

## **Industry Trends Program Support**

### **RES/DRA**

The NRC's Industry Trends Program (ITP) monitors trends in indicators of industry performance to confirm that the safety of operating power reactors is being maintained. If any long-term indicators show a statistically significant adverse trend, the NRC will evaluate the trends and take appropriate regulatory action using its existing processes for resolving generic issues and issuing generic communications.

RES supports the ITP by analyzing and trending the operating experience data in RES databases. This includes updating trends for initiating events, component and systems reliabilities, common-cause failures, and fire events, and then providing this information on the RES internal web page and NRC's public web site. The Accident Sequence Program also provides trends in the occurrence rate of significant precursor events to support the Industry Trends Program.

RES has finished development of the Baseline Risk Index for Initiating Events (BRIIE), which is an industry-wide risk-informed performance indicator for initiating events. The BRIIE is documented in NUREG/CR-6932, "Baseline Risk Index for Initiating Events (BRIIE)," published in June 2007. This new indicator was implemented in fiscal year 2008.

RES has completed the transition of using component failure and reliability information from the Equipment Performance Information Exchange (EPIX) System and the SPAR system models to evaluate system performance. The past system studies used failure information from LERs and simplified system models. The number of failures in LERs has been decreasing as the number of LERs has decreased in recent years. Use of EPIX information will provide more meaningful results. RES has also used EPIX data, information from Licensee Event Reports, and data from the Reactor Oversight Process to develop updated industry-average parameters for input to the NRC SPAR models. The results of this effort is documented in NUREG/CR-6928, "Industry-Average Performance for Components and Initiating Events at U.S. Commercial Nuclear Power Plants," published in February 2007.