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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 some~~ covered lagoon anaerobic digester systems that are currently in operation at commercial dairies in the United States:

Covered Lagoon Digesters in the United States				
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, NH3 or H2S 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, H2S and NH3 control. A properly designed biofilter may be installed upstream, or prior to a combustion device since the biofilter will not remove CH_4, 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.