



SOLVENT EXTRACTION PROJECT

BIOTECH FACILITY – NORTH CAROLINA

TOTAL INSTALLED COST \$7,000,000

PENTA provided complete design and engineering services for a new solvent extraction process used to make an additive for baby formula. The new facility was designed for processing biomass through the use of hexane in conformance with NFPA 36. PENTA developed the initial Phase I Study, which included a Total Installed Cost estimate, and was responsible for overall project management, scheduling, and purchasing.

The project included the addition of two new production buildings and expansion of existing utility infrastructure to support the process. Almost 100 pieces of equipment were specified such as Biomass Handling & Feed, Crown Model IV Extractor, Desolventizer Toaster, Spent Meal Handling, Storage and Cooling Equipment, Two-stage Evaporator, Bulk Solvent Storage Tanks, Solvent Vapor Recovery (Cryogenic Condenser), and two pneumatic conveying systems.



PENTA self-performed all the detailed design including:

- Process
- Mechanical
- Piping (13,000 ft of process/ utility piping)
- Civil
- Structural
- Electrical
- Instrumentation
- Controls (150 instruments)

Additionally, PENTA provided an on-site Project Engineer throughout the construction, commissioning and start up phases of the project.