

**A SYSTEMATIC APPROACH FOR IMPLEMENTATION OF  
NEW MC&A REQUIREMENTS (U)**

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# **A SYSTEMATIC APPROACH FOR IMPLEMENTATION OF NEW MC&A REQUIREMENTS**

**W. A. WILSON, SAVANNAH RIVER SITE**

## **SUMMARY**

In early 1988 the Material Control and Accountability Section at the Savannah River Site (SRS) was given the task of implementing DOE MC&A Order, 5633.3. The requirements of this Order are significantly different than those of the previous DOE MC&A Order. This, coupled with the size and complexity of operations at SRS made implementation of this Order a formidable task.

The Material Control and Accountability Section at SRS took a somewhat unique approach. First, the order was broken down into 240 individual requirements. Each requirement was given a number, summarized in a short phrase, and entered into a computer database. This database was then used to prepare a check sheet for evaluating each Material Balance Area (MBA).

The check sheets were used by the five MC&A Area Liaison to evaluate the 32 MBAs at SRS. Upon completion of the check sheets, the results were compiled in the database. A review of the check sheets by the five Area Liaison and their manager revealed, in many cases, differing interpretations of the order requirements. These areas of differing interpretations were then reviewed with the local DOE Operations Office and in some cases DOE Headquarters for resolution.

Check sheets were revised based upon DOE interpretation of the requirements. These check sheets were then used to prepare an Implementation Plan. This plan addressed all areas of non-compliance with either a proposed plan for bringing the area into compliance or a proposal to request a formal exception to the requirement. The draft Implementation Plan was reviewed by the DOE Operations Office for concurrence. After several iterations of this plan, agreement was reached with DOE and a final plan was prepared. The final Implementation Plan was then used to prepare exception request letters.

During the final phases of this process, the MC&A Area Liaison began working with the process operations personnel to initiate actions to bring

the site into compliance with the new requirements. Each of these actions (documented in the Implementation Plan) was then tracked to completion by the MC&A Section.

This method of approaching order implementation provided an organized systematic way to compile and organize the data necessary to prepare an Implementation Plan and exception requests, and track action items. In fact, this approach was so effective that it was recently used at SRS to address compliance with new DOE Orders in the area of waste management.

## **DISCUSSION**

### **Approach**

In order to comprehensively address every requirement of DOE Order 5633.3, each requirement was identified and recorded. Each requirement was then summarized in a short phrase, given a reference number, and listed along with reference to the page and paragraph location in the order. All requirements were given a designation as to the minimum attractiveness level MBA to which they apply. For example, an entry of IIIC means that all category I, II, IIIB, and IIIC (there is no category IIIA) MBAs must meet the requirement, while category IIID and IV MBAs do not need to comply.

This list of requirements was then formatted onto check sheets for the various categories of MBAs. The check sheets had columns to be filled in with the following information: whether or not the MBA was in compliance with the requirement, whether there were approved or currently proposed upgrades that would bring the MBA into compliance, whether a new upgrade would be required, or whether an exception to the order should be requested. There was also a column to be filled in with the expected date of completion of each upgrade.

Since the order relies heavily on the graded safeguards concept, it was very important to properly categorize each MBA prior to completing the MBA check sheet. The categorization of most MBAs at the Savannah River Site was very straightforward. The analytical laboratories were, however, fairly difficult to categorize and required consideration of "credible rollup."

The next task was to fill out the appropriate MBA check sheet for each MBA. At SRS there are five MC&A Area Liaison which report to the central MC&A organization. Each MC&A Area Liaison is responsible for evaluating and administering the MC&A program in his/her assigned area. Since these individuals are geographically located near their MBAs, frequently audit them for compliance with MC&A requirements, and are familiar with the new order requirements, they were given the task of completing the check sheets.

Separate check sheets were filled out for all category I, II, and III MBAs, with the exception of the three reactor MBAs (the reactor MBAs are essentially identical). Within the category IV designation, some MBAs that contain sources only were analyzed together. Also, some category IVE MBAs, since they are similar, were analyzed together.

Prior to filling out the check sheets, the MC&A Area Liaison met with their manager to review the check sheets to determine which requirements are met (or should be met) by a site wide program and those which must be met by each individual MBA. All requirements to be addressed on a site wide basis were noted as such on the check sheets.

### Analysis

When all the check sheets had been completed the compliance results were tabulated side-by-side for the various categories of MBAs (i.e., category I together, category II together, etc.). The MC&A Area Liaison met as a group with their manager to review the areas of noncompliance identified. In many cases differing interpretations of the specific order requirements led to MBAs being analyzed differently. For instance, one MBA was analyzed as being in compliance and another MBA (with essentially the same system in place) analyzed as not being in compliance. From this review, a list of requirements needing further clarification was generated and reviewed with the local DOE Operations Office. Based on guidance received from the DOE Operations Office, changes were made to the check sheet responses. This process ensured consistent assessments of compliance across the site.

The results of the completed check sheets were used to prepare a draft implementation plan for the order. Areas of noncompliance with specific requirements were listed along with either an action to be taken before April 30, 1989 to bring the MBA into compliance, a proposal that an exception be granted, or a request for additional DOE guidance.

After several reviews of the draft implementation plan, DOE Operations Office comments were incorporated and a final implementation plan was prepared. For each area of noncompliance, the final plan contained actions to be taken to bring that MBA into compliance by April 30, 1989 or stated that an exception to the order requirement would be requested. The implementation plan was then used as a basis for preparing exception request letters. The final plan and the exception request letters were then submitted to the DOE Operations Office for approval.

### Application

Once the implementation plan had been drafted, it became necessary to begin making MC&A policy changes. In order to accomplish this, the site MC&A manual (which establishes Westinghouse MC&A policy for the site) had to be extensively revised. Following revision, approval, and publication of the site manual, individual facility MC&A manuals were revised.

Next came the needed changes in lower level procedures which were required to get the policy changes into action. The MC&A Area Liaison worked extensively with the MBA custodians to ensure that the appropriate changes were made.

In order to effectively manage implementation, a tracking system was developed to ensure that all corrective action identified in the implementation plan were completed and that all exception requests were followed until approved.

### CONCLUSION

This approach to implementation of DOE 5633.3 Order requirements to the very diverse and complicated Savannah River Site with its 33 MBAs, various processes, and different material types, proved extremely successful. It provided for identification and compilation of individual requirements, a systematic approach for compliance analysis, a basis for developing compliance documentation, and a method for assuring that compliance actions were completed and exception requests were approved. This approach was so effective, in fact, that it was subsequently used to at the SRS to assess compliance with new DOE Orders in the area of waste management.

The implementation plan (83 pages) has since been revised to reflect additional guidance from DOE Headquarters. Seventy-one exceptions were requested; 34 approved by the DOE Operations Office; 36 approved by DOE Headquarters; and one denied. (This does not include exceptions denied by the Operations Office during review of the draft implementation plan.) Many of the exceptions are for an indefinite timeframe and reflect situations where the effect of not meeting the requirement does not contribute significantly to a vulnerability and meeting the requirement is not cost effective.

At first, this approach was followed simply as a means to assess compliance and request exceptions. However, in retrospect, this approach has increased the level of knowledge concerning the site's vulnerabilities and capabilities. This has enabled the MC&A Section to focus attention on these areas in a proactive manner instead of waiting until they were discovered by an external audit team.

**A SYSTEMATIC APPROACH FOR  
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**by**

**Walter Wilson**

**Savannah River Site**

# **IMPLEMENTATION**

- **APPROACH**
- **ANALYSIS**
- **APPLICATION**

## **APPROACH**

- **BREAK DOWN INTO REQUIREMENTS**
- **PREPARE MBA CHECK SHEETS**
- **CATEGORIZE MBAS**
- **EVALUATE MBAS**

# REQUIREMENTS

REF. NO	ORDER PAGE	ORDER PARAGRAPH	REQUIREMENT	MIN. MBA AFFECTED
39	I-11	I.5c	DOCMNTD MC EFF VERIF PROG	IVE
40	I-11	I.5.d	EMERG PROC: INOPER MC&A	IVD
41	II-1	II.2	GENELLY ACCPTD ACCT PRIN	IVE
42	II-1	II.2.a.(1)	WRITTEN MAT ACCT PROCDS	IVE

# CHECK SHEETS

REF. NO. REQUIREMENT	SITE/ FAC.	COMP- LIANCE	APPROV. UPGRADE	NEW UPGRADE	COMP. DATE	REQ. EXCEP.
91 VERIF/CONF ACCPT/REJ CRIT	F	YES				
92 RESP PLN: VERIF/CONF ALARM	F	NO	PROCED.	4/30/89		
93 NO PROCESS: ITEMS FAILING	F	NO				YES

## **ANALYSIS**

- **COMPILE / REVIEW DATA**
- **DRAFT IMPLEMENTATION PLAN**
- **OPERATIONS OFFICE REVIEW**
- **FINAL PLAN & EXCEPTION REQUESTS**

# IMPLEMENTATION PLAN & EXCEPTIONS

- PLAN - 83 PAGES
- EXCEPTIONS

## APPROVED

<u>REQUESTED</u>	<u>SR</u>	<u>HQ</u>	<u>DENIED</u>
70	34	36	1

# **APPLICATION**

- **CHANGE POLICY**
- **REVISE PROCEDURES**
- **TRACK ACTIONS & EXCEPTIONS**

## **CONCLUSION**

- **IDENTIFY REQUIREMENTS**
- **SYSTEMATICALLY ASSESS**
- **DOCUMENTATION BASIS**
- **FOLLOW UP**
- **PROACTIVE FOCUS**

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J. A. Duschinski

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P.O. Box 616  
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