

REFERENCE CASE POWER PLANT



Independent Inspection Services for Nuclear Energy Project in Alabama, USA

In 2011, the Tennessee Valley Authority (TVA) decided to restart construction and operate the two Babcock & Wilcox nuclear reactors units at the Bellefonte Nuclear Power Plant site in Hollywood, Alabama. To revive and complete the project, ASME N-5 Code Data Reports were necessary in order to obtain the Authorized Nuclear Inspector (ANI) approval. That is why TÜV Rheinland Industrial Solutions was brought in to help.

Basic Facts	
Client	Tennessee Valley Authority - Bellefonte Nuclear Power Generating Station (BLN)
Timeframe	November 2012 - June 2013
Project location	Hollywood, Alabama USA
Main services	<ul style="list-style-type: none">ASME N-5 Code Data ReportsComponent testing and validationConstruction QC including visual and NDT inspection
Involved regulations/standards	ASME Boiler and Pressure Vessel Code Section III

Initial situation and requirements

The Bellefonte Nuclear Power Generating (BLN) Station dates back to January 1974, when the Nuclear Regulatory Commission (NRC) issued construction permits for two Babcock & Wilcox (B&W) Type 205, 1,256 MWe reactors to the Tennessee Valley Authority's Bellefonte Nuclear (BLN) Plant in Jackson County, Alabama.

TVA halted construction in 1985 in response to decreased power demand. Over time, TVA made several attempts to re-start construction, and in 2011, finally began the process of completing the Bellefonte nuclear project.

Solutions, results

Due to extensive expertise in the field of nuclear technology and as an authorized inspection agency accredited by ASME for nuclear components, TÜV Rheinland Industrial Solutions assisted Tennessee Valley Authority in gaining ASME certification for its equipment. TÜV Rheinland Industrial Solutions provided the scope, technical details, and methods of performance, schedule and staffing levels needed to regenerate the ASME N-5 Code Data Reports for the 48 primary ASME systems.

TÜV Rheinland completed estimating and identified the necessary repairs and replacements of components to achieve the ASME Code Certificate needed to re-start construction on the facility. According to the TRIS assessment and project execution plan, TÜV Rheinland Industrial Solutions provided a wide range of services including component testing and validation, construction QC which included visual and NDT inspections and tests, ASME material qualification and traceability and correct ASME class boundaries and classifications.

Did you know?

Tennessee Valley Authority provides electricity for 9 million people throughout seven states in the USA.



Benefits for the client

TÜV Rheinland helped Tennessee Valley Authority with:

- Extensive experience in nuclear energy projects and quality issues.
- Ensuring a high level of safety compliance meeting all quality and security requirements.
- International network of experts and one-stop shop service.

Your contact:

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About TÜV Rheinland:

Founded more than 140 years ago, TÜV Rheinland is a global leader in independent inspection services, ensuring quality and safety for people, the environment, and technology in nearly all aspects of life.

We inspect technical equipment, products and services, oversee projects and help to shape processes for companies around the world. Since 2006, we have been a member of the United Nations Global Compact to promote sustainability and combat corruption.

TÜV Rheinland supports you with services throughout the entire plant life cycle, ensuring safety, quality and reliability right from the beginning to optimize your investments.

We have the expertise and accreditations to support you in safe and profitable planning, construction, operation and maintenance or even decommissioning of your fossil, combined cycle, biomass, hydro or nuclear power plant facilities.