

# HEALTH QUESTIONS & WIREGRASS POWER PLANT *Valdosta, GA*

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# Basic Issues

- ◆ **Image of biomass facility as “smoky fire” is inaccurate**
- ◆ **Facility must be judged on engineering, emissions**
- ◆ **Extensive analysis during permit development process**
- ◆ **Stringent controls on Wiregrass facility to limit emissions**
- ◆ **By permit and design, Wiregrass Power facility will have multiple overlapping control systems to address emissions**

# Mercury (Hg)

- ◆ Facility will be better than permit limits by wide margin
- ◆ Ounces per year projected Hg emissions, not pounds
- ◆ Maximum concentrations far below health-based criteria
- ◆ Principal concerns for Hg typically center on edible fish
- ◆ Emissions as inorganic RGM, particulate, not methyl Hg
- ◆ Air levels, deposition, conversion, uptake, consumption
- ◆ Deposition to local waterbodies negligible

# Particulate Matter (PM)

- ◆ Facility will be better than permit limits by wide margin
- ◆ Maximum impact well below protective air standards
- ◆ 15 ug/m<sup>3</sup> standard air for PM<sub>2.5</sub>; plant 1% or less of standard
- ◆ Valdosta/Lowndes air quality good
- ◆ Comparisons with open burning (*e.g., field fires, forest fires*) of equivalent mass show substantial reductions by controlled burning within facility

# Dioxins

- ◆ Formed by combustion of organics in presence of chlorine (*e.g., trash burning, fireplaces, coal utilities, cement kilns, medical waste combustion*)
- ◆ EPA – large dioxin emission reduction past 25 years (92%)
- ◆ CDC - Dramatic reduction in human tissue dioxins (80%)
- ◆ Comparisons with open burning (*e.g., field fires, forest fires*) of equivalent mass show substantial reductions by controlled burning within facility
- ◆ Deposition to local waterbodies negligible

# Polycyclic Aromatic Hydrocarbons (PAHs)

- ◆ Very common; formed by all types of combustion
- ◆ Wiregrass facility emissions very low
- ◆ “Aromatic” refers to ring structure, not odor potential
- ◆ Lifestyle elements are greatest PAH exposure source
  - *inhalation of tobacco and wood smoke*
  - *ingestion of grilled foods*
  - *breathing roadside air*
- ◆ Scientific interest in carcinogenic potential; available data are from high dose, long term animal studies

# Closing Thoughts

- ◆ **Permit limits and emission controls set to protect health**
- ◆ **Multiple, overlapping engineering controls in place**
- ◆ **Emissions will be very low**
- ◆ **Odors not expected**
- ◆ **Facility represents a valuable addition to essential fuel diversification strategies**