



USE OF BWRVIP INSPECTION AND EVALUATION GUIDANCE AT
PEACH BOTTOM ATOMIC POWER STATION

R. E. Ciemiewicz
PECO Energy Company
200 Exelon Way
Kennett Square, Pa. 19348

Keywords: Boiling water reactor, Vessel and internals, Flaw evaluation, Inspection strategy

ABSTRACT

Peach Bottom Atomic Power Station (PBAPS) has always been proactive with respect to inspection of its boiling water reactors. Internal visual inservice inspections (IVVI) of the reactor vessel internals have been conducted at the PBAPS for many years. The scope and methods of these inspections were primarily driven by conservative interpretations of the American Society of Mechanical Engineers (ASME); Boiler and Pressure Vessel Code, Section XI, "Rules for Inservice Inspection of Nuclear Power Plant Components". In addition, industry recommendations, regulatory requirements augmenting Code guidance, and investment protection were also used for guidance. With the formation of the Boiling Water Reactor Vessel and Internals Project in 1994, comprehensive and systematic guidance for the inspection of the reactor internals became available. Inspection recommendations, along with defensible methods for dealing with identified degradation were published on an ongoing basis. This consistent guidance enabled PBAPS to more crisply focus its resources on the appropriate inspections of its reactors. The guidance allowed retention of the proactive inspection effort, and provided the ability to develop a more proactive program for dealing with inspection results. The BWRVIP guidance also enabled sound decisions regarding repair or replacement of internal components, as well mitigation measures that could be undertaken to reduce or eliminate the internals degradation phenomenon.

The objective of this paper is to explain the approach used by PBAPS to integrate the evolving BWRVIP guidance into its existing Inservice Inspection Programs. Additionally, the paper will describe specific scenarios that occurred during the implementation of this effort, and the approach used by PBAPS to apply the BWRVIP guidance toward resolution of the related issues. The paper will provide a model for successful use of BWRVIP products, and explain the process used to satisfy commitments made by this Industry Initiative on behalf of its participating utilities.