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Implementation of the Generic Safety Analysis Report (GSAR)- Lessons Learned

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The Savannah River Site has completed the development, review and approval process for the Generic Safety Analysis Report (GSAR) and implemented this information in facility SARs and BIOs. This includes the yearly revision of the GSAR and the facility-specific SARs. The process has provided us with several lessons learned:

- Development of the format set forth in DOE-STD-3009-94
- Level of detail required in the GSAR
- DOE approval process for a non-facility-specific SAR
- USQD process for a SAR without an Accident Analysis
- Amendment process for both facility and site level SARs
- Others lessons learned

Development of GSAR Format

There were two problems associated with the development of the GSAR format. When work began on the GSAR, DOE-STD-3009-94 was not yet approved. Several iterations of the Standard were issued before final approval. The GSAR was completely reformatted with every issuance of a new draft Standard. We also encountered facility resistance to changes from the accepted SROM format.

To correct these problems, we worked with DOE-SR to limit further rewrites of the GSAR. A SAR Style Guide was also written and approved for the use of all facilities. Training was then provided to facility engineers on the Style Guide and the differences between 3009 and the SROM format.

Level of Detail Required to be in the GSAR

The fundamental issue was that various facilities wanted different levels of detail in each chapter. The solution was to work closely with DOE-SR and select facility representatives to resolve this issue. A comparison on the level of detail in existing SARs was conducted with guidance in DOE-STD-3009-94. The decision was made to use division-level procedures to define the separation between the facility-specific SAR and the GSAR.

Approval Process for Non-Facility-Specific SARS

Because the GSAR was the first of its kind, there was no past experience with an approval process. As such, the GSAR had been given a low priority in the review and approval process. There was also a problem with inconsistent reviewers.

The solution was threefold. Training was conducted for facility and DOE on the GSAR approval process. Approval of the GSAR was tied in to corporate level funding and it became a DOE Award Fee Milestone. An electronic database was created to track comments and resolutions from all reviewers.

USQD Process for a SAR without an Accident Analysis

The GSAR was the first type of SAR that did not contain an accident analysis to conduct a USQ review against. In the early revisions of the GSAR, there was no site-level committee to provide a process for approving USQs to the GSAR.

To solve this problem, a Commitment Tracking Matrix was developed to ensure that no SER commitments are violated. A site-level Facility Operation Safety Committee (FOSC) was also developed to handle the USQ process for the GSAR.

Amendment Process for Both Facility-Specific and GSAR

Facility-specific SARs are updated at different times than the GSAR. Due to a cumbersome revision process, there have been delays in the approval of the annual revisions to the GSAR.

To resolve these problems, the facilities will reference the most current revision of the GSAR in their facility-specific SARs. This year WSMS is also implementing an electronic revision process for DOE-SR.

Ongoing Improvements

There are several improvements to the GSAR. We are converting the chapters from being DOE Order compliant to being S/RID compliant chapters. The GSAR has also been incorporated into SAFETYNET, including pending revisions. This year WSMS developed a generic Accident Analysis Methodology chapter, and next year WSMS is looking towards developing a generic Chapter 4, Safety Structures, Systems, and Components, for inclusion in the GSAR.

Accomplishments

WSRC, DOE-SRS, and WSMS have taken ownership of the GSAR and implemented it at the Savannah River Site. This effort included the development, review/approval, and annual amendment of the GSAR; development, review/approval, and annual amendment of numerous facility-specific SARs; and resolution of several licensing and technical questions discussed above.

Conclusion

The GSAR effort has resulted in cost savings of \$4 M in initial development and implementation and an additional savings of about \$2 M in the annual amendment process. To date the GSAR effort has saved DOE approximately \$10 M in total cost savings.