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UNIFIED AIR POLLUTION CONTROL DISTRICT**

**ADDENDUM TO THE APRIL 27, 2004 VERSION OF THE PRELIMINARY DRAFT  
DAIRY BACT ANALYSIS**

The following is an addendum to the April 27, 2004 (reformatted) version of the Preliminary Draft Dairy BACT Analysis. These changes are intended to improve the effectiveness and clarity of the BACT Analysis.

**Page 36. The first sentence should read as follows:**

As mentioned earlier, there are three types of manure that a dairy may have to manage, solid (**solids** moisture content > 20%), slurry (**solids** moisture content between 10 & 20%), and liquid (**solids** moisture content < 10%).

**Page 36. The first sentence in last paragraph on page should read as follows:**

Many dairies operate with more than one open (uncovered) lagoon to handle the liquid waste (see figure **below** above).

**Page 39. The third sentence on this page should read as follows:**

The primary reasons for failure in the past have been attributed to deficiencies in design and engineering deficiencies, labor skill, training, **industry** support, and equipment **installations**.

**Page 42. The following language and table should read as follows:**

Covered Lagoon Digesters

The following table shows **several** ~~the same~~ covered lagoon anaerobic digester systems that are currently in operation at commercial dairies in the United States:

<b>Covered Lagoon Digesters in the United States</b>				
Location	Year operational	Number of Animals	Manure Handling Method	Biogas End-Use
CA	2004	2,500 Milkers	Flush	Flare
WI	1999	1,300 Milkers	Scrape	Flare
WI	1998	1,100 Milkers	Scrape	Flare
Castinelli Dairy		1,600 cows	Flush	IC Engine/Generator

**Page 46. The following underlined language should be added:**

To date there is not an established method to determine the overall VOC, NH<sub>3</sub> or H<sub>2</sub>S emissions reductions due to a floating permeable cover. However there have been some general estimates on odor control effectiveness (see table below). As mentioned above, an anaerobic digester system is required if BACT is triggered for VOC emissions. Therefore, since a permeable cover has less control than a digester system, a permeable cover may only be required for the overflow or secondary lagoon if cost effective.

**Page 47. Under Item (4), the following underlined language should be added:**

The captured biogas from the digester may be sent to a biofilter for VOC, H<sub>2</sub>S and NH<sub>3</sub> control. A properly designed biofilter may be installed upstream, or prior to a combustion device since the biofilter will not remove CH<sub>4</sub>, which is the primary energy biogas constituent. Therefore, if a biofilter is cost effective at a site, it may be required in combination with the anaerobic digester system.