Date: July 6, 2016

To: Arnaud Marjollet
Director of Permit Services
San Joaquin Valley Air Pollution Control District
1990 East Gettysburg Ave.
Fresno, CA 93726

From: Patrick Thompson, CEO
EcoPAS, LLC
3130 Skyway Dr., Suite 401B
Santa Maria, CA 93455

Re: Comments on Proposed Initial Permit for Project N-1152244

Dear Arnaud,

Thank you for including EcoPAS in the engineering analysis for project N-1152244 (Delicato Vineyards Manteca). As a developer of smart condensation technology for capturing volatiles from winery fermentation, we are always striving to lower costs and increase adoption of aroma capture and emissions control technologies. This letter includes our comments on the District's preliminary decision to issue the Authority to Construct (ATC) for this project.

This proposed ATC is one of five (5) new proposed ATCs collectively permitting ~500 tons of uncontrolled criteria pollutants from winery operations in the San Joaquin Valley. In light of the SJVAPCD's "No Stone Left Unturned" policy, we'd like to offer the following:

- The EPA has stated that multiple control technologies have been achieved in practice for this category of source, and therefore any valid ATC must comply with a determination of **lowest achievable emissions rate (LAER)**.
- The proposed project's **cost analysis is vastly divergent** from ours. For example, our estimate of total installation costs of this control system is $1,981,431, while the project estimate is $19,238,728 (a factor of *10 times* higher).
- EcoPAS is willing to install and support a **control system at our expense**, with the applicant paying only for tons of VOCs actually captured.
    a. EcoPAS is willing to **fund a District study**, using an objective 3rd-party engineering firm with wine industry experience, to determine reasonable installation and operation costs.
    b. EcoPAS is willing to **provide a guarantee of cost effectiveness**. We will guarantee that total $/ton is less than the District's threshold, and be directly liable if actual costs exceed the unbiased engineering firm's estimates.
    c. Applicant may also **share in byproduct revenues** (if so desired).

With similar historical permits for the valley wine industry, there has been much debate about the myriad details of scope, fact, procedure, and cost. With this proposal, we are attempting to craft a creative solution to the analysis gap, as well as shifting financial liability away from the applicant if something goes wrong.

Expanded Cost Breakdown

The proposed ATC states that the District "requested a detailed breakdown of the cost of each component of each cost category from the vendor but has not received the requested additional

information." We apologize for this misunderstanding. After receiving revised and expanded documentation from EcoPAS on March 28th, District engineers informed us in writing that they had no further questions, but would contact us if they had any unanswered questions. From the proposed ATC, we now understand that the District required further details on how specific costs were allocated to each category. The following table attempts to provide the requested detail:

Description	**EcoPAS Estimate**	**Project Estimate**
Direct Costs		
PAS-100 Condenser(s) Qty. 36*	$7,020,000	$8,190,000
Instrumentation	$72,000	$819,000
Sales Tax	$302,738	$353,194
Freight	$18,208	$409,500
Foundations and supports	$50,400	$1,368,037
Handling and erection	$120,000	$781,736
Electrical	$54,000	$781,736
Painting	$0	$97,717
Insulation	$0	$977,169
PLC Programming	$72,000	$420,000
Total Installation Costs	$689,346	$6,008,089
Total Direct Costs (DC)	$7,709,346	$14,198,089
Indirect Costs		
Engineering	$0	$977,169
Construction & field expenses	$0	$488,585
Contractor fees	$90,000	$977,169
Start-up	$0	$195,434
Source Testing	$144,000	$630,000
Owner's cost	$0	$0
Total Indirect Costs (IC)	$234,000	$3,268,357
Total Direct & Indirect Costs (DC+IC)	$7,943,346	$17,466,446
Contingency - 15%	$0	$2,619,967
Total Capital Investment (TCI)	**$7,943,346**	**$20,086,413**
Annualized Capital Investment (x0.163)	$1,294,765	$3,274,085
Operation & Maintenance Costs		
Description	**EcoPAS Estimate**	**Project Estimate**
Operator	$89,916	$104,895
Supervisor	$13,488	$15,734
Maintenance	$0	$104,895
Overhead	$0	$198,251
Administration	$27,480	$401,728
Property Taxes	$0	$200,864
Insurance	$0	$200,864
Annual Source	$144,000	$0
Total Annual Costs	**$274,884**	**$1,227,231**
Ducting & CIP		
Ducting	$995,085	$4,345,659
Clean-in-place (CIP)	$0	$2,996,656
Total Ducting and CIP	**$995,085**	**$7,342,315**
Ducting & CIP (Annualized)	$162,199	$1,196,797
TCI (Annualized)	$1,294,765	$3,274,085
O&M	$274,884	$1,227,231
Total Annual Cost	**$1,731,848**	**$5,698,114**
Cost/Ton (109.3 tons captured)	$15,845	$52,133

As is evident from the table above, there is substantial divergence between EcoPAS and District/Applicant estimates. We propose to engage a qualified objective 3rd party to assist in closing this gap (and we are willing to fund this study). Further, we propose to be liable for eventual cost overruns, should any occur.

Our cost estimates are based on actual experience with 2015 full-crush operation of PAS-100 (manifold to 24 tanks) in Santa Barbara County. Supporting documentation is available.

*IMPORTANT NOTE: A portion of the cost divergence is a function of the differences between our "potential to emit" calculations (based on District direction on turns and emissions factors), and the new "Specific Limiting Condition" (which would appear to require less condensing capacity).

Question Regarding Indemnification Agreement and Letter of Credit

The author is curious if this is a common permit requirement? At first glance, it gives the impression that the District is concerned this ATC issuance will generate CEQA liability, and therefore is requiring applicant to bear legal responsibility. Would actual controls eliminate the need for indemnification and letter of credit?

2016 Ozone plan for 2008 Ozone Attainment

The recently adopted plan for Ozone attainment states that "…the District commits to amend Rule 4694 to include additional requirements to further reduce emissions from wine fermentation processes as appropriate by December 31, 2018." Each year we get only one chance (the late-summer early-fall crush) to evaluate fermentation emissions control technologies. We submit that this new source review and proposed permit is an excellent opportunity for industry and regulators to work together to further validate actual economic feasibility of implementing real emission control technologies.

In closing, we remain eager to work together to implement feasible capture technologies in this important category of uncontrolled emissions.

Thanks and best regards,

Patrick Thompson

cc: John Dunlap
Kerry Drake, Gerard Rios, EPA
Wes Ingram, Tung Le, CARB

"Pollution is nothing but the resources we are not harvesting. We allow them to disperse because we've been ignorant of their value."

-Buckminster Fuller

"EcoPAS has cracked the code, turning a previously wasted resource into a wonderful new winemaking resource."

-Clark Smith, 2016 Innovator of the Year (Wine Business Monthly)