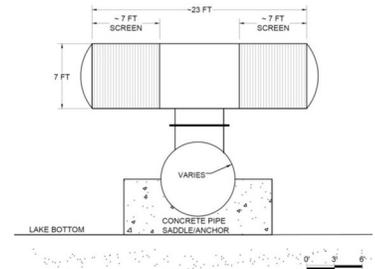
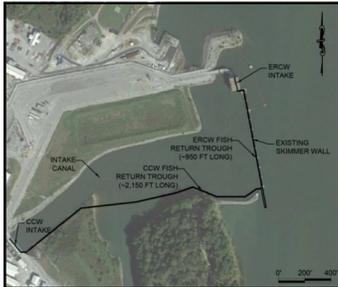


Preparation of §316(b), §122.21(r)(10), (11), and (12) for the Tennessee Valley Authority Sequoyah Nuclear Plant



Project Summary

ALDEN is part of a Team contracted by Electric Power Research Institute to develop §122.21(r)(10), (11), and (12) reports relative to entrainment for Tennessee Valley Authority's (TVA's) Sequoyah Nuclear Plant (Sequoyah). Alden's portion includes a review and screening of available technologies, conceptual designs, cost estimates, and feasibility analysis. Feasible alternatives were then further analyzed for biological effectiveness and other potential environmental impacts. Veritas is also part of this Team and is contracted to estimate the social costs

Client

Tennessee Valley Authority

Location

Tennessee, USA

Year

2016

FOR MORE INFORMATION,

Contact our Headquarters, Holden, MA at +1 (508) 829-6000 or by e-mail at : info@aldenlab.com

Project Overview

In compliance with §316(b) of the Clean Water Act for existing facilities, ALDEN and VERITAS are supporting the Electric Power Research Institute (EPRI) in developing §122.21(r)(10), (11), and (12) reports relative to cooling water intake entrainment for TVA Sequoyah. ALDEN'S 122.21(r)(10) Comprehensive Technical Feasibility and Cost Evaluation Study analyzes and screens the broad scope of available cooling water intake technologies, and develops conceptual designs and costs for the most feasible alternatives. The designs and costs developed by ALDEN will then be used by VERITAS to develop the social costs. The 122.21(r)(11) Benefits Valuation Study then analyzes the biological efficacy of the feasible options, while the 122.21(r)(12) Non-water Quality Environmental and Other Impacts Study considers potential land based environmental impacts.

Work Performed

Following a review of existing plant operation and environmental conditions, ALDEN developed a list of technologies with potential application at Sequoyah along with a screening criterion. ALDEN then developed conceptual designs and feasibility studies for selected technologies, which includes preliminary design, construction methodologies, operation and maintenance (O&M), permitting, uncertainty analysis, and initial and annual costs. Following review of the conceptual designs, ALDEN will estimate the biological efficacy of the feasible technologies by reviewing local environmental conditions, available plant information, and data from similar installations. A similar review and analysis will also be conducted for potential land-based impacts. VERITAS, will then use ALDEN's cost estimated to develop the social costs for Sequoyah.

Project Highlights

- Comprehensive screening of available intake technologies
- Conceptual design and costs of feasible technology
- Biological effectiveness study for feasible alternatives
- Environmental impact study for land-based portion of the feasible options