

Nondestructive Examination Methods for Materials Degradation

Nondestructive examination (NDE) is a key tool in the management of materials issues for nuclear power plants. Qualified NDE solutions are essential for safe, reliable, and economic operation of the existing nuclear fleet and also for the viability of the nuclear renaissance.

The EPRI NDE Center is the central resource for NDE solutions for the U.S. nuclear industry and the world leader for NDE technology development and qualification. The extensive laboratory facilities, large staff of experts, and high credibility with regulators are a unique resource in support of utilities' routine and emergent needs for NDE support.

The mission of the EPRI NDE Program is to develop and implement NDE solutions to promote safe, reliable, and economic nuclear power. As nuclear power plants age, their structural materials experience various forms of corrosion and other degradation. The structural integrity of the power plants depends on the availability of accurate, reliable, qualified NDE solutions to inform asset management decisions.

NDE includes developing and implementing advanced inspection technology as well as using performance-based and risk-informed methodologies to

improve inspection reliability, increase the accuracy of information used to assess material condition, improve plant reliability, lower operating costs, lower radiation exposures to workers, achieve maximum plant useful life, and assist plant owners with meeting their regulatory commitments.

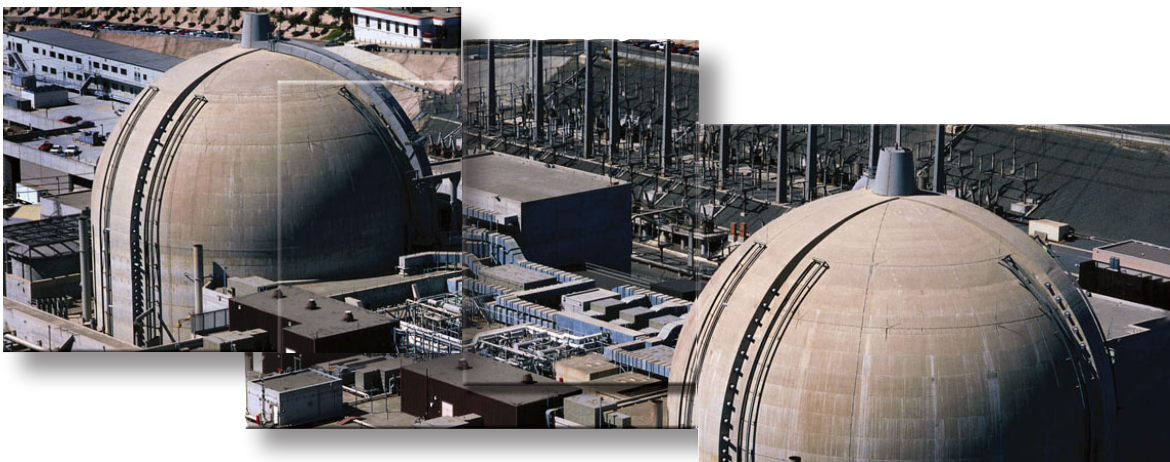
Strategic Planning

The NDE Program's utility advisors recently identified six key strategic challenges that require long-term programmatic solutions. This step was taken in conscious recognition of the Program's historical tendency to concentrate on immediate issues. The Program will need to grow to address long-term challenges because the immediate issues still must be supported.

Collaboration

EPRI's NDE Program is directed by closely engaged technical- and executive-level advisors. Each NDE project is sponsored, advised, and tracked by utility personnel. The NDE Program also has a long tradition of close support of utilities' emergent needs, and rapid response is built into the structure of the NDE Program. Off-site or on-site assistance with plant-specific needs is available at all times for member utilities.

The NDE Program represents a global effort. This global participation brings rapid sharing of operational experience, broad acceptance and adoption of EPRI technologies, and the possibility of realizing economies via global standardization of technologies and qualification methodologies.



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