

SNC • LAVALIN

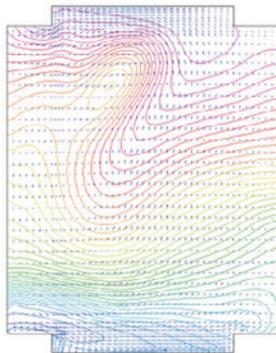
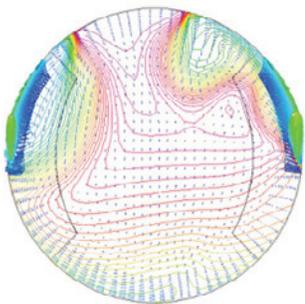
Deterministic Safety Analysis

SNC-Lavalin Brings Proven and Reliable Global Experience

Nuclear power plant owners have relied on SNC-Lavalin's expertise and experience to perform deterministic safety analysis (DSA) since the earliest days of commercial nuclear power.

Our experts perform safety analyses of a broad range of events covering all aspects of design basis accident consequence analysis, from thermalhydraulic and fuel behaviour through fission product release, containment response and release from containment, as well as evaluation of events outside containment. We have full analysis capability for deterministic analysis of beyond design basis events to support probabilistic risk assessment (PRA). We have performed safety analysis to support the licensability of nuclear power plants on four continents, with extensive experience conforming to a broad range of regulatory requirements for different jurisdictions, using a wide variety of methodologies and analysis tools.

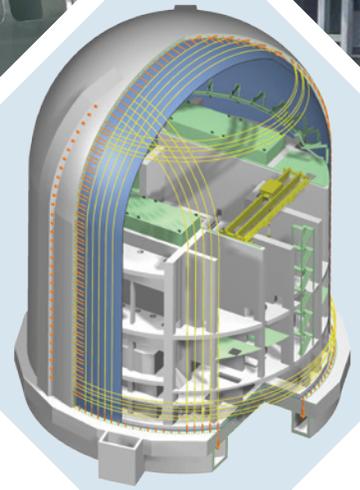
As both a design and service company, we draw on a wealth of in-house expertise of nuclear engineering including mechanical, civil, electrical, control and instrumentation, human factors, safety analysis, and licensing, to ensure complete support for full scope DSA.





Our full service multi-disciplinary BWR and PWR engineering services team includes experts in:

- > PRA
- > Reactor Physics and Safety Analysis
- > Seismic
- > Civil
- > Mechanical, including Process Systems and Chemistry
- > Electrical, Control & Instrumentation

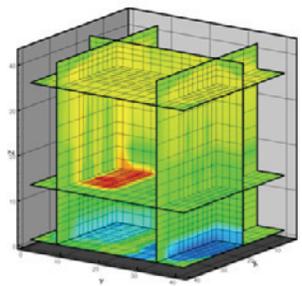
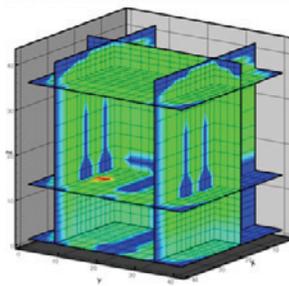


Our Capability

Our DSA services range from small work packages, including emergent work, that can be executed in just a few weeks, to multi-year, full-scope station modifications performed over several years. Our customers have also recognized our ability to effectively respond to urgent operational issues worldwide.

Our core DSA capabilities include:

- > Thermal hydraulic analysis using a range of codes including RELAP
- > Containment and dose analysis (e.g., applying GOTHIC)
- > Specialized multi-dimensional thermal-hydraulic analysis (e.g., CFX)
- > Trip coverage analysis, including design assist analysis to establish updated and new trip setpoints deterministic analysis of severe accidents including use of MAAP



Our team provides comprehensive support during all phases of the nuclear plant life cycle from scope definition through design, construction, commissioning, operations, uprate or other retrofit design changes and implementation.

Our experience in performing analysis to meet modern requirements for new build reactors is invaluable in providing support to existing stations as they perform periodic safety reviews consistent with International Atomic Energy Agency (IAEA) SSG-25 standards.



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Please contact us to discuss how our expertise can support your current or upcoming needs.

✉ nuclear@snclavalin.com



www.snclavalin.com/nuclear