AREVA can provide turnkey or supplemental support for critical digital asset assessments, cyber security engineering modifications, Verification and Validation (V&V) and regulatory affairs needs. You can benefit from the deployment of team members within our engineering organizations, which have a proven track record for cyber security engineering and bring to bear all the lessons learned and best practices from previous engagements.

**Critical Digital Asset Assessments**

AREVA couples our engineering expertise with a practical approach to assess your critical digital assets and identify and mitigate security gaps, whether they are technical, programmatic or organizational in nature.

The benefits of our Critical Digital Asset Assessments include:

- An approach that is designed in accordance with the latest industry guidance, and ensures you meet regulatory requirements in the most cost effective manner.
- Assurance that deliverables and outcomes of the assessments will integrate within your current operating framework, minimizing the burden that results from the creation of new programs and procedures that can disrupt operations and maintenance activities.
- A diverse project team whose members bring a wide range of experience including digital plant modifications, design engineering, security, information technology, and regulatory affairs.
- Identification of all required plant modifications in advance of final implementation date, so they can be scheduled with sufficient time to execute.

**Plant Modifications**

AREVA's expert engineers can leverage our robust engineering and design processes to execute plant modifications. You can be confident the AREVA team is capitalizing on our elite knowledge and lessons learned from similar scopes of work across the United States and abroad.

Given our breadth of experience, AREVA is renowned for optimizing these modifications for each customer as required to improve performance and generate efficiencies. This thorough and comprehensive approach from cradle to grave, allows you to have predictability to achieve the highest quality modification within budget and schedule. AREVA achieves engineering excellence by focusing on safety, quality, performance, and delivery.

**Verification and Validation (V&V)**

Verification and Validation (V&V), a technical discipline of systems engineering, provides an objective assessment of the products developed during the system development lifecycle process. Digital I&C equipment require additional design and qualification approaches above and beyond analog control systems. To obtain high confidence in Digital Software Quality, rigorous V&V processes are established based on guidance provided by NRC requirements.

AREVA's full scale V&V fulfills the requirements of Appendix B to NRC Regulations, 10 CFR Part 50 and IEEE Std 1012-2004 as endorsed by NRC Regulatory Guide 1.168 revision 2 (2013).
AREVA's Independent Verification and Validation (IV&V) department provides the V&V qualification activities required by regulations for Digital Instrumentation and Controls (I&C) equipment for AREVA's TELEPERM® XS. Additionally, AREVA's IV&V department also provides V&V services for third party vendors’ equipment, provides independent assessments of Software Development programs (i.e., V&V, Software Quality Assurance, Software Safety, Software Configuration Management, Cyber Security) for third party vendors or nuclear utilities.

The services provided AREVA's IV&V department includes software V&V for analysis, program evaluation, independent reviews, audits and inspections, quality assessments, validation (testing) of software products, and the overall Digital I&C equipment testing (software and hardware integration testing, and Factory Acceptance Testing, and site commissioning and startup testing).

Regulatory Affairs Support

AREVA can provide industry recognized regulatory affairs support to ensure the successful outcome of NRC cyber security interactions and inspections. This offering can include:

- Periodic regulatory oversight of cyber security plan implementation efforts according to a defined regulatory and inspection support model
- Performance of a pre-NRC inspection to identify potential gaps and to assess regulatory compliance with a focus on reviewing justifications provided in support of alternate controls
- Proactively entering any identified gaps into the CAP prior to NRC inspection
- Communication training for utility staff prior to NRC inspection to improve regulatory communications with NRC inspectors
- NRC inspection support, either as a primary interface to NRC inspectors or in a background/supporting role to ensure that the Cyber Security Program is well represented from a regulatory perspective
- Evaluation of, and support in responding to and resolving, any findings resulting from the NRC inspection

AREVA's Unique Offering

We combine a unique blend of engineering expertise with equipment and system knowledge, rigorous project management experience and regulatory expertise — all driven to reduce risk while saving time and money. The combination of nuclear steam supply system OEM engineering and field service capabilities with secondary-side expertise allows AREVA to deliver a total-plant perspective.

With customer-focused innovation, AREVA can deploy the technology and resources to lower your total cost and improve your facility's performance. We pledge uncompromising support for the long haul as you realize your vision for highly reliable, high quality and safe energy operations.

AREVA is a proven cyber security partner — bringing a holistic engineering perspective to ensure cost-effective protection and regulatory compliance. We offer:

The Expertise You Require: The AREVA team comprises industry recognized experts in nuclear plant engineering, security (cyber/physical), SQA, V&V and regulatory affairs.

A Pragmatic and Cost-Effective Approach: Our diverse capabilities enable us to take a holistic approach to cyber security plan implementation, ensuring that you can fully leverage existing plant protections and integrate only those necessary while minimizing disruptions to plant operations.

A Single Point of Accountability: AREVA has developed a robust supply chain to deliver a comprehensive suite of proven security solutions focused on minimizing your total cost of ownership.

A Proven Team Member: The AREVA team provides various levels of cyber security support across the U.S. nuclear fleet. We have earned a reputation for operational excellence. We bring to bear all the lessons learned and best practices developed over time to each new engagement.

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