David M. Metres

From: David Briggs <dbriggs@mfsair.com>
Sent: Wednesday, April 12, 2017 2:59 PM
To: Kevin M. Brown
Cc: Richard Mather; 'Marianne Strange'
Subject: CCWS - Nuts and Bolts

Kevin,

I was hoping to be able to start kicking around some of the nut-and-bolt details for the CCWS 400 series tank project.

During our phone conversation las week you hit us with a potential condition that we were not expecting: separate daily limits. We would like to dig a little deeper into the details of this possible requirement and into the basis of the control efficiency determination.

1. Separate Through Put Limits:
   Before we can make any recommendation to CCWS regarding the expansion of the scope of the project to include the entire facility (or any portion of the facility beyond the 400 series tanks), we need to have more specifics as to how a permit will be conditioned with a two daily TP limit; and the recordkeeping details that would be required.
   a. The 40 400-series tanks that are part of this project are also legacy tanks; that is they have historical contributions to the current 55 lb/day facility limit. Specifically 10 of these tanks can already ferment white wine. We calculate that the PTE of these 10 tanks (149,800 gallons net) is 26.75 lb/day. If these tanks are re-defined as new tanks and assigned to a separate lb/day mass balance limit, will the mass balance limit of the "legacy" system be reduced by some amount proportional to the contribution that these tanks made to that prior legacy limit?
      i. The limit of 55 lb/day for the existing permit was based upon the facility offset threshold. If separate daily limits are assigned to the 400 series tanks (project) and the legacy facility, that would make it appear that the District is now assessing offset limits on a project basis and not a facility basis.
   b. If there are separate daily limits on "legacy" vs "new" tank emissions, how will the District look upon transfers between these two tank categories (if it becomes necessary) during a fermentation cycle? The daily records record fermentation as starting from inoculation. If a tank of must is transferred after inoculation, the existing daily record spreadsheet does not have a means to address this transfer.

2. NoMoVo & EcoPAS control efficiencies.
   Currently a control efficiency of 76.6% has been associated with each of these technologies. We are unsure of how this value was determined; we are unable to duplicate it with the data that is available to us (CCWS annual reports/daily reports). Each of these vendors have been asked for a efficiency value that they are able to guarantee. Some of the difficulties with obtaining these guarantees is rooted in the winemaking process itself:
   a. Frequently during the winemaking/fermentation process the winemaker will make physical observations of the tank contents. During these observations the main hatch of the tank will be propped open.
      i. The duration of this activity can vary from winemaker to winemaker, and between grape color and variety.
   b. When red wines are fermented, a cap (crust) develops on the surface of the must. It is necessary that this cap be broken up on a frequent and routine basis. At CCWS this is accomplished by performing a "pump over". A "pump-over" is the pumping of must from the bottom of the tank onto the top of the

cap to break it up. The must is introduced on top of the cap through a nozzle inserted through the open tank hatch.

i. The duration and frequency of these pump-overs can vary by winemaker, by red grape variety, and by the stage of fermentation.

These are just two examples of how difficult it is to determine a capture efficiency for either of these processes. In each of these examples, while the tank hatch is open, the capture efficiency will drop drastically (if not to zero).

3. Daily Mass Balance data.
Currently CCWS analyzes and reports on the quantities of ethanol recovered in the EcoPAS and NoMoVo systems every day that they are in use. During the height of the crush season this becomes a logistical burden on the facility staff. With the requirement to always control the 400 series tanks, CCWS will likely be installing larger units (and possibly more units). One accommodation that the vendors are considering are holding capacities that will allow these units to operat for multiple days without needing to empty/refresh the holding tanks. As the District considers how the monitoring and recordkeeping requirements are going to be structured for this permit process, we ask this this significant change be taken into consideration.

Please review the comments we have provided above and let us know if you have any questions. We are anticipating have a ATC application ready for submittal by the end of next week. Any responses to the comments and questions we have posed here will help us structure that application package.

Regards

David Briggs
M. F. Strange & Associates
105 E. De LaGuerra St, Ste 10
Santa Barbara, CA 93101
(805) 564-6590
Agent for CCWS