



NUCLEAR SAFETY ANALYSIS

Final Safety Analysis Report (FSAR)

HukariAscendent provides Safety Analysis (SA) update support to the commercial nuclear industry during all phases of a nuclear plant's lifecycle. Whether it's Final Safety Analysis Report (FSAR) support for new facilities, operating plants, or facility D&D, **HukariAscendent's** network of personnel has the experience to help meet your SA requirements. Our network of individuals with relevant experience in SA updates averages more than 15 years of nuclear experience.

FSAR development and maintenance experience includes work **HukariAscendent** is performing for the National Enrichment Facility, an NRC regulated facility. **HukariAscendent** is supporting ongoing safety analysis, integrated safety analysis, and updates to the FSAR. One example of safety analyses we prepared was the Quality Level-1 nuclear safety calculations in air dispersion modeling, source term development, and postulation of post-accident leak rates from natural phenomena events such as seismic, tornado, tornado missile, and high winds.

At the Mixed Oxide Fuel Fabrication Facility, **HukariAscendent** has provided safety analysis, safety basis document development, Failure Mode and Effects Analysis (FMEA), and other licensing support. This facility is required to meet both NRC and DOE requirements.

HukariAscendent is also assisting a nuclear fleet operating company in evaluating the impact of a large volume of licensing history on the FSAR.

HukariAscendent is managing the Updated FSAR (UFSAR) historical review (25 years) for the entire commercial nuclear fleet of a major utility involving multiple sites, different designs, and different

regulatory approval time frames. Responsibilities include review of all types of licensee documents having the potential to affect the FSAR in question (i.e., license amendments, generic communications, new/revised regulations, modifications, procedure changes, etc.). **HukariAscendent** is conducting thorough reviews of the relevant documents and correspondence and preparing required changes to each site's FSAR according to the Licensee's procedures, regulatory requirements, and guidance documents (Regulatory Guide 1.70, Nuclear Energy Institute 98-03). **HukariAscendent** is providing complete documentation of findings and the bases for the required FSAR changes.

HukariAscendent has provided safety analysis support for the D&D of the Hematite Fuel Fabrication Facility. Tasks included:

- Safety analyses
- Preparation of a Remedial Action Plan
- Preparation of a Decommissioning Plan
- Development of the material control & accountability (MC&A) bases documents

Safety Analysis Probability and Consequences

HukariAscendent also has substantial experience in safety analysis of probability and consequences.

Expertise and analytical methods includes:

- Criticality safety
- Fire Hazard Analysis (FHA)
- Failure Mode & Effects Analysis (FMEA)
- Fault Tree Analysis (FTA)
- Probabilistic Risk Assessment (PRA)
- Natural Phenomena and External Events Analysis
- Risk analysis (all receptors)
- Safety implications of construction activities
- Accident analysis of nuclear waste transportation
- Explosives safety analysis for D&D
- Safety evaluations of system and component designs