



## NUCLEAR SAFETY AND LICENSING

HukariAscendent is a recognized leader in providing nuclear safety to the government nuclear industry. Nuclear safety support includes the following documents and activities:

### AUTHORIZATION/SAFETY BASIS PREPARATION AND APPROVAL

- Facility description/activity or process
- Hazard identification and analysis
- Accident analysis probability and consequences
  - Criticality Safety
  - Fire Hazard Analysis (FHA)
  - Failure Mode & Effects Analysis (FMEA)
  - Fault Tree Analysis (FTA)
  - Probabilistic Risk Assessment (PRA)
  - Risk analysis (all receptors)
  - Explosives safety analysis for D&D
- Safety Controls Derivation – Development of Technical Safety Requirements
- Documented Safety Analysis (DSA)
  - DSAs (including SARs, PSARs, and FSARs)
  - Safety Analysis Document( SAD)
  - Hazard Assessment Report (HAR)
  - Basis of Interim Operations (BIO)
  - Justification for Continued Operation (JCO)

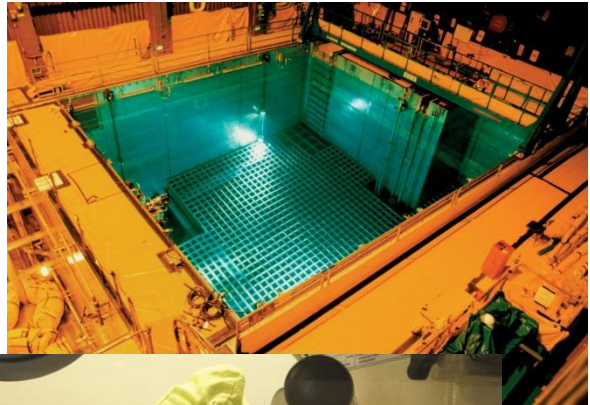
Performed under DOE 10 CFR 830, DOE-420.2B, DOE-STANDARDS -1027, -1120, -1186, -1189, -1628, -3006 and -3009

### ONGOING FACILITY SUPPORT

- Unreviewed Safety Question (USQ) Process
- Safety Basis Documentation Changes
- Management Self-Assessments (MSA)
- Nuclear Material Accountability
- Conduct of Operations
- Criticality Safety Program

### IMPLEMENTATION

- Operational Readiness Review (ORR)
- Interaction with federal, state, local agencies
- Writing procedures
- Training
- Independent review/programmatic assessment



### SAFETY BASIS ACADEMY COURSE DEVELOPMENT

- Airborne Release Fraction and Respirable Fractions Course
- CFAST Consolidated Model of Fire Growth and Smoke Transport (Version 6) Course

### LICENSING SUPPORT FOR DOE

- Step-out controls as hazards are reduced during D&D activities
- Nuclear Regulatory Commission (NRC) licensed transport container audit

#### *Project Performance and Customer Satisfaction*

At HukariAscendent we recognize that it is not only our reputation that is on the line, but that of our clients as well. Our corporate mission is to provide only the highest quality service and long-term value to our customers through well-defined, proven methodologies and experienced, dedicated, and innovative staff. Our mission success is affirmed by the satisfaction expressed by our customers (sites and companies).

### **Nuclear Safety Support – Los Alamos**

**National Laboratory** – Specific safety basis documentation tasks include SARs/PSARs, BIODs, PISAs, Preliminary Safety Design Reports, Conceptual Safety Design Reports, SADs, SEs, Hazard Category Determinations, FSARs, Facility Safety Plans, Implementation Plans, USQDs and FHAs for a variety of facilities. Facilities include TA 50 – Building 69, Area G, CWRRF, DARHT, WCRRF, TA-3, TA-16, TA-18 (Experimental Reactors), TA-53, TA 54, TA-55, TA 54 RANT facility, TA-18 Experimental Reactor Decommissioning, TA 50 Radioactive Liquid Waste Treatment Facility, CMR facility, Materials Test Station, SNMCRF, WCCR, WDAB, WETF, PF-4, and LANSCE. Performed TSR implementation reviews for all Haz Cat 2/3 nuclear facilities.

### **Nuclear Safety Support – Pantex Plant –**

Provided Nuclear Safety support of nuclear and non-nuclear facilities, activities and weapons programs including nuclear explosive bays and cells, staging facilities, and transportation activities. Support included USQDs, Safety Basis Documents, hazard analysis/accident analysis, HARs, JCOs, TSRs, radiological dispersion analyses, plus TSR implementation reviews for all Haz Cat 2/3 facilities.

### **Nuclear Safety Support – Savannah River Site**

– Reviewed SRNS USQ process and supporting Safety Basis Documents for the K Area Material Storage, SWM facility, Savannah River Nuclear Laboratory Extraction Facility, Tritium Facilities, H Canyon Facilities, 235-F Facility, F&H Labs and the Spent Fuel Facility. Savannah River Tritium Enterprises Tritium facilities (SRTE), including hazard and accident analyses implementing new dispersion modeling recommendations using the MCCS2 code.

### **Nuclear Safety Support – Idaho National Site**

– Provided Nuclear Safety support for the Sodium Bearing Waste Integrated Waste Treatment Unit. Develop and implement DSA for IWTU, D&D of CPP-601 Fuel Processing Facility, D&D of the MTR, portable/scalable DSA for D&D of HC 3 facilities, and for waste management and operations support. Provided support for TSR implementation for the IWTU. Provided DSA and USQ support for multiple Haz Cat 1/2/3 facilities including reactor vessel removal, remote handled TRU waste, and Naval Fuel Storage Facility.

### **Nuclear Safety Support – Hanford Site –**

Provide day-to-day nuclear and criticality safety support and safety basis document development, modification and implementation activities including D&D of the Plutonium Finishing Plant (PFP), and design of Waste Treatment Plant (WTP), Pre-treatment facility, High-Level Waste Facility, LAW and Analytical Laboratories

### **Nuclear Safety Support – Nevada Nuclear Safety Site**

– Provide expert SME support for Nuclear Safety to NNSS. Facilities include the U1a Complex, LANL Subcritical Experiments for Leda SCE, Lead USQ support for LANL/LLNL Radiation Test Object Construction, Lead USQ support for LLNL Coring Project, support for DAF/LANL SCE for Lyra, and USQ support for LANL Rabbit Modification.

### **Nuclear Safety Support – Argonne National Laboratory**

– Provided Safety Basis support to Argonne’s NOD and EM Omnibus Funded Activities. Activities included SARs, DSAs, TSRs, and JCOs. Facilities included D&D in 205K, Alpha Gamma Hot Cells, 331 yard RH -TRU shipments, 306, RWSF, and WMOF.

### **Nuclear Safety Support – Lawrence Berkeley National Laboratory**

– Provide Safety Analysis support services for D&D of the Bevatron nuclear accelerator. Support included authorship of the SAD, and TSR equivalent requirements.

### **Nuclear Safety Support – Sandia National Laboratories**

– Provided Nuclear Safety Support for the GIF and HC3T. Provided programmatic Nuclear Safety Support to SNLs electronic USQ system, the Safety Basis Manual, and various SNL wide operating procedures.

### **Nuclear Safety Support– Oak Ridge Site –**

Provide management for Nuclear Safety and Criticality Safety organizations. Implemented the USQ process for UCOR.

### **Nuclear Safety Support – New Brunswick Laboratory**

– Provided Nuclear Safety Support to assist NBL personnel in correcting deficiencies. Work included USQDs, ESS, JCOs, DSA and similar documents to support facility de-inventory.