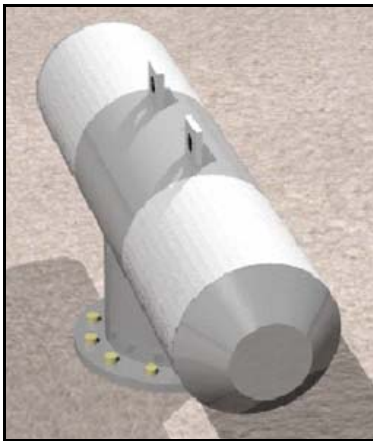


Alternative Intake Analysis - North and South Carolina



Alden, in conjunction with EPRI, evaluated the technological, operational and/or restoration options that Duke Power could use to comply with §316(b) of the Clean Water Act at four of its generating facilities. Based on information gathered during site visits and from historical information, Alden:

- Determined which performance standards were applicable at each site
- Assessed the potential to use historic impingement and entrainment data in addition to or in lieu of expensive field studies
- Determined if existing CWIS design and operational characteristics could reduce impingement mortality or entrainment compared to EPA's calculation baseline



Alden then evaluated several alternative technologies and operational changes that could further reduce

IM&E and be used to meet the performance standards. For each option, sufficient engineering, biological, and cost information was developed that allowed Duke to:

- Weigh the relative advantages and disadvantages of each alternative
- Weigh the relative costs of the alternatives identified
- Determine whether the cost of the alternative would be "significantly greater than" the costs assumed by EPA in developing the final rule (the "cost/cost" test) and whether Duke could pursue a site-specific approach
- Determine whether each alternative has the potential to meet the impingement mortality and entrainment reduction standards
- Identify additional information that may need to be developed to fulfill the requirements of the Rule



Engineering sketches were prepared for each selected alternative that reflected best engineering practice and judgment. Plans and sections of each alternative and the details necessary for a complete understanding of the alternative were provided. We estimated the direct costs for each of the alternative intake technologies based on historic data developed for other power plant sites. In addition, we estimated the potential compliance and permitting costs for future budgeting purposes.

PROJECT FEATURES

- Evaluation of Alternative Intake Technologies
- Preliminary Cost-Cost Test
- Input to Compliance Strategy Development