

Consent Order NCO-2016-01

Consent Order Incorporating Agreement Between the U.S. Department of Energy and Savannah River Nuclear Solutions, LLC, April 2016

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*Savannah River Site Citizens Advisory Board Meeting
September 25, 2018*

Agenda

- Consent Order and the DOE Office of Enforcement
- Key Consent Order Actions
- Reviews and Results
- Summary

Acronym List / References

AEA	Atomic Energy Act
CFR	Code of Federal Regulations
CSE	Criticality Safety Engineer
CO	Consent Order
CSSG	Criticality Safety Support Group
DOE	U.S. Department of Energy
EA	Office of Enterprise Assessments
NCS	Nuclear Criticality Safety
NNSA	National Nuclear Security Administration
OE	Office of Enforcement
PAAA	Price Anderson Amendment Act
SME	Subject Matter Expert
SRNS	Savannah River Nuclear Solutions

Consent Order NCO-2016-01, April 2016

- The Consent Order is a settlement agreement between DOE and SRNS. The document includes facts and circumstances associated with the potential noncompliances from the events that lead to the Operational Pause and a remedy. The remedy included monetary and corrective actions.
- All actions have been completed and the final action closure documentation was provided to DOE in June 2018.
- DOE reviewed the action closure documentation and notified SRNS in August 2018 that this matter is closed.



Office of Enforcement – Authority and Purpose

- The Atomic Energy Act and Price Anderson Amendment Act authorize the Secretary of Energy (Secretary) to:
 - a) *establish rules, regulations, or orders necessary or desirable to promote the safety and security of nuclear activities and material*
 - b) *levy penalties against DOE-indemnified contractors for violations of these rules*
- DOE implements (b) (above) through the enforcement program administered by the Office of Enforcement (OE).
- OE's regulatory enforcement process is one mechanism to ensure contractors perform DOE's missions safely and securely.

COMPLIANCE

- One key element of OE's implementation approach is:
 - Promoting management and compliance assurance attributes so contractors can achieve excellence in safety and security without the need for enforcement involvement. Such attributes include:
 - *Rigorous and critical self-assessment programs*
 - *Timely processes for self-identification and correction of noncompliance conditions and any underlying problems affecting compliance*
 - *Positive safety and security cultures*
 - *Sustainable and effective corrective action processes*
- **10 CFR 820, *Procedural Rules for DOE Nuclear Activities* and Appendix A, "General Statement of Enforcement Policy," provide implementation and policy information.**

Key Consent Order Actions

There were two key Consent Order actions:

1. Complete corrective action plans, arrange for an independent party (outside of SRNS) to conduct an effectiveness review, and transmit results to OE.
2. Conduct an independent (outside of SRNS and its associated parent companies) assessment of the Nuclear Criticality Safety (NCS) Program.

Consent Order Action #1

Complete corrective action plans, arrange for an independent party (outside of SRNS) to conduct an effectiveness review, and transmit results to OE

- Two independent subject matter experts (SMEs) were hired to perform this review.
- Expertise in Conduct of Nuclear Operations and Nuclear Safety
- Review included:
 - Facility tours and walkthrough of the mockup area
 - Observed shift turnover meeting, plan of the week meeting, pre-job briefing
 - Observed operation evolutions on days, nights and weekends: vessel flush, liquid waste transfer, fan functional test, waste repackaging, movement of waste items, ventilation damper functional test
 - Performed 15 formal interviews of Operations and support staff
- Generally found staff to be competent, responsive, and dedicated to making improvements. The actions were determined to be effective.

Consent Order Action #2

Conduct an independent (outside of SRNS and its associated parent companies) assessment of the NCS Program

- OE and SRNS agreed to the Criticality Safety Support Group (CSSG) as the independent assessor.
- SRNS also performed an internal assessment prior to the CSSG review, referred to as the Pre-CSSG review.

Pre-CSSG Review

SRNS performed an NCS Program review.

- Four assessors/six weeks
- Interviewed 100 workers in Operations and support roles, reviewed greater than 200 documents/procedures, observed field evolutions and facility meetings
- Concluded that the SRNS NCS Program is sound and in compliance with DOE and site requirements
- One finding was identified related to expired criticality safety training
- Twenty-two opportunities for improvement were identified, including improvements to:
 - *Clarity of training requirements*
 - *The self-assessment program*
 - *Performance of oversight metrics and committees*
 - *Common mode failure discussion in technical documents*
 - *Sharing lessons learned and best practice information*
 - *Linking document database consistency*
- Improvement actions have been developed and are in progress

Five members from the CSSG performed the independent NCS Program review. The CSSG is a ten-member NNSA sponsored group comprised of both federal and contractor staff criticality safety SMEs.



NUCLEAR CRITICALITY SAFETY PROGRAM U.S. DEPARTMENT OF ENERGY

About the Criticality Safety Support Group

The Criticality Safety Support Group (CSSG) was formed in response to Defense Nuclear Facilities Safety Board (DNFSB) Recommendation 97-2, Criticality Safety. The CSSG functions as the technical support group to the Nuclear Criticality Safety Program (NCSP) Manager, providing operational and technical expertise pertinent to the criticality safety needs of DOE missions. This expertise is relevant to integral experiments, nuclear data, methods, training, and organizational structures supporting the development and execution of the NCSP. Additionally, the scope of CSSG activities also includes reviewing:

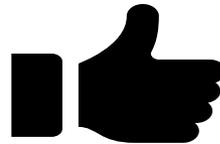
- Activities or conditions that have the potential for serious degradation of nuclear criticality safety at DOE facilities
- New nuclear facility designs where criticality is a credible hazard
- New or revised DOE directives, standards and guides related to criticality safety
- Contractor nuclear criticality safety programs at DOE facilities in support of DOE line management

The CSSG conducts its work in accordance with a [Charter](#), [Work Instructions](#), and [Membership Policy](#) as approved by the NCSP Manager.

[Find out more](#)

Criticality Safety Support Group Review Conclusions

- Overall, the SRNS Criticality Safety Program was found to be healthy and functioning well. Those issues that led to the Consent Order have been evaluated and understood by site management and corrective actions have been developed, and in some cases completed, which should preclude similar events from occurring.
- No findings were identified during the review.
- Improvement opportunities were noted in the areas of functional performance, oversight (metrics/trending), and the self-assessment process.



Summary

- The Consent Order was established in April 2016 in response to events that led to the Operational Pause.
- The Consent Order terms required two independent reviews.
- SRNS also conducted an internal review.
- The three reviews concluded that the SRNS Nuclear Criticality Safety Program was found to be healthy, functioning well, and in compliance with DOE and site requirements.
 - Improvement actions have been identified and are in progress.
- SRNS provided action closure documentation to DOE.
- In August 2018, DOE notified SRNS that this matter is closed.



SRNS is a learning organization and continuously strives to improve performance to ensure compliance with important safety requirements and to achieve our vision to be the standard of excellence in nuclear materials management.