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A Strong and Viable Technical Service Organization to Meet Current and Future Regulatory Challenges – NRC's Vision and Perspectives

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The Office of Nuclear Regulatory Research (RES) is, as established under Statute, a US-NRC program office that develops and maintains technical tools, analytical models, analyses, experimental data, and technical guidance needed to support the agency's regulatory decisions. RES is essentially the NRC's statutorily mandated technical support organization (TSO) that provides technical expertise and capabilities to support NRC's program offices, namely the Office of Nuclear reactor regulation (NRR), the Office of New Reactors (NRO), the Office of Nuclear Material Safety and Safeguards (NMSS), and the Office of Nuclear Safety and Incident Response (NSIR) in licensing and regulatory decisions. RES develops the technical bases to confirm that the methods and data generated by the nuclear industry help ensure that adequate safety is established and maintained.

In addition to conducting confirmatory research, as a technical support organization, RES conducts anticipatory research whereby it develops expertise and capabilities to evaluate longer term (approximately five years and beyond) needs of the Agency. To provide the technical bases for future regulatory decisions, RES looks where the regulated industry is moving and conducts exploratory research as needed to prepare the USNRC to respond to industry requests and initiatives. The paper will provide some examples of the technical activities and support provided by RES in support of US-NRC mission. The core capabilities required to continuously provide these technical services are of paramount importance to RES.

In addition to regulating the commercial use of radioactive materials to protect public health and safety and to protect the environment, the USNRC has responsibility for protecting and safeguarding nuclear materials and nuclear power plants in the interest of national security. Hence, RES also provides research and technical support to broad government-wide initiatives associated with national security. Thus, safety and security culture is an integral part of RES and US-NRC. In its broadest sense, "safety culture"refers to how well the NRC' s mission, policies, and working environment support nuclear safety and security as the agency's overriding priorities. RES ensures that personnel in the safety and security sectors have an appreciation for the importance of each, emphasizing the need for integration and balance to achieve both safety and security in their activities. It is important that consideration of these activities be integrated so as not to diminish or adversely affect either; thus, mechanisms should be established to identify and resolve these differences. To this end, several important programs, such as Open and Collaborative Work Environment, have been put in place.

RES's principal product is knowledge; thus, knowledge management (KM) is an integral part of the RES mission. RES's objective is to capture, preserve, and transfer key knowledge among employees and stakeholders. The body of knowledge can be used when making regulatory and policy decisions and ensures that issues are viewed and analyzed within a historical context. RES KM activities include participation in an Agency-Level KM Steering Committee to helpm promote and cultivate an awareness of the value of KM, expansion of Expertise Exchange Program, continuation of support to communities of practice (CoPs), and championing KM development and preservation.

Country or International Organisation

United States of America

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