APPENDIX B – SYSTEM-SPECIFIC BEST MANAGEMENT PRACTICES

The purpose of this Appendix is to present a list of BMPs as they apply to reducing emissions from specific dairy systems.

I. Nutrition

1. Reduce the amount of dietary protein (N) in the ration to match, rather than exceed, the animal's needs.
2. Increase the level of starch in the diet.
3. Properly manage and minimize overfeeding of sulfur in the diet.
4. Practice phase-feeding.

II. Feed Management

1. Properly manage ensiled feedstuffs.
2. Store feed in a weatherproof storage structure.
3. Remove spilled and unused feed from feeding area on a regular basis.
4. Do not mix feed during windy times.

III. Milk Parlor

1. Ensure proper ventilation.
2. Use recycled parlor (clean) water used for flushing/cleaning holding areas.
3. Treat recycled water used for flushing/cleaning holding areas.
4. Remove manure from holding areas frequently.

IV. Housing – Freestall Barns

1. Ensure proper ventilation of freestall barns.
2. Bedding selection and management.
3. Treat recycled lagoon water used for flushing.
4. Remove manure from barns frequently.
5. Modify alleyway floors to separate urine and feces.

V. Housing – Drylot Pens

1. Provide shade for cattle.
2. Locate feed and water opposite in pens.
3. Remove and spread (harrow) manure frequently.
4. Use straw bedding in drylot pens.
5. Incorporate wood chips in surface layer.
6. Urease inhibitors.
7. Surface moisture content management.
8. Knock down and remove fence line manure.

VI. Grazing Management

1. Stock appropriate number of animals.
2. Use rotational grazing.
3. Move water and feeding areas frequently.
4. Irrigate immediately after grazing.

VII. Manure Management

1. Manage solids separation.
2. Lagoon or storage covers.
3. Scrub exhaust of enclosed waste containers.
4. Installation of an anaerobic digester.
5. Surface aeration of lagoons.
6. Reduce the pH of lagoons and manure piles.
7. Encourage purple sulfur bacterial formation in anaerobic lagoons.
8. Properly manage composted solid manure.
9. Properly manage stockpiled manure.

VIII. Land Application – Manure and/or Chemical Fertilizer

1. Apply N fertilizer below no-till residue.
2. Inject or incorporate fertilizer into soil within 24 hours of application.
3. Apply nutrients according to agronomic recommendations based on soil test results.
4. Do not over-irrigate.
5. Utilize cover crops.
6. Apply during cool weather and on still rather than windy days.
7. Installation of windbreaks or shelterbelts.