



January 21, 2016

Patrick Thompson  
EcoPAS  
5319 University Drive, Suite 430  
Irvine, CA 92612

Re: BACT Determinations

Dear Patrick,

Thank you for spending the time meeting with me last week to discuss the EcoPAS winery emission control system and how the District's regulatory requirements apply. Specifically, our conversation focused on our New Source Review Best Available Control Technology (BACT) requirements. As we discussed, projects at wineries that have the potential to emit 25 pounds per day or more of VOCs trigger our BACT threshold in Rule 802.

BACT is defined in terms of both technical feasibility and cost effectiveness. For the former, EcoPAS has been working for the past few years in delineating the technical feasibility of your process. In fact, your control system has been in use at the Central Coast Wine Services Santa Maria facility in a manner that assists the company to keep within its daily VOC permit limit. The use of winery controls by CCWS was voluntary and not the result of BACT requirements. None-the-less, it appears that the first prong of the BACT determination, technical feasibility, has been met.

The second prong of the BACT determination is the cost effectiveness test. We discussed how the District goes about a cost effectiveness calculation. Namely, we follow USEPA's Cost Control Manual<sup>1</sup> as a guiding document. Specifically, we use the annualization cost method (aka the Capital Recovery Cost Method) described in Section 2.4.4.4 of the Manual to derive an equivalent annual control equipment capital cost. The capital recovery factors (CRF) in Appendix A.2 should be used. Control equipment life is 10 years by default, however the District will evaluate any request for a different time period if substantial backup documentation is provided to support the request.

For the interest rate, the District follows the procedures used by the Bay Area Air Quality Management District in the Policy and Implementation Procedure section of their BACT Workbook<sup>2</sup>. As noted in the BAAQMD document:

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<sup>1</sup> See [http://www3.epa.gov/ttn/catc/dir1/c\\_allchs.pdf](http://www3.epa.gov/ttn/catc/dir1/c_allchs.pdf)

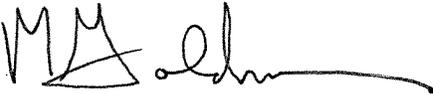
<sup>2</sup> See <http://hank.baaqmd.gov/pmt/bactworkbook/>

*"The current District policy regarding the interest rate (to be used in cost-effectiveness calculations) is similar to the guidelines used by the California Air Resources Board. First, take as a benchmark the interest rate on United States Treasury Securities with a maturity that most closely approximates the project horizon (typically 10 years), add 2 percentage points for incremental risk, and then round the total up to the next higher integer. Use of the 10-Year Treasury Note interest rate (yield) averaged over the previous 6 months will dampen the daily fluctuations of that index. And the addition of two percentage points and rounding up to the next higher integer rate will reflect more closely market conditions while adding further assurance that the project can be financed near or below that final calculated interest rate."*

As we discussed, the above is how we would address a BACT determination for any new or modified project for a winery whose project's potential to emit meets or exceeds 25 pounds per day VOCs. As noted in District policy, all units designated as BACT in the ATC permit must have verifiable permit conditions that address Monitoring, Recordkeeping and Reporting (MRR). This includes initial and ongoing control device efficiency testing. The specifics of the testing requirements are defined in a District-approved Source Test Plan in advance of issuance of the ATC permit for the facility in question when non-standard test methods are proposed. Once a control device is permitted as BACT (meeting the two prongs noted above), installed, tested and verified it is then typically considered as Achieved-in-Practice. In some instances, agencies, including ours, may wait for a years' worth of operation and a second verification test to label the technology as Achieved-in-Practice.

I hope this better explains the BACT process for our agency. Please call if you have any questions or concerns.

Sincerely,



Michael F. Goldman, Manager  
Engineering Division

Cc: David Harris  
Steven Colome, EcoPAS