



NuclearSafety

Associates

Experienced Integrated Safety Analyses and Licensing Team

INTEGRATED SAFETY ANALYSIS

NSA WAS A KEY CONTRIBUTOR to the first Integrated Safety Analysis to receive NRC approval (in 2004). We are leading initial ISA efforts for several clients, and also maintain ISAs and produce annual updates to the ISA Summaries. The ISA is closely intertwined as a support document for the facility SNM license. NSA has extensive experience helping clients obtain new SNM licenses, amendments to existing SNM licenses, and decommissioning licenses. We help clients maintain compliance with established license requirements, and assure the safety of both onsite workers and offsite members of the public.

ISA Capabilities

NSA fulfills all roles necessary for completion and submission of an Integrated Safety Analysis. We have the experience and capabilities to:

- Lead and coordinate the overall ISA;
- Write the ISA and ISA Summary documents.
- Perform hazards identification and risk and consequence analysis for all applicable disciplines:
 - Nuclear Criticality Safety
 - Fire Protection Engineering
 - Chemical Safety
 - Nuclear Safety
 - Environmental Impacts

Selected ISA Experience

- **Navy Fuel Manufacturing & HEU Downblending**
NSA played an integral role in Nuclear Fuel Services' successful licensing of two major HEU facilities and supported two major license amendments. Our roles included ISA lead and coordination, nuclear criticality safety, radiological dose assessment, chemical safety, and analyzing environmental impacts. We were also responsible for Annual Updates for ten Integrated Safety Analyses (ISA), NRC commitment tracking, and developing RAI response plans.
- **Laser Enrichment**
NSA is a key partner supporting GE-Hitachi on the license application for an enrichment plant utilizing cutting-edge, first-of-a-kind technology. NSA personnel lead the ISA effort and also perform supporting safety analyses, including hazards identification and consequence analysis, nuclear criticality safety, fire protection engineering, and nuclear safety. NSA also directly supports the license application document.
- **Commercial Nuclear Fuel Fabrication**
NSA produces the ISA update and performs nuclear criticality safety evaluations in support of the ISA effort for the Westinghouse Columbia Fuel Fabrication Facility. NSA also performs radiological dose calculations to support the site emergency response plan.
- **Decommissioning**
NSA was instrumental in development of the decommissioning plan (which is part of the SNM license) for the Westinghouse Hematite decommissioning project. NSA also supports the ISA and other licensing functions and provides all nuclear criticality safety analysis and support functions.

Fluorine Extraction Process

NSA provides professional technical and regulatory services and expertise to Advanced Process Technology Systems for developing and preparing license applications and supporting documents to build and operate a proposed Fluorine Extraction Process, depleted uranium processing, and de-conversion facilities. Services include preparation of the ISA and ISA Summary as well as generation of key sections of the license application, specifically the fire protection, environmental, chemical safety and safeguards and security programs.

MOX Fuel Fabrication

NSA was the principal technical lead and author for the criticality safety work performed in support of the MFFF ISA and ISA Summary. This contribution supports a major element of the first ever NRC licensing of a MOX Fuel Fabrication Facility in the US.

Quality Assurance

The NSA Quality Assurance Program is compliant with the requirements of ISO 9001-2000, NQA-1, 10CFR50 Appendix B, CSN 286.2, and 10CFR830. NSA strives for continuous improvement in the quality of its products and services. NSA accepts 10CFR21 reporting requirements.

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KNOWLEDGE

Intimate working knowledge of NUREG-1520
ISA experience under 10CFR40 and 10CFR70

TECH SUPPORT

Unparalleled Technical Support
for Nuclear Fuel Cycle Facilities

NSA clients include all nuclear fuel manufacturing operations in the US (and all but one in Canada), uranium enrichment facilities, and source material operations.



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Licensing IROFS/ISA 10CFR70 Consequence Analysis Hazard Identification