Best Practice #152

Best Practice Title: *Cognizant Engineer/Alternate Cognizant Engineer System Assignment List*

Facility: Waste Isolation Pilot Plant (WIPP)

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Brief Description of Best Practice: The Configuration Management (CM) section of WIPP maintains the Engineering Department's Cognizant Engineer (CE)/Alternate Cognizant Engineer (Alt. CE) System Assignment List, also known as the "Cog List". Pursuant to the System Engineering Program as defined in DOE O 420.1C *Facility Safety, Chapter V - Cognizant System Engineer Program*. CM maintains the Cog List in the electronic document management system (EDMS).

The Cog List displays all WIPP systems and subsystems. It lists the assigned CE/Alt. CE by system, subsystem, and title, along with the Cognizant Manager responsible for each system.

The Cog List also identifies the anniversary date for the required walkdown that serves as the CE/Alt. CEs annual requalification.   Safety Systems are designated as such under the system number where applicable, along with the DOE Safety System Oversight officer responsible for that system. This needs to be readily available because of the requirement that the DOE counterpart be invited to participate in the system walkdown.

Why the Best Practice is used: As planned facility modifications and upgrades are occurring throughout the site the operations, maintenance, and engineering process requires knowing the responsible parties for each system. The Cog List provides that information in one convenient document. This best practice positions the site to quickly assign system responsibilities, label VSS systems, document due dates of walkdowns, and list DOE counterparts for VSS systems.

What are the benefits of the Best Practice: Overall, the Cog List allows for all system assignments to be listed with related information for the system engineer program. This information is documented to meet the requirements from DOE O 420.1C.

What problems/issues were associated with the Best Practice: In previous versions of the list at WIPP, "Not Assigned" was used when a CE was in the process of becoming a qualified engineer. Now, the future CE is listed as "In Training" to prevent "Not Assigned" or blank designations from appearing on the list. The appearance and perception was that a system lacked adequate support. This misnomer has been rectified by listing the person who will become CE/Alt. CE once all necessary training has been completed. Likewise, by listing the In-Training personnel it creates an environment that motivates the candidate to complete training requirements.

Depending on the complexity of the specific site, some sites will automatically assign a system to the responsible Engineering Manager until the individual is trained and qualified. Other sites do not use alternate CEs so would have to tailor their approach.

It is also extremely important that tight control of system boundaries be maintained so there is no question which CE owns what component on a safety system. Without this tight control, gaps or overlaps between systems can result in significant implementation problems.

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How the success of the Best Practice was measured: The practice of listing the CE/Alt. CE who is in training has lessened the inquiries during audits, assessments, etc. The perception that a system didn't have proper ownership has diminished and overall the action has resulted in better information being available for site participants when it comes to the question of site system responsibility and ownership.

Description of process experience using the Best Practice: As changes in engineering personnel occur, it is important that site systems are maintained in a consistent manner. The Cog List allows the site to formalize the designation of CE/Alt. CEs who are responsible for maintaining overall cognizance of assigned systems to ensure continued operational readiness of the systems within its scope. To paraphrase 420.1C: A key element of the CE program is the designation of CEs who are responsible for maintaining overall cognizance of assigned systems, providing systems engineering support for operations and maintenance, and technical support of line management safety responsibilities for ensuring continued system operational readiness. The Cog List meets this need. This is an ISMS key principle to have clear roles and responsibilities relative to implementing key safety management programs such as the Cognizant System Engineering Program.