

District Response to Environmental Protection Agency (EPA) Comments to SJVAPCD on ATC Project for E & J Gallo Winery, Facility # C-447, Project # C-1133347, Submitted on May 8, 2015

In the May 8, 2015 letter, comments were provided on the District's Preliminary Decision to issue Authority to Construct permits to EJ Gallo Winery to modify twelve existing 350,000 gallon wine storage tanks to add fermentation capability. In this correspondence, it stated that EPA's position is that wine fermentation operations have achieved emission reductions through the use of add-on controls and therefore use of this add-on control technology constitutes LAER.

As stated in the past, the District disagrees with EPA's position with regard to add-on control technology on wine fermentation tanks. In our "Achieved in Practice Analysis for Emission Control Technologies Used to Control VOC Emissions from Wine Fermentation Tanks" document (AIP Memo), the District evaluated in detail every known installation of add-on emission control technology used on wine fermentation tanks and concluded that none of the known installations can reasonably be considered to be Achieved in Practice (AIP) or to meet the definition of Lowest Achievable Emission Rate (LAER) at this time.

EPA has also expressed concern over some the evaluation criteria the District uses in our AIP and LAER determinations; specifically, the following criteria from the District's AIP Memo identified in italic text:

- *Whether the emission control technology in question was operated in the same manner that would be required by the District if the control technology was required as BACT*

EPA expressed concern that this evaluation criteria may exclude some controls that have achieved emission reductions during only part of a fermentation cycle. However, the District never used this sole criteria to exclude any control technologies that achieved actual emission reductions. In fact, as explained in the AIP Memo, this criteria was used in conjunction with other evaluation criteria to exclude control technologies whose use was entirely optional and which never actually demonstrated any achieved emission reductions with any degree of confidence or independent verification via emissions source testing.

- *How reliable has the control technology been over the life of its use?*

In the letter, EPA stated that no reliability concerns were raised for the control technology installation at Central Coast Wine Services (CCWS). The District excluded the one permitted installation of this technology from consideration as LAER for reasons other than reliability; namely, its use is entirely optional and at the facility's discretion, it is not required by permit to achieve any emission reductions or performance standard, and it has never been subject to an independent 3rd-party source test to verify either its emission control performance or the amount of emissions released into the atmosphere.

Furthermore, EPA stated that, despite its ongoing reliability issues, its continual failure to meet any of its claimed emission control performance targets, and SBCAPCD's recommendation to *not* consider this particular type of emission control technology for wine fermentation operations given their first-hand experience with it, the District should still consider the scrubber and hydrogen peroxide/UV treatment system employed by the Terravant Wine Company to be LAER for wine fermentation operations. For the reasons stated above as well as those presented in the AIP Memo, the District believes it would be irresponsible to consider the emission control system employed at the Terravant Wine Company to be LAER for wine fermentation operations given its operational history.

- *Has the control technology been verified to perform effectively over the range of operation expected for that type of equipment?*

EPA assumed that "range of operation" relates solely to the size of the emission unit and stated that it does not agree that the size of an emission unit is an appropriate basis for determining what constitutes LAER. In the AIP Memo, the District did not exclude any of the known installations of wine fermentation controls based on equipment size. In the context of an AIP and LAER analysis, "range of operation" typically includes factors such as gas stream composition, gas flow rate variability, pollutant concentrations, equipment duty cycles, process equipment emission characteristics (e.g. continuous emissions rate, non-steady-state emissions, etc.) as well as many other factors including equipment size. Factors such as these must be carefully considered to ensure a technically correct assessment of whether the example process emissions stream is characteristic of that under consideration as well as what emission rate or degree of control has actually been achieved.

- *Was the control effectiveness verified by performance test(s), when possible, or using other performance data?*

In the letter, EPA referenced a 2013 source test of a NoMoVo scrubber system installed at a Kendall Jackson winery for a temporary experimental research operation that was funded by a grant from BAAQMD as evidence that this emission control technology can achieve emission reductions from wine fermentation operations. As explained in the AIP Memo, Kendall Jackson did not purchase the referenced NoMoVo system, and it is no longer being used at the winery. In a 1989 memorandum titled "Guidance on Determining Lowest Achievable Emission Rate (LAER)" EPA makes a statement "*If some other plant in the same (or comparable) industry uses a control technology, then such use constitutes de facto evidence that the economic cost to the industry is not prohibitive.*" In fact, this is the logic that allows air districts to require emission control technology that has been achieved in practice to be required regardless of cost. However, this logic is only sound if the example facility actually incurred economic costs related to the use of that technology. Since Kendall Jackson did not purchase the NoMoVo emission control system, it did not incur any economic cost due to the use of this emission control system, so one cannot conclude that the use of this technology at this installation is *de facto proof* that the economic cost to the industry is not prohibitive.

In fact, EPA's stance on this would appear to require a control to be considered LAER if it achieved 1% capture and control and cost \$1 billion, if the vendor installed the first one on his own dime, tested it, and then removed it. These facts are very similar to the situation described in the District BACT evaluation, and we strongly disagree with EPA's conclusion that these same facts represent a *de facto* "achieved in practice" LAER determination. EPA is reminded that we did not fail to analyze this equipment as LAER, we just recognize the irresponsibility of considering such a situation as determining "achieved in practice". Rather, we analyzed the cost effectiveness of a decision to require the control, and found it to be excessively expensive to require.

This fact alone is sufficient to eliminate this installation from consideration in a LAER determination. At best, the 2013 source test at the Kendall Jackson facility shows the NoMoVo system to be technologically feasible for control of wine fermentation emissions. The District agrees that scrubber technology is feasible for control of wine fermentation emissions, as referenced in District BACT Guideline 5.4.14 and stated in the top down BACT analysis for this EJ Gallo Winery project.

EPA also referenced facility records for a NoMoVo emission control system permitted at the CCWS facility that show it has captured some amount of ethanol in

its recirculating water. This permit for this wine fermentation operation does not require the NoMoVo system to achieve any emission limit nor control efficiency standard; in fact, the permit does not even require that the NoMoVo system be used at all. Its use is solely at the discretion of CCWS. CCWS has conducted tests of the scrubber water to determine the ethanol concentration and has used this data together with an assumed inlet ethanol emission rate to estimate control efficiency. However, as far as the District can determine, this NoMoVo system has never undergone inlet and outlet emission testing to determine the actual control efficiency nor the actual achieved emission rate into the atmosphere. Furthermore, given that the ethanol entrained in the scrubber water can be easily re-emitted into the atmosphere if the contaminated scrubber water is not treated properly; there is some uncertainty of the actual achieved ethanol reductions from this facility. In fact, SBCAPCD has indicated that CCWS has had trouble reliably disposing of the VOC-laden scrubber water. Consequently, even though the CCWS facility has a scrubber on site and has used it on occasion for some of its fermentation operations, the District believes the technical details related to this control system's actual effectiveness at this location are uncertain, at best, and non-existent, at worst. Certainly, the lack of control efficiency demonstration deems this installation inadequate for it to be considered LAER for wine fermentation at this time.

The District is also aware of two recent Authority to Construct permitting actions by the Santa Barbara County APCD for the CCWS facility that required the use of either a NoMoVo scrubber system or an EcoPAS condenser system, with a full suite of inlet and outlet emissions testing required for each system. However, Santa Barbara County APCD recently informed us that both ATC permitting actions have been cancelled due to both technology vendors (NohBell Corporation and EcoPAS, LLC) objecting to perform the required source tests to demonstrate the control efficiency of their respective systems. This refusal to demonstrate the actual control efficiency of either control system raises significant questions and concerns over the vendors' control efficiency claims. The Valley Air District cannot, in good faith, require controls which the vendors refuse to validate. Our concern is that, if the vendors of this technology are aware that claims of control efficiency are potentially overstated, but they also know the EPA is about to REQUIRE their technology to be installed on a widespread basis, they gain no advantage by demonstrating their actual control efficiency.

In summary, at this point in time, the technology is **not** achieved in practice, and we have shown that it is not cost effective. EPA's letter made no comments regarding

our cost effectiveness analysis of this technology, which we have shown to be too expensive to be required for use. Therefore, since this technology is neither achieved in practice nor cost effective, our rules do not require Gallo to use this technology on the proposed fermentation tanks at this time. None of the points raised in EPA's comment letter nullifies our LAER analysis nor do any of EPA's comments change the conclusion of our analysis.

Furthermore, the District believes the AIP Memo document previously provided to you *is* an appropriate LAER evaluation of all known instances of add-on control technologies for wine fermentation tanks at this point in time according to reasonable and appropriate criteria for such determinations.