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COMMITMENT TRACKING SYSTEM IMPLEMENTATION AT THE SAVANNAH RIVER PLANT

by

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Introduction

The Savannah River Plant (SRP) is a Department of Energy (DOE) installation covering over 300 square miles along the Savannah River in South Carolina. E. I. du Pont de Nemours (Du Pont) has been the only operating contractor at SRP since 1952. Over 16,000 people work at the facility. Three weapons grade production reactors produce Plutonium, Tritium and other radioactive materials for DOE. As you may know the reactors have been shut down since last fall. Plans are to restart them by the end of the year. Congress has authorized a New Production Reactor to be built at SRP or Idaho Falls to replace these three reactors. SRP is this country's only source of weapons grade materials.

Du Pont has decided that it is not in the company's best interest to continue as the SRP operating contractor. All present Du Pont employees will transfer to the new operating contractor - Westinghouse Savannah River Company (WSRC) on April 1. WSRC has decided this will be an ideal time to implement a site-wide commitment tracking system or the Commitment Management System (CMS).

History of Development

A site-wide Savannah River Plant committee with the assistance of IBM reviewed the SRP communication network and defined a course of action in April, 1985. An Information Systems Integrated Plan documented the need for a better communication network at the plant. A Local Area Network (LAN) made up of pc's connected to VAXs or minicomputers was developed so that engineers and managers could communicate electronically via their computers using such features as electronic mail. This system was independent of the Mainframe computer and its network of terminals. The study also pointed out the need for a system to provide better communication in the quality, environmental and safety areas.

The Site Quality Department, the department at SRP responsible for overall site-wide QA, took the lead in this effort in November, 1987. Drawing on the expertise in the private nuclear utility sector, inquiries were made to several private utilities where we soon learned of the Commitment Tracking Utility Group (CTUG). We visited several CTUG member utilities to view their systems including Florida, Georgia and Alabama Power. We also visited the Braidwood Plant owned by Commonwealth Edison which has since joined CTUG.

We reached several conclusions about the private nuclear utility sector's commitment tracking systems after these visits:

Commitment Tracking is a necessity, not a requirement
No two commitment systems are completely alike
NRC is the primary focus
No cost/benefit analysis necessary
Nuclear Licensing/Compliance responsible
Scope & amounts of commitments vary
All implemented in past 6 years

Du Pont, as a government contractor, has no NRC regulatory obligations unlike a private utility which must comply with the NRC regulatory requirements. DOE's relationship to Du Pont is contractual. SRP needs the same type of system to meet our contractual requirements to DOE, if SRP is to survive in the present oversight atmosphere. In fact amendments to the Price Anderson Act approved by Congress last fall provides DOE with the authority to impose civil fines of up to $100,000 per violation on contractors who violate DOE rules, regulations or orders related to nuclear safety.

Du Pont conducted a management survey in January, 1988, to determine the interest in a site-wide tracking system. Approximately 35% of the 110 SRP managers responsed. Over 85% of the manager's supported the system. Interviews were conducted with as many managers as possible and the following major needs were identified:

Handle voluminous documents
Internal tracking top priority
Access control required
User friendliness a necessity

A Commitment Management Unit (CMU) within the Site Quality Department was established and began developing a basic commitment tracking system for external, internal and historical generated documents. The external feature tracks external commitments - those made to an external organization such as DOE, EPA etc. This feature is in production now. The internal feature will track commitments that originate inside the company from an internal source document. The historical feature will contain commitments that have been formally closed and contain no immediate action.

CMS combines a basic commitment tracking function with a correspondence tracking function from receipt of the incoming correspondence to the response information generation. The system does not contain decision-making controls. It reflects the information in a form that management can use to ensure all commitments are managed correctly. The external system reflects the important information contained in the daily correspondence between DOE and the operating contractor.

CMS is a computerized management tool that was developed in the Quality Department. CMS will be the responsibility of the Management Integration Department in the Business Services Division when the current WSRC reorganization at SRP takes place on April 1. Most utilities see the need to separate the commitment tracking function from the QA function. The commitment tracking function in the private nuclear utility sector is usually performed by the Licensing or Compliance Department or in some cases the Contracts or Information Services Department. There is no Licensing or Compliance Department at SRP. Several modifications have already been made to the system in anticipation of this ownership change.

Commercialized commitment tracking systems are marketed by several utilities. SRP management decided to develop a tracking system specifically for SRP because of the uniqueness of the governmental nuclear sector. The original concept was to develop a Mainframe system, accessible to all managers on site. Mainframe file access through the LAN was added to the scope to meet this goal and also to provide a more user friendly application. CMS has two accesses, personal computers or terminals linked directly to the Mainframe and/or indirectly through the LAN.

The management survey identified many existing tickler systems that were tracking the important DOE action items. The CMS external feature will provide this tracking now. Once a commitment was made to the tickler action item it was not tracked further to ensure completion. No complete list of all the SRP commitments made or those pending was maintained. This practice created two problems - no way to ensure that new commitments were not violated later and no way to adequately schedule and prioritize work created by each new commitment. For example, commitments to DOE Orders, the formal operating DOE documents used to direct the operation of DOE installations, are accepted as operating requirements with hardly any formal review.

CMU began CMS development with the Du Pont computer programming personnel by conducting a business analysis based on how the system would operate in the current environment. CMS was developed such that the basic program would track any of the three types of commitment features - external, internal and historical. The external feature would be developed first so that it could be in use while the later two features were under development. An experienced consultant was hired who had been involved with the development of five other private nuclear utility commitment systems. The requirements for the system were identified as follows:

Track all commitment types
User friendly
Part of LAN
Controlled access
On-line search & reporting
Bulk report generation
Downloading capability
Accessible to all managers

CMU drafted a Project Quality Plan and a Project Definition Document. The business analysis was done by CMU with assistance from the SRP Computer Systems Department (CSD) using the Information Engineering Methodology developed by Arthur Young, Inc. CMU then prepared a CMS Functional Specification for management approval.

CSD prepared a CMS Design Document detailing their CMS external feature programming effort. The Computer Projects Department, the Du Pont computer department responsible for the SRP LAN, produced a similiar Design Document describing their plan to build CMS computer screens that would allow managers to use CMS as part of the LAN. A new electronic bridge had to be built that would allow LAN access to the Mainframe database.

CMS is a Mainframe Computer system with two access routes to the data. The CMS user with the proper accesses can acutally manipulate the data using two different applications. The computer screens for the two applications are very similar yet each application has distinctive advantages. The Mainframe application provides the security requirements, access controls and batch reporting capability. The LAN application has the convenience of electronic mail and user friendliness. Since training is available for new LAN users it offers a mechanism to ensure new CMS users are already trained in the mechanics of the application.

CMS was designed to be an unclassified system. The flexibility exists with two applications to separate them in the future. The existing Mainframe application could be moved to the SRP classified computer network located on the Mainframe. The LAN application would then become the sole unclassified system. There would be two Mainframe data files, a classified and an unclassified.

A site-wide task team representing all the site-wide program areas was formed to help develop the system. This 12 member team reviewed several important aspects during early CMS design.

CMU had the task of establishing a means to obtain and review the DOE source documents so the source information could be entered into the system. An agreement was established with DOE requiring that CMU be copied on all higher tier DOE correspondence sent to Du Pont from the DOE-SR Manager and his five Assistant Managers. The plan now is to allow CMU to intercept the incoming mail to Du Pont and enter the DOE source information into CMS.

After one year of effort we now have the Mainframe application in production and plan to formally implement CMS on April 1. We expect the Local Area Network application to be in production by the end of this month just in time to train managers and data entry clerks in this application. Next we will develop the CMS historical and internal features. Another ongoing effort will be collecting the present open commitments and entering them into the system. This is being done now, organization by organization.

System Operation

CMS has six broad categories that apply to all three tracking features - external, internal and historical. These are:

Source Document - document containing a required response
Source Item - action item in source document
Response Document - document responding to source document
Commitment - a written pledge in a response document
Task - an assignment required to complete a commitment
Implementing Document - document which embodies the commitment

CMU will enter the external source document and source item information into CMS. The internal feature is still to be developed but the plans are to require the responsible organization to enter the source document information. CMU will enter the historical feature source document information.

CMU Coordinators will be trained to identify the specific external feature source items. The system will provide the means to track the action or source items in each of the source documents to ensure a timely reply. The commitment information will be extracted from the response documents. The response information will be entered by trained coordinators. These coordinators may be provided by the responsible organization or by CMU.

A SRP commitment is defined as "a written pledge made to an external or internal organization in response to a source item or in a historical document". Coordinators will identify these commitments and be responsible to ensure they are entered into CMS.

The system also carries information on tasks and implementing documents associated with the commitments. The task information allows managers the opportunity to insure that the commitments are met and to update DOE on the progress in meeting these commitments. The implementing document information ties procedures, work orders, purchase orders, etc. back to the commitment. This feature ensures that commitments met in procedures and other documents are retained permanently.

CMS will be a menu item on the Local Area Network application and any user will view CMS as just another menu item. Once familiar with the LAN the user should be able to use CMS. Local Area Network application training is the responsibility of one of the Du Pont computer departments. CMS training to indoctrinate new users would be minimal. The future benefit of the LAN application will be to use features such as electronic messaging in conjunction with CMS to review and approve response documents or to alert managers of new source documents.

There are four access privileges available in CMS. Full read/ write for CMU personnel, limited read/write capability for coordinators, read/write with management reporting for managers and read only for the majority of users including all DOE personnel. The plan is to give DOE access to the external and historical feature but not the internal.

The following batch reports will be used to provide information concerning source items and commitments. The batch reports will include:

New Source Document
Open/Overdue Source Item
Open Commitment Status
Commitment Verification
Quarterly Commitment Status

Managers will be allowed to generate their own reports in similar batch report format. All users will be able to screen print.

Conclusion

The Commitment Management System at the Savannah River Plant is in the infancy stage but progress has been made and plans are for it to mature as it is developed.

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