury or damage to business or property.

If the County were to receive an odor complaint, Rule 303 is a standard by which the complaint and conditions on the ground would be evaluated. There have been eight (8) harvests of cannabis grown on the property since 2014. The County has not received any odor complaints related to this site.

Various documents relevant to cannabis are available on the APCD land use webpage under the subheading “Cannabis and Air Quality.”¹

2.0 ODOR MODELING

Information regarding cannabis odor was collected from resources referenced herein. In general, research indicates that the state-of-science remains lacking for this nascent industry. Nevertheless, Sespe was able to exercise some professional judgment and collect sufficient information from several sources to prepare an air dispersion model. Model results are consistent with the history of the site in which no complaints have been made. Model background, parameters and results are discussed below.

The United States Environmental Protection Agency (EPA) AERMOD (version 19191) gaussian dispersion model as implemented by the Lakes Environmental AERMOD View software package was used to predict concentrations of several odorous compounds that were described in the literature review. The AERMOD dispersion model is the preferred model by EPA (see Title 40 Code of Federal

¹ <https://www.ourair.org/land-use/>

Regulations Section 51, Appendix W)², CARB (see HARP webpage)³, and Santa Barbara County APCD (Modeling Guidelines for Air Quality Impact Assessment, April 2019)⁴. AERMOD is used by all types of industrial sources that emit pollutants to demonstrate that new and modified sources will not result in concentrations that exceed or contribute to an existing exceedance of an ambient air quality standard (AAQS). In addition, California agencies and air districts throughout the State use AERMOD to assess health risk from toxic air contaminants (TACs) under the AB 2588 Air Toxics Hot Spot Program and as needed to evaluate potential impacts under CEQA. Thus, it is appropriate to use AERMOD to evaluate potential for odor conditions around the Busy Bee Organics Project site.

2.1 Meteorological Data

One of the primary inputs to AERMOD is hourly wind data. Generally, meteorological stations should be within ten miles of a model domain (i.e., site and receptors) to possibly be considered representative. If no station exists, then prognostic wind data sets generated by the EPA processor software, MMIF, may be used to generate Mesoscale Meteorological 5 (MM5) datasets for use in modeling. In this case, the closest station with wind data is located on H Street in Lompoc. Given the distance and differences in terrain between Lompoc and the model domain, it was determined that MM5 generated wind data would be more representative. Therefore, Lakes Environmental was contracted to generate wind data that would be representative of conditions near the Project site. As discussed above, Lakes Environmental packages EPA AERMOD code and would be expert in assessing the representativeness and of wind datasets and in preparing MM5 data as was done in this case.

Site specific meteorological data for the time period of Jan 1, 2014 to Dec 31, 2018 (Attachment 2) was purchased from Lakes Environmental and used in the AERMOD model to calculate concentration of odorous chemicals in and around the Project site.

Flowering season generally occurs twice a year in June / July and in October / November but can vary depending on seasonal weather conditions. It is during this time that odor is a concern. Wind data was modeled for each of the five (5) years contained in the dataset. Normally, low wind speed results in stagnation and plumes remain more cohesive during stagnation producing the highest model concentrations. High wind periods result in greater dispersion of pollutants and lower concentrations.

Review of the wind dataset shows the frequency of Calm Winds (wind less than 0.97 Knots) was 0.51% during the flowering period. This means that throughout the course of a year, calm winds and potential for related high concentrations of odorous emissions from flowering cannabis may occur simultaneously for 0.1% of the time.

² <https://www.govinfo.gov/content/pkg/CFR-2018-title40-vol2/pdf/CFR-2018-title40-vol2-part51-appW.pdf>

³ <https://ww3.arb.ca.gov/toxics/harp/harp.htm>

⁴ <https://www.ourair.org/wp-content/uploads/aqia.pdf>

2.2 Cannabis Emissions Rates

The model contains a single area source with initial vertical dimension of 3 meters and initial release height of 1.5 meters emitting uniformly at a constant rate of 0.172 gram per second (g/s). The emissions rate was derived from an assumption that one (1) acre yields 200 kg of dry cannabis product (Kern County Cannabis Land Use Ordinance Project FEIR, July 2017).⁵

A pre-print copy of an article authored by researchers at University of North Carolina at Chapel Hill, University of Colorado at Boulder, Lancaster Environment Centre in United Kingdom, and University of California at Irvine titled “Potential Regional Air Quality Impacts of Cannabis Cultivation Facilities in Denver, Colorado” is under review for possible publication in the journal, Atmospheric Chemistry and Physics (ACP).⁶ The article presents “emissions capacity” on a dry weight basis of 100 µg of organic emissions per gram of dry weight cannabis product per hour (µg gdw⁻¹ hr⁻¹) which was used with the dry weight per acre to determine the 31-acre site specific emissions rate used in the model (0.172 g/s).⁷

2.3 Odor Thresholds

The Kern County FEIR contains data showing the relative amounts of various odorous chemicals associated with cannabis cultivation and an “ODT” odor threshold for each. The ODT is defined as the concentration of a compound that may be detectable by fifty-percent (50%) of the population and states that “nuisance levels typically occur at concentrations that are several multiples higher than the ODT.” Thus, using the ODT as a threshold for nuisance should be overly conservative and is the approach taken in evaluating the model results. Table 1 presents the relative rate of emissions and ODTs used to obtain the weighted ODT of 28.1 ppb that was applied to modeled data in order to produce an isopleth representative of the ODT for the mixture of odorous chemicals.

Table 1. Odor Thresholds

Chemical	Emissions Rate (g/s)	Relative Emissions	ODT (ppm)	Weighted ODT (ppm)
Benzaldehyde	2.59E-05	53.7%	4.17E-02	0.02240
Myrcene	2.05E-05	42.5%	1.30E-02	0.00553
Decanal	1.72E-07	0.4%	8.97E-04	0.00000
Heptanal	1.64E-06	3.4%	4.79E-03	0.00016
Mixture ODT:				0.02810

⁵ <https://kernplanning.com/environmental-doc/kern-county-cannabis-land-use-ordinance-project/>

⁶ <https://www.atmos-chem-phys-discuss.net/acp-2019-479/>

⁷ The Project site is 64 acres of which 31 acres are outside the riverbed and 22 acres (about one-third of the Project site) would be used for cannabis cultivation. The cannabis emissions modeled are based on the 31-acre value. Thus, the mass of emissions in the model is approximately 30% greater than necessary leading to odor estimates that are overly conservative.

2.4 Model Results

AERMOD produces output in units of $\mu\text{g}/\text{m}^3$ and the Lakes Environmental software contains a tool for converting results to other units. It was assumed that the average chemical weight for these compounds is 136.1 grams per gram-mole (g/g-mole) which is a value reported for myrcene and several other terpenes.⁸ Using the chemical weight, the model results were converted to parts per billion (ppb). Parts per billion concentration of the mixture was then divided by the mixture ODT (28.1 ppb) calculated in Table 1 to produce results normalized to the mixture ODT where a value of 1.0 is equal to the ODT, values lower than 1.0 are less than the ODT, and values greater than 1.0 exceed the ODT and are thus much more likely to be detected as odor. Figure 2 shows the model results which indicate that 99.8% of the time the odor is less than 1.0 ODT index at any point in the model domain (i.e., on- or off-site). In addition, the 0.8 odor index isopleth remains within the Project site.

Table 2. Discrete Receptors Including Residences

ID	UTM Zone 11 East (m)	UTM Zone 11 North (m)	Odor Index
1	754344	3834885	0.4497
2	754290	3834924	0.3363
3	754194	3834953	0.2664
4	754392	3834910	0.331
5	754753	3834810	0.2264
6	753826	3834793	0.2447
7	753605	3834813	0.1859
8	753488	3834726	0.1538
9	753451	3834684	0.1443
10	754075	3834453	0.4118
11	753806	3834560	0.2219
12	753812	3834512	0.2064
13	753830	3834454	0.2119
14	754428	3833184	0.06878
15	754658	3833639	0.1277
16	755046	3832953	0.06577
17	755665	3832724	0.06041
18	755090	3834525	0.1791
19	752248	3834465	0.05271
20	752255	3834520	0.05472

Source: Air dispersion modeling (Attachment 3).

⁸ <https://www.steePhill.com/science/terpenes>

The two-tenths of one percent (0.2%) of time that ODT may be greater than shown in the model is appropriate given analogous EPA ambient air quality standards which are promulgated as statistical standards. For instance, PM₁₀ and PM_{2.5} each are evaluated at the 98th percentile rather than the highest concentration output by the model or measured by an air agency. The form and values of ambient air quality standards are summarized by CARB⁹ and contain a footnote which states:

National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM₁₀, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m³ is equal to or less than one. For PM_{2.5}, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard....

3.0 CONCLUSION

Air dispersion modeling was performed to estimate the level of odor near the Project site. Concentrations of common odorous compounds found in cannabis and comprising the model output were then converted to an odor index using the odor detection thresholds and weighted amounts of the compounds. Odor indices greater than one (1.0) indicate a greater than 50% likelihood that odor would be detected and indices less than one (1.0) indicates less than 50% likelihood that odor would be detected. As shown on Figure 2, 99.8% of the time the odor index on-site is less than one (i.e., 0.8715 O.I.) and odor index is less than 0.8 O.I. at each location outside the property boundary. The greatest odor index value predicted by the model to occur at a residence is 0.45 O.I. which is exceeded less than 0.2% of the time at UTM Zone 11, 754344 m E, 3834885 m N. Given only half of people would detect odor at 1.0 O.I., much less than half of people would detect odor at residential locations surrounding the Project site. Given the range of odor indices at residences, detection of odor by occupants is considered unlikely resulting in compliance with APCD's Nuisance Rule discussed above and corresponding to a less than significant impact due to odorous emissions from the Project site.

⁹ <https://ww3.arb.ca.gov/research/aaqs/aaqs2.pdf>

Busy Bee Organics

ATTACHMENT 1
Figures

PROJECT TITLE:

**Discrete Sources & Receptors
Busy Bee Organics**



COMMENTS:

SOURCES:

1

RECEPTORS:

1576

NOTICE:

MODELER:

SDC

DATE:

9/13/2019

SCALE:

1:32,437

0 1 km

SESPE
CONSULTING, INC.

PROJECT NO.:

PROJECT TITLE:

**99.8%tile Peak Hour Odor Index
Busy Bee Organics**



ODOR INDEX

Max: 0.872 [ODOR INDEX] at (754250.00, 3834725.00)

COMMENTS:

SOURCES:

1

RECEPTORS:

3257

OUTPUT TYPE:

Concentration

NOTICE:

Values are relative.

MODELER

SDC

DATE:

10/18/2019

SCALE:

1:9,593



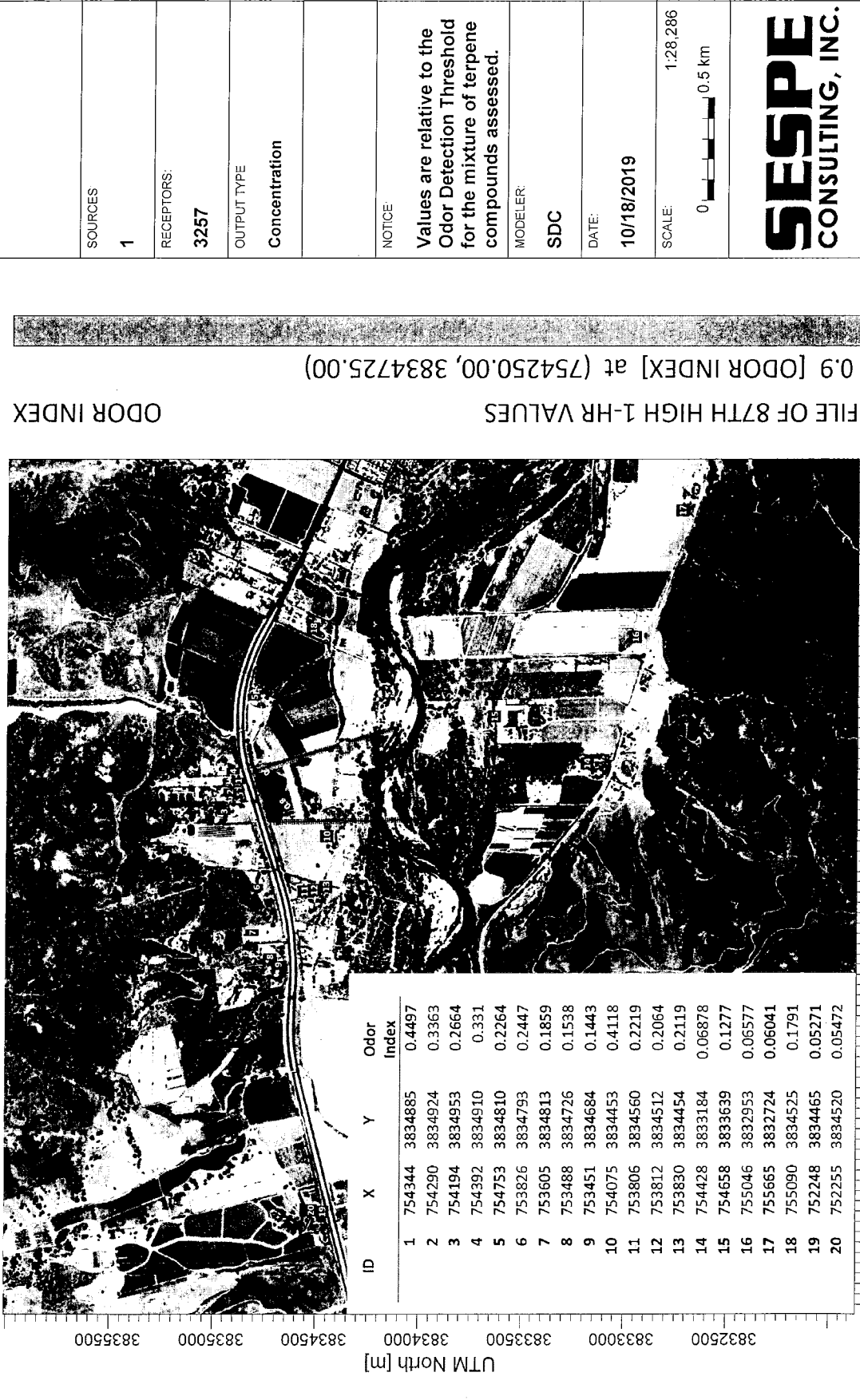
**SESPE
CONSULTING, INC.**

PROJECT NO.:

BU03.19.01

PROJECT TITLE:
99.8%tile Peak Hour Odor Index
Busy Bee Organics

COMMENTS:
 Figure 3



NOTICE
 Values are relative to the Odor Detection Threshold for the mixture of terpene compounds assessed.

MODELER:
 SDC

DATE:
 10/18/2019

SCALE:
 1:28,286

0 0.5 km

SESPE
 CONSULTING, INC.

PROJECT NO.:
 BU03.19.01

Busy Bee Organics

ATTACHMENT 2
Meteorological Data

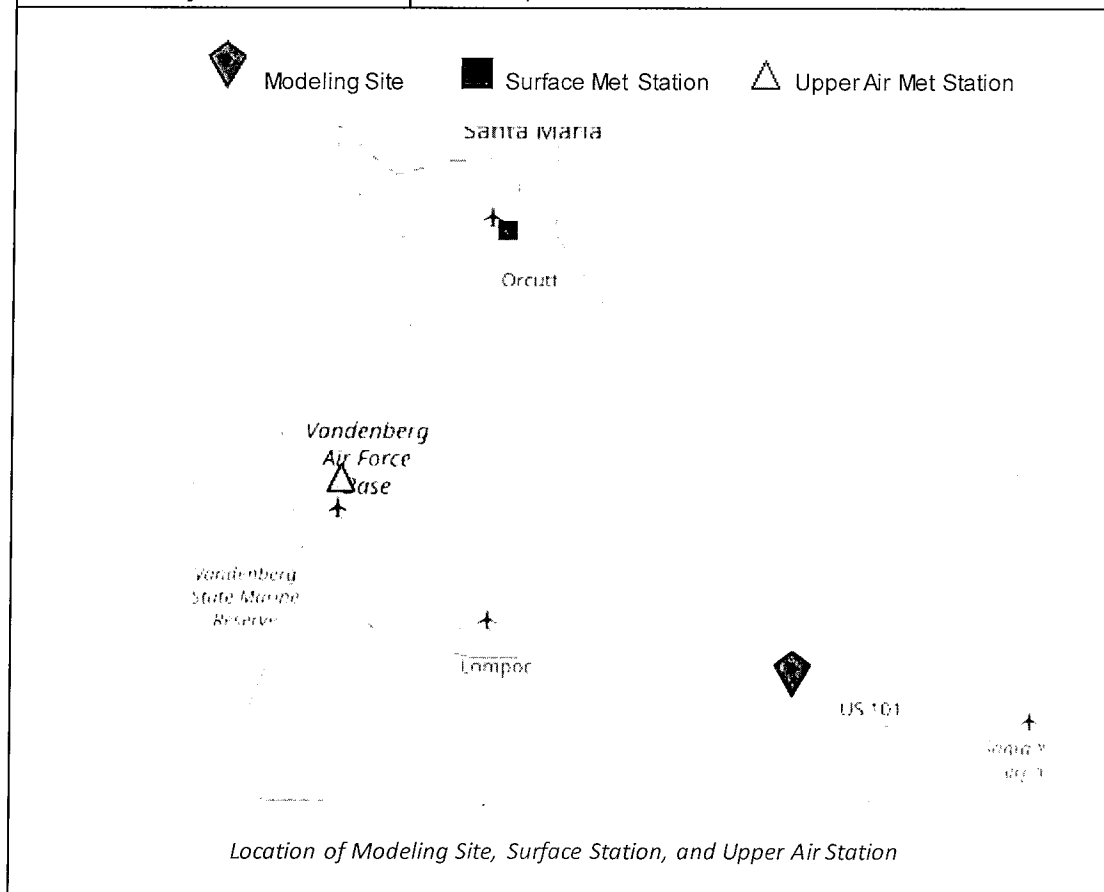
AERMOD-Ready Station Met Data

SFC and PFL Met Data Files

August 1, 2019

Met Data Order Information

Order #	MET1914753
Ordered by	Andre Almeida
Company	Sespe Consulting
Met Data Type	AERMOD-Ready Station Met Data (Surface & Profile Met Data Files)
Start-End Date	Jan 1, 2014 to Dec 31, 2018
Modeling Site Latitude	34.62083 N
Modeling Site Longitude	120.24722 W
Datum	WGS 84
Site Time Zone	UTC/GMT UTC-0800 hour(s)
Closest City & State	Buellton, California - USA



Model Versions Used for Met Data Preprocessing

Parameter	Value
AERMET	Version 18081
AERMINUTE	Version 15272
AERSURFACE	Version 13016

Hourly Surface Station Met Data Information

Parameter	Value
Surface Station Name	SANTA MARIA PUBLIC, CA
Latitude, Longitude	34.89406 N, 120.45216 W
Station ID (WBAN)	23273
ASOS Station?	Yes
File Format	NCDC TD-3505 (ISHD)
Base Elevation	72.5 m
Adjustment to Local Time	8 hours
Anemometer Height	10 m

1-Minute & 5-Minute ASOS Wind Data Information

Parameter	Value
AERMINUTE Data Used?	Yes
Station Name	SANTA MARIA PUBLIC, CA
Latitude, Longitude	34.89406 N, 120.45216 W
Station Code	SMX
Station ID (WBAN)	23273
File Format	NCDC TD-6405
IFW Installation Date	June 6, 2007

Upper Air Station Met Data Information

Parameter	Value
Upper Air Station Name	VANDENBERG, CA
Latitude, Longitude	34.75 N, 120.57 W
Station ID (WBAN)	93214
File Format	FSL
Adjustment to Local Time	8 hours

AERSURFACE Parameters

Parameter	Value
Land Use Data File	USGS NLCD92 - Binary Format
Center Lat/Long	34.89406 N, 120.45216 W
Datum	NAD83
Radius for Surface Roughness	1km
Number of Sectors	12 sectors of 30° (starting at 0°)
Period	Monthly
Surface Moisture	Year 2014: Average Year 2015: Dry Year 2016: Average Year 2017: Average Year 2018: Average
Other Settings	Continuous Snow: No Airport Site: Yes Arid Region: No

AERMOD View Instructions

Start your **AERMOD View** project and go to the **Meteorology Pathway – Met Input Data** window.

Under the **Meteorology Pathway – Met Input Data** window, specify the Surface Met Data file (*.SFC) and the Profile Met Data file (*.PFL) you received from Lakes Environmental according to table below:

AERMOD Parameters

Parameter	Value
Surface Met Data File	MET1914753_2014_2018.SFC
Profile Met Data File	MET1914753_2014_2018.PFL
Station Base Elevation (MSL)	72.5 m
Surface Station No.	23273
Surface Station Name	SANTA MARIA PUBLIC, CA
Start Year	2014
Upper Air Station No.	93214
Upper Air Station Name	VANDENBERG, CA
Start Year	2014

The screenshot shows the 'Meteorology Pathway' window with the following sections:

- Model:** AERMOD
- Met File Options:** Includes 'Data Period' and 'Wind Speed Categories'.
- Surface Met Data:** File: _____
- Profile Met Data:** File: _____
- Surface Station Primary Met Tower (Anemometer):**
 - Base Elevation (MSL): _____ [m]
 - Optional Wind Direction: Rotation: _____ [deg]
- Met Stations:**
 - Surface Station | Upper Air Station | Using On-Site Data
 - Station No.: _____
 - Year: _____
 - Station Name: _____ (Optional)
 - X Coord. [m]: _____ (Optional)
 - Y Coord. [m]: _____ (Optional)

Having Problems?

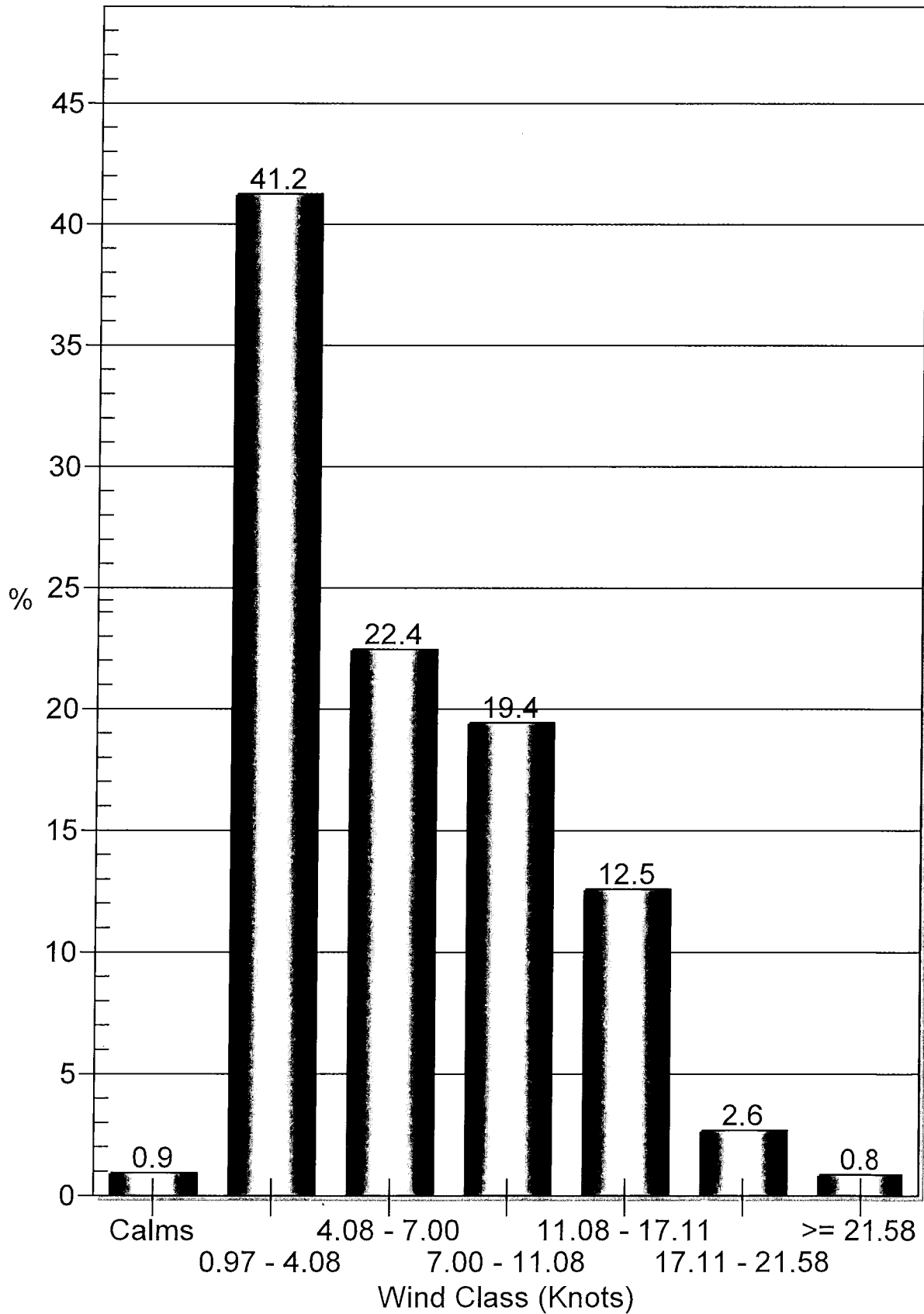
If you have any problems with the met data you received from us or need additional information on the above steps, please do not hesitate to contact us by sending an email to:

sales@webLakes.com

When contacting us, please provide:

- Met data Order # MET1914753
- Detailed description of the problem

Wind Class Frequency Distribution



Station ID: 23273
 Start Date: 1/1/2014 - 00:00
 End Date: 12/31/2018 - 23:59

Run ID:

Frequency Distribution
 (Count)

Wind Direction (Blowing From) / Wind Speed (Knots)

	0.97 - 4.08	4.08 - 7.00	7.00 - 11.00	11.00 - 17.11	17.11 - 21.58	>= 21.58	Total
355-5	204	96	93	107	2	0	502
5-15	184	69	99	135	12	0	499
15-25	148	43	69	164	28	0	452
25-35	176	32	61	147	21	0	437
35-45	146	35	42	57	3	0	283
45-55	178	41	19	14	1	0	253
55-65	181	48	10	0	0	0	239
65-75	177	54	11	0	0	0	242
75-85	270	59	6	0	0	0	335
85-95	293	81	2	0	0	0	376
95-105	397	101	12	1	0	0	511
105-115	654	130	12	0	0	0	796
115-125	845	227	18	2	2	0	1094
125-135	1034	243	32	15	1	1	1326
135-145	1064	288	64	43	12	6	1477
145-155	1081	324	96	69	8	1	1579
155-165	977	353	75	91	9	1	1506
165-175	749	274	67	73	12	0	1175
175-185	616	189	70	39	1	0	915
185-195	446	120	53	29	0	0	648
195-205	403	76	30	10	1	0	520
205-215	351	49	21	7	0	0	428
215-225	307	66	33	7	0	0	413
225-235	319	83	52	9	0	0	463
235-245	366	97	87	21	1	0	572
245-255	397	116	132	33	2	0	680
255-265	468	145	107	28	0	0	748
265-275	593	204	102	9	1	0	909
275-285	782	449	138	34	3	0	1406
285-295	901	943	532	386	184	34	2980
295-305	934	1461	1820	1530	661	262	6668
305-315	800	1529	2570	1560	160	40	6659
315-325	613	944	1284	559	11	3	3414
325-335	422	463	382	153	3	0	1423
335-345	320	245	183	76	4	1	829
345-355	254	138	103	83	3	0	581
Total	18050	9815	8487	5491	1146	349	43824

Frequency of Calm Winds: 381
 Average Wind Speed: 6.49 Knots

Station ID: 23273
 Start Date: 1/1/2014 - 00:00
 End Date: 12/31/2018 - 23:59

Run ID:

Frequency Distribution
 (Normalized)

Wind Direction (Blowing From) / Wind Speed (Knots)

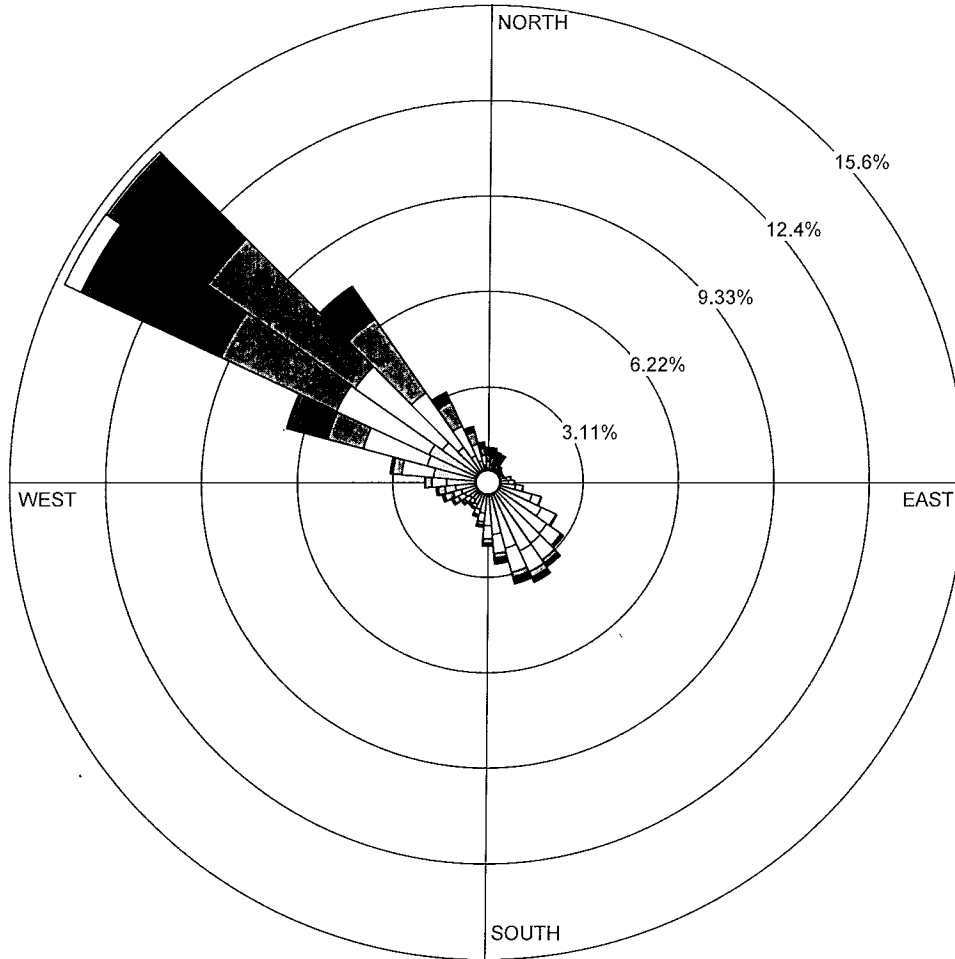
	0.97 - 4.08	4.08 - 7.00	7.00 - 11.00	11.00 - 17.1	17.1 - 21.58	>= 21.58	Total
355-5	0.004655	0.002191	0.002122	0.002442	0.000046	0.000000	0.011455
5-15	0.004199	0.001574	0.002259	0.003081	0.000274	0.000000	0.011386
15-25	0.003377	0.000981	0.001574	0.003742	0.000639	0.000000	0.010314
25-35	0.004016	0.000730	0.001392	0.003354	0.000479	0.000000	0.009972
35-45	0.003332	0.000799	0.000958	0.001301	0.000068	0.000000	0.006458
45-55	0.004062	0.000936	0.000434	0.000319	0.000023	0.000000	0.005773
55-65	0.004130	0.001095	0.000228	0.000000	0.000000	0.000000	0.005454
65-75	0.004039	0.001232	0.000251	0.000000	0.000000	0.000000	0.005522
75-85	0.006161	0.001346	0.000137	0.000000	0.000000	0.000000	0.007644
85-95	0.006686	0.001848	0.000046	0.000000	0.000000	0.000000	0.008580
95-105	0.009059	0.002305	0.000274	0.000023	0.000000	0.000000	0.011660
105-115	0.014923	0.002966	0.000274	0.000000	0.000000	0.000000	0.018164
115-125	0.019282	0.005180	0.000411	0.000046	0.000046	0.000000	0.024963
125-135	0.023594	0.005545	0.000730	0.000342	0.000023	0.000023	0.030257
135-145	0.024279	0.006572	0.001460	0.000981	0.000274	0.000137	0.033703
145-155	0.024667	0.007393	0.002191	0.001574	0.000183	0.000023	0.036030
155-165	0.022294	0.008055	0.001711	0.002076	0.000205	0.000023	0.034365
165-175	0.017091	0.006252	0.001529	0.001666	0.000274	0.000000	0.026812
175-185	0.014056	0.004313	0.001597	0.000890	0.000023	0.000000	0.020879
185-195	0.010177	0.002738	0.001209	0.000662	0.000000	0.000000	0.014786
195-205	0.009196	0.001734	0.000685	0.000228	0.000023	0.000000	0.011866
205-215	0.008009	0.001118	0.000479	0.000160	0.000000	0.000000	0.009766
215-225	0.007005	0.001506	0.000753	0.000160	0.000000	0.000000	0.009424
225-235	0.007279	0.001894	0.001187	0.000205	0.000000	0.000000	0.010565
235-245	0.008352	0.002213	0.001985	0.000479	0.000023	0.000000	0.013052
245-255	0.009059	0.002647	0.003012	0.000753	0.000046	0.000000	0.015517
255-265	0.010679	0.003309	0.002442	0.000639	0.000000	0.000000	0.017068
265-275	0.013531	0.004655	0.002327	0.000205	0.000023	0.000000	0.020742
275-285	0.017844	0.010246	0.003149	0.000776	0.000068	0.000000	0.032083
285-295	0.020560	0.021518	0.012139	0.008808	0.004199	0.000776	0.067999
295-305	0.021313	0.033338	0.041530	0.034912	0.015083	0.005978	0.152154
305-315	0.018255	0.034890	0.058644	0.035597	0.003651	0.000913	0.151949
315-325	0.013988	0.021541	0.029299	0.012756	0.000251	0.000068	0.077903
325-335	0.009629	0.010565	0.008717	0.003491	0.000068	0.000000	0.032471
335-345	0.007302	0.005591	0.004176	0.001734	0.000091	0.000023	0.018917
345-355	0.005796	0.003149	0.002350	0.001894	0.000068	0.000000	0.013258
Total	0.411875	0.223964	0.193661	0.125297	0.026150	0.007964	0.988910

Frequency of Calm Winds: 0.87%
 Average Wind Speed: 6.49 Knots

WIND ROSE PLOT:
 Busy Bee Organics

MM5 Wind Data (WGS 84 : 34.62083 N, 120.24722 W)

DISPLAY:
Wind Speed
Direction (blowing from)



WIND SPEED
 (Knots)

- >= 21.58
- 17.11 - 21.58
- 11.08 - 17.11
- 7.00 - 11.08
- 4.08 - 7.00
- 0.97 - 4.08

Calms: 0.87%

COMMENTS:	DATA PERIOD:	COMPANY NAME:	
	Start Date: 1/1/2014 - 00:00 End Date: 12/31/2018 - 23:59	MODELER:	SESPE CONSULTING, INC.
	CALM WINDS	TOTAL COUNT:	
	0.87%	43719 hrs.	PROJECT NO.:
AVG. WIND SPEED:	DATE:		
6.49 Knots	8/4/2019		

Wind Direction	0.00 - 2.62	>= 2.62	Total
348.75 - 11.25	544	1,018	1,562
11.25 - 33.75	145	862	1,007
33.75 - 56.25	154	459	613
56.25 - 78.75	189	385	574
78.75 - 101.25	259	648	907
101.25 - 123.75	433	1,524	1,957
123.75 - 146.25	563	2,668	3,231
146.25 - 168.75	621	2,665	3,286
168.75 - 191.25	590	1,436	2,026
191.25 - 213.75	471	637	1,108
213.75 - 236.25	370	658	1,028
236.25 - 258.75	427	1,009	1,436
258.75 - 281.25	501	1,787	2,288
281.25 - 303.75	568	8,792	9,360
303.75 - 326.25	440	10,818	11,258
326.25 - 348.75	232	1,846	2,078
Sub-Total:	6,507	37,212	43,719
Calms:			0
Missing/Incomplete:			105
Total:			43,824

Hours in Two Month Flowering Period:	1,084.5
Hours in Dataset:	43,719
Hours with Conditions Adverse to Inversion or Outside the Two Months Flowering Period:	97.5%

Busy Bee Organics

ATTACHMENT 3

Model Input File

(Download model output and other files at:

<https://www.dropbox.com/sh/82ihcrr8o3bqijs/AAAWXAhBYCjNnLucLteF4eb-a?dl=0>).

```

**
*****
**
** AERMOD Input Produced by:
** AERMOD View Ver. 9.8.0
** Lakes Environmental Software Inc.
** Date: 10/18/2019
** File: I:\z_AERMOD\BU03-BusyBeeOrganics\BBO_SiteMetData(3)\BBO_SiteMetData.inp
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** AERMOD Control Pathway
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  TITLETWO Lompoc H Street MetData
  MODELOPT DFAULT CONC
  AVERTIME 1 PERIOD
  POLLUTID ODOR
  RUNORNOT RUN
  SAVEFILE I:\z_AERMOD\BU03-BusyBeeOrganics\BBO_SiteMetData(3)\BBO_SiteMetData.svl 5
  ERRORFIL BBO_SiteMetData.err
CO FINISHED
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** AERMOD Source Pathway
*****
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**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
  LOCATION PAREA1 AREAPOLY 754157.477 3834711.136 98.200
** Source Parameters **
  SRCPARAM PAREA1 1.9477E-06 1.500 12 3.000
  AREAVERT PAREA1 754157.477 3834711.136 754384.427 3834784.312
  AREAVERT PAREA1 754497.902 3834417.373 754396.093 3834396.163
  AREAVERT PAREA1 754228.531 3834424.796 754154.295 3834362.226
  AREAVERT PAREA1 754152.174 3834479.943 754279.436 3834487.367
  AREAVERT PAREA1 754308.070 3834567.966 754241.257 3834582.813
  AREAVERT PAREA1 754155.356 3834561.603 754153.235 3834711.136
  SRCGROUP ALL
SO FINISHED
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** AERMOD Receptor Pathway
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  INCLUDED BBO_SiteMetData.rou
RE FINISHED
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** AERMOD Meteorology Pathway
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ME STARTING
** Surface File Path: I:\z_AERMOD\BU03-BusyBeeOrganics\BBO_SiteMetData(3)\
  SURFFILE MET1914753_2014_2018.SFC
** Profile File Path: I:\z_AERMOD\BU03-BusyBeeOrganics\BBO_SiteMetData(3)\

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PROFFILE MET1914753_2014_2018.PFL
SURFDATA 23273 2014
UAIRDATA 93214 2014
PROFBASE 72.5 METERS
ME FINISHED
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** AERMOD Output Pathway
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OU STARTING
RECTABLE ALLAVE 1ST-10TH 87
RECTABLE 1 1ST-10TH 87
** Auto-Generated Plotfiles
PLOTFILE 1 ALL 1ST
I:\z_AERMOD\BU03-BusyBeeOrganics\BBO_SiteMetData(3)\BBO_SITEMETDATA.AD\01H1GALL.PLT 31
PLOTFILE 1 ALL 2ND
I:\z_AERMOD\BU03-BusyBeeOrganics\BBO_SiteMetData(3)\BBO_SITEMETDATA.AD\01H2GALL.PLT 32
PLOTFILE 1 ALL 3RD
I:\z_AERMOD\BU03-BusyBeeOrganics\BBO_SiteMetData(3)\BBO_SITEMETDATA.AD\01H3GALL.PLT 33
PLOTFILE 1 ALL 4TH
I:\z_AERMOD\BU03-BusyBeeOrganics\BBO_SiteMetData(3)\BBO_SITEMETDATA.AD\01H4GALL.PLT 34
PLOTFILE 1 ALL 5TH
I:\z_AERMOD\BU03-BusyBeeOrganics\BBO_SiteMetData(3)\BBO_SITEMETDATA.AD\01H5GALL.PLT 35
PLOTFILE 1 ALL 6TH
I:\z_AERMOD\BU03-BusyBeeOrganics\BBO_SiteMetData(3)\BBO_SITEMETDATA.AD\01H6GALL.PLT 36
PLOTFILE 1 ALL 7TH
I:\z_AERMOD\BU03-BusyBeeOrganics\BBO_SiteMetData(3)\BBO_SITEMETDATA.AD\01H7GALL.PLT 37
PLOTFILE 1 ALL 8TH
I:\z_AERMOD\BU03-BusyBeeOrganics\BBO_SiteMetData(3)\BBO_SITEMETDATA.AD\01H8GALL.PLT 38
PLOTFILE 1 ALL 9TH
I:\z_AERMOD\BU03-BusyBeeOrganics\BBO_SiteMetData(3)\BBO_SITEMETDATA.AD\01H9GALL.PLT 39
PLOTFILE 1 ALL 10TH
I:\z_AERMOD\BU03-BusyBeeOrganics\BBO_SiteMetData(3)\BBO_SITEMETDATA.AD\0110GALL.PLT 40
PLOTFILE 1 ALL 87
I:\z_AERMOD\BU03-BusyBeeOrganics\BBO_SiteMetData(3)\BBO_SITEMETDATA.AD\01H87GALL.PLT 41
PLOTFILE PERIOD ALL
I:\z_AERMOD\BU03-BusyBeeOrganics\BBO_SiteMetData(3)\BBO_SITEMETDATA.AD\PE00GALL.PLT 42
SUMMFILE I:\z_AERMOD\BU03-BusyBeeOrganics\BBO_SiteMetData(3)\BBO_SiteMetData.sum
OU FINISHED
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** Project Parameters
*****
** PROJCTN CoordinateSystemUTM
** DESCPTN UTM: Universal Transverse Mercator
** DATUM World Geodetic System 1984
** DTMRGN Global Definition
** UNITS m
** ZONE 10
** ZONEINX 0
**
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Busy Bee Organics

**ATTACHMENT 4
Sespe Staff Resumes
And Project Briefs**

SESPE

CONSULTING, INC.

1565 Hotel Circle South, Ste. 370 • San Diego, California 92108
Office: (619) 894-8669 Fax: (805) 667-8104

Andre Almeida, P.E.

Engineer II
aalmeida@sespe.com

EDUCATION

UNIVERSITY OF CALIFORNIA, SAN DIEGO
B.S., Chemical Engineering

La Jolla, CA
2016

WORK HISTORY

SESPE CONSULTING, INC.
Engineer I, Engineer II

San Diego, CA
September 2016 – Present

UNIVERSITY OF CALIFORNIA, SAN DIEGO, FACILITIES MANAGEMENT
Energy Management Systems Engineer

San Diego, CA
January 2016 – September 2016

ALLIANCE TO SAVE ENERGY
Project Manager

San Diego, CA
February 2013 – December 2015

SCRIPPS INSTITUTION OF OCEANOGRAPHY
Thermodynamics Engineering Consultant

San Diego, CA
April 2013 – January 2014

EXPERIENCE

AIR QUALITY

Experience in modeling air pollutant diffusion from industrial projects and preparation of technical reports. Familiarity with applicable federal, state, and county guidance for air quality modeling, including guidance from 6+ California air districts.

Prepared air dispersion models using AERMOD and assessed health risk using CARB HARP software for many projects and purposes including as part of air permitting and CEQA impact analysis.

Proficiency writing Health Risk Assessments for CEQA Environmental Impact Reports that involve calculations of:

- The pollution output levels of facility devices;
- Resulting ground level concentrations of pollutants at various receptors;
- Health impact to receptors, including;
 - Acute impact,
 - Chronic impact,
 - Long term cancer risk.

Prepared various compliance reporting documents and provided consultation related to compliance issues. Specifically, emissions inventory (GHG, criteria and air toxics) protocols and reporting; violation response and negotiation, and annual compliance certifications/renewals.

COMPUTATIONAL MODELING

Experience modeling natural and industrial systems, including:

- Health risk assessment and criteria pollutant modeling using software including AERMOD, HARP2, and CalEEMod;
- Industrial project toxics, criteria pollutant, and GHG emissions estimating using CalEEMod software;
- Developing and implementing energy use optimization models for high energy use industrial equipment, including HVAC equipment, lab fume hoods, -80°C freezers ; and
- Preparing energy production potential calculations and reports on geological heat flow.

Data Science, Software Development, and Automation

Scripting Experience in the following languages:

Python (specialization in “NumPy” and “PANDAS” Modules)

Visual Basic for Applications (VBA)

Matrix Laboratory (MATLAB)

Successful design, production, and implementation of software for:

- Automated dataset analysis and manipulation;
- health risk assessment modeling; and
- stormwater chemical compliance assessment.

ENERGY AUDITING AND OPTIMIZATION

Experience analyzing office, laboratory, and industrial spaces and providing recommendations for reducing energy use and increasing efficiency, including:

- Behavioral changes;
- Process adjustments;
- Retrofits.

INDUSTRIAL HYGIENE

Experience in worker health and safety including:

- Sampling for Silica and Noise in mining environments;
- Conducting assessments of employee exposure to hazardous materials during industrial operations; and
- Providing safety training to lab occupants working with volatile reagents in a lab setting.

REGISTRATIONS AND CERTIFICATIONS

Registered Chemical Engineer: California CH6933

EDUCATION

UNIVERSITY OF CALIFORNIA, SANTA BARBARA Santa Barbara, CA
B. S. Mechanical Engineering June 1993

WORK HISTORY

SESPE CONSULTING, INC. Ventura, CA; San Diego, CA
Principal Engineer May 2019 – Present
Project Manager III June 2009 – May 2019

COUNTY OF SAN DIEGO. San Diego, CA
Air Pollution Control District Hearing Board Member September 2014 – September 2018

WEST COAST ENVIRONMENTAL AND ENGINEERING Ventura, CA; San Diego, CA
Managing Engineer 1996 – May 2009

LOS ALAMOS NATIONAL LABORATORY Los Alamos, NM
Hazardous Waste Technician IV 1994 – 1995
Graduate Research Assistant, Hydrology Group 1993 – 1994

Recent work history includes:

- Provision of EH&S permitting and compliance services for industrial and municipal clientele.
- Management of southern California branch office(s) and staff including acquisition of office space, furniture, equipment, and consumables; installation and maintenance of network infrastructure and information systems; human resource functions such as hiring, firing, and policy enforcement; transitional duties during acquisition of another small consulting company; and interface with property manager(s).
- Management of multiple, simultaneous consulting projects of various sizes, durations, locations, complexities, and subject matter. Tasks include proposal scoping, costing, writing and interviewing; primary contact for client, agency staff and other stakeholders; budget and schedule tracking; invoice preparation and distribution.
- Interpretation and tracking of regulatory, planning and legal developments and documentation to identify potential opportunities and challenges; ensure that work product is prepared using the most current and defensible method available; and illuminate alternative and/or novel approaches that may be implemented.
- Marketing through active participation in various associations and other groups including volunteering to serve as chair, secretary, host, or another role in committees and for meetings; public speaking, booth attendance, and entertainment of clients during conferences; writing articles for trade journals; and donation of professional services as may be needed to track issues, attend meetings, strategize and communicate when an undesirable restriction has been proposed.

- Using and learning to use computers to most efficiently accomplish work at-hand including specialized software (e.g., AERMOD, HARP, EMFAC, CalEEMod, GIS, RTNM, SoundPlan, AggFlow); office productivity software (e.g., Word, Excel, Access, VBA); graphics software (e.g., Photoshop/Illustrator, 2D CAD, etc.); networking software (e.g., LAMP stack).
- Technical support and process development for publishing large environmental documents (EIRs).
- Core skill set includes:
 - Project Management
 - Technical Writing
 - Air Quality and Greenhouse Gases
 - Noise and Vibration
 - CEQA/NEPA
 - Dispersion Modeling and Health Risk Assessment
 - Construction and Mining
 - Industrial Hygiene

EXPERIENCE

Technical Analysis for CEQA/NEPA and Special Studies

- Practiced in the subject areas of air quality, health risk assessment, climate change, noise, vibration, and hazardous materials. Emphasis in assessing fugitive dust and diesel exhaust.
- Applied CEQA requirements in light of existing case law to assess baseline, cumulative effects, and project fair share of mitigation for cumulative effects.
- Developed feasible, enforceable mitigation measure language including some creative solutions.
- Successfully defended work-product through litigation of several project EIRs by supporting efforts of legal counsel in the analysis of opposition arguments and the development counter arguments.
- Experienced a variety of project types including mining, asphalt, ready mix concrete, residential/commercial developments, arterial-freeway interchange improvements, and a university long range development plan.

Industrial Environmental Compliance and Permitting

- Involved in most aspects of environmental compliance for industrial clients including development of management systems and policy.
- Permitted air emissions sources in local and federal (Title V) programs including all aspects of new source review, emissions calculations and modeling, health risk assessment, best available control technology (BACT) cost effectiveness, and portable equipment regulation.
- Permitted industrial process water discharge to land under National Pollutant Discharge Elimination System (NPDES) and to sewer.

- Prepared storm water pollution prevention plans (SWPPP) and related documents including notices of intent, annual reports, and notification to regional water board of illicit discharges.
- Performed services related to characterization and management of hazardous materials and wastes including:
 - Release investigation and sampling.
 - Storage, use and transport as regulated by EPA, OSHA, DOT and the Uniform Fire Code.
 - Risk management plans (RMPs) for facilities with acutely hazardous material.
 - Emergency response plans and spill pollution control and countermeasures (SPCC) plans for facilities with bulk petroleum storage.

Air Quality Expertise

- Prepared air permit applications and negotiated conditions on permits to construct and operate various types of sources and facilities (including those in Title V) in each major California air district, some smaller districts, and several states. Work included each facet of new source review including cost effectiveness and feasibility for BACT, offsets, modeling and coordination of start-up/initial source testing.
- Prepared air dispersion models using AERMOD and assessed health risk using CARB HARP software for many projects and purposes including as part of air permitting and CEQA impact analysis.
- Represented California Mining Association and provided consultation to Arizona Rock Products Association during fugitive dust rulemaking in South Coast AQMD (Rule 1157) and Maricopa County (Rule 316).
- Prepared various compliance reporting documents and provided consultation related to compliance issues. Specifically, emissions inventory (GHG, criteria and air toxics) protocols and reporting; violation response and negotiation, and annual compliance certifications/renewals under Title V.

Worker Safety and Industrial Hygiene

- Provided regulatory analysis and technical support to clients with issues in the areas of indoor air quality (IAQ) and other employee exposure investigations.
- Process hazard analysis, injury and illness prevention (IIPP), safety program management, OSHA violation response, employee training, hazard communication (HAZCOM), personal protective equipment (PPE) selection, confined space, lockout/tagout, health risk assessment, noise, and fall protection.

REGISTRATIONS AND CERTIFICATIONS

Registered Mechanical Engineer: California M30545

Certified Industrial Hygienist: 8162CP

County of San Diego CEQA Air Quality and Noise Consultant Lists

PUBLISHED ARTICLES AND PRESENTATIONS

California Construction and Industrial Mineral Association Education Conference or Meeting
The Air UP There – Positive Health Impacts from Industry’s Investments in Diesel Truck Engines (2018).
Distance Matters – Assessing Regional Air and GHG Impacts of Mining Projects Under CEQA (2015).
Industrial Hygiene Statistics and Exposure Assessment (H&S Committee Meeting, 7/2015).
Navigating the Rocky Road to Portable Permitting in California (2013).
Community Noise Impact Assessment Primer (2011).
Portable Plant Air Permitting, What You Need to Know (2009).
Case Study – CEQA Analysis of Air Quality, Greenhouse Gas, and Health Risk Impacts (2008).

Industrial Environmental Association Education Conference or Meeting
Air Permitting 101 & 102 (2015 & 2016).
California Health Risk Assessment Methodology Changes (Air Committee Meeting, 4/2014).

California Asphalt Magazine
Health Risk Assessment – What to Expect and How to Prepare (July 2017).
Portable Equipment Air Permitting and Compliance Status Update (July 2012).
Can California Afford its Climate Change Policies? (July 2011).

California Precast Concrete Association (CPCA) Member Meeting
Current Air Quality Issues Facing Processors of Non-Metallic Minerals (November 2005).

AFFILIATIONS AND MEMBERSHIPS

California Construction and Industrial Materials Association Member and *Associate of the Year in 2015*

California Asphalt Pavement Association Environmental Committee Co-chair (2010 to present)

Industrial Environmental Association Member

Industrial Minerals Association of North America Member

American Industrial Hygiene Association Member

San Diego APCD Air Pollution Permit Streamlining Committee/Compliance Improvement Team (APPS/CIT)
Meeting Chair (7/2012 to 7/2017)

EDUCATION

UNIVERSITY OF WINDSOR,
BASc, Chemical Engineering

Windsor, Ontario, Canada
1981

REGISTRATIONS

- Professional Engineer, Chemical Engineering, California (#CH005847)
- South Coast Air Quality Management District Certified Permitting Professional (#B4317)

WORK HISTORY

SESPE CONSULTING, INC.
Vice President

Ventura, CA
Present

- Provide executive management and company quality assurance/quality control.
- Develop work product methodologies, procedures and formats for numerous company services including site assessment, regulatory compliance, hazardous materials, hazardous waste, etc.
- Hiring, training, developing, and managing junior staff.
- Client management.
- Project management including scheduling, coordination, budgeting, and quality control.

EXPERIENCE

35 years of professional experience including 30 years of wide ranging consulting experience covering all aspects of environmental compliance, assessment and management.

INDUSTRY EXPERIENCE

- Provided consulting services to a wide variety of industries, including:
 - Aggregate mining and processing
 - Ready mixed and asphaltic concrete production
 - Crude oil production and processing
 - Refined oil bulk storage, blending and distribution
 - Scrap metal recycling
 - Metal forging and forming
 - Food processing and agricultural
 - Water purveyors
 - Semiconductor manufacturing
 - Real estate development
 - Power generation
 - Glass production

WATER QUALITY

- National Pollutant Discharge Elimination System (NPDES) and Waste Discharge Requirements (WDR) permitting, monitoring, reporting and compliance support including evaluation of technical issues such as ion imbalance toxicity and mixing zones.
- Discharge treatment studies for various manufacturing facilities, in particular ion exchange pilot testing for removal of toxic metals to meet CTR/NPDES permit limits for inland surface waters.
- Industrial sewer discharge support including preparing baseline monitoring reports, obtaining local sewer permits, Notice of Violation (NOV) resolution and treatment system evaluations.
- Preparation of Storm Water Pollution Prevention Plans (SWPPPs) for a variety of industrial and manufacturing facilities.

SITE ASSESSMENT AND ENVIRONMENTAL AUDITS

- Completed environmental compliance audits for numerous manufacturing operations including construction materials, wastepaper recycling, circuit board manufacturing, electronics equipment manufacturing, and bottled water production.
- Conducted pre-acquisition due diligence compliance audits for aggregate mining, ready mixed and asphaltic concrete production facilities.
- Provided project management for more than 1,000 Phase I Site Assessment projects including agricultural parcels, heavy and light manufacturing sites, oil and gas production facilities, and commercial and residential lands.

HAZARDOUS MATERIALS

- Hazard Communication Program development and implementation including conducting hazardous material audits and creating MSDS tracking and reporting systems.
- Hazardous Material Business Plan preparation and Tier II reporting.
- Prepared and/or certified Spill Prevention Control and Countermeasure (SPCC)
- Prepared Facility Response Plans for large oil blending and packaging facilities.
- Prepared Toxic Release Inventory (TRI) reports for a variety of manufacturing facilities and reported emissions using Form R/Form A.
- Risk Management Plan (RMP) preparation for facilities storing anhydrous ammonia and chlorine gas.
- Facility design support for California Fire Code (CFC) and California Building Code (CBC) requirements.

HAZARDOUS WASTE

- Hazardous waste compliance support.
- Waste Minimization (SB14) Plan and Report preparation.
- California Tiered Permitting support including preparation of necessary reporting forms, developing closure cost estimates, and certifying hazardous waste treatment tanks and containment areas.

LAND USE PLANNING AND PERMITTING

- Conditional Use Permitting (CUP) support
- Managing the preparation of technical studies in support of environmental impact reports
- Permitting of new crude oil wells and production facilities

Project: Azusa Rock Quarry Expansion Project EIR

Dates: 2006 to 2011

Air Quality and Climate Change Studies and Subsequent Litigation Support

Client: Vulcan Materials Company – Western Division

Location: City of Azusa

Contract Value: \$ 150,000

Contact: Jim Gore, Permitting and Government Relations
323.474.3231
gorej@vmcmail.com

Description: Vulcan Materials Company was proposing to increase mining from approximately 1.5 million tons per year (MTPY) to an estimated 10.8 MTPY and increase material processing, which required amending the existing Reclamation Plan and Conditional Use Permit, and preparing an Environmental Impact Report (EIR). SESPE employees, while at another firm, were hired to prepare stand-alone technical reports in support of the EIR. This effort included developing impact reduction strategies and creating Project Design Features that were incorporated into the project to reduce potentially significant impacts to air quality.

The Project sought to process up to 6 MTPY at a rate of 50 percent above the average day on the peak day in a 312-day year (i.e. 28,800 tons per day on the peak day). This peak day amount coincided with the maximum throughput that could be processed by mining equipment and haul trucks that load the processing plant as determined by cycle time analysis for the process. Peak day assumptions are important because they are used to estimate regional air quality impacts in the South Coast Air Quality Management District.



Distinctive Characteristics: Several distinctive characteristics are associated with the Azusa Rock Quarry. Two residential neighborhoods are located within one and one-half miles from the site. The northern quarry boundary is adjacent to the Angeles National Forest. Reclamation included a new process known as “micro benching” that will allow for native vegetation to be planted in benches on the previously mined slopes thereby integrating the facility with the surrounding topography.

Outcome: Project Design Features were successfully developed that were incorporated in the EIR, which eliminated the need to develop mitigation measures.

Project: Lebata Big Rock Creek Project Surface Mine Reclamation Plan and EIR
Air Quality and Climate Change Impact Assessments

Dates: 2004-2014

Client: McGee and Associates

Location: Los Angeles County, CA

Contract Value: ≈ \$150,000

Contact: Jim McGee, Esq.
McGee and Associates
949.640.0050
jimmcgee@mcgee-law.com

Description: A newly proposed mine, this project involves mining approximately 275 acres of a 310-acre site over a 50-year permit period. Approximately 42.3 million gross tons of sand and gravel would be excavated in two phases at an extraction rate ranging from 0.5 million and 2.5 million tons per year. In addition to aggregate surface mining and processing facilities, the project would include a ready-mixed concrete plant, a Vac-Lite plant (producing lightweight concrete), an asphalt mixing plant, a raw cement and aggregate transfer and distribution facility (via existing rail), and water reclamation and fines recovery facilities. The reclaimed end use for disturbed lands would be open space/groundwater recharge and/or stormwater retention basins. Beginning with a previous employer, SESPE staff members have been working on this project since 2004. Leбата submitted an application to the County for the Surface Mining Permit and Reclamation Plan in 2007. From 2009 to 2014, regulatory issues and project design changes led to numerous revisions to the Reclamation Plan, the environmental impact report (EIR), and supporting technical studies. SESPE was actively involved in addressing those changes, and circulated a Draft EIR for public review in February 2014.



A - Existing conditions



B - View after proposed facility is installed.

Distinctive Characteristics: At the conclusion of a pre-production phase of mining (up to 5 years), the project facilities pad would be about 25 to 35 feet below surrounding natural grade and thus shielded to reduce noise and to minimize visibility of processing facilities and off-site lighting impacts. In addition to minimizing distance setbacks and maintaining aggregate reserve volume, mining and reclamation phasing are timed so at least 71 percent of the site will be available as undisturbed and/or reclaimed habitat areas at any point in time.

Outcome: The County of Los Angeles certified the Final EIR in 2014 and approved the Draft EIR's "environmentally superior" alternative. SESPE finalized the Reclamation Plan consistent with the County approval.