EFCOG Best Practice #96

Best Practice Title: Performance Assessment Scoping Process

Facility: Savannah River Site, South Carolina

Point of contact: Steve Thomas (803-557-8960), Kent Rosenberger (803-557-9328) - Savannah River Remediation

Brief Description of Best Practice:

Savannah River Remediation (SRR) has implemented a process to provide an open forum for technical discussions and interchanges between stakeholders, DOE and DOE contractors evaluating the development of radiological performance assessment of HLW Tank Farm closures.

Why the best practice was used:

The process was developed to avoid lengthy and costly request for additional information from the NRC, EPA and State Regulators during the review of the performance Assessment (PA) for the F and H Tank Farms.

What are the benefits of the best practice?

The benefits of this process include:

- Provides the technical foundation for the PA
- Identifying and resolving key issues upfront
- Provided an excellent opportunity to discuss technical topics in a private setting prior to expenditure of resources (personnel and dollars) for detailed analysis
- Establishing stakeholders relationships and making them part of the development team early in the process
- Excellent open exchange of information between technical staffs
- Willingness from all stakeholders to discuss technical basis, inputs and results prior to issuance of the PA for formal and public review
- Establishes a foundation for future PAs
- Process has been adopted at the Hanford site
- Process can be utilized throughout the Complex

What problems/issues were associated with the best practice?

- Establishment of the “ground rules” that met everyone’s needs
- Meeting preparation and conduct are labor intensive
- Individual interaction quality with the various members of the group improved as the meeting progressed
- Team membership changes and may challenge issue resolutions and fundamental approaches
- Very important to adequately document the discussions and decisions of the team so that new team members can be “brought up to speed” and so that memories can be refreshed after months of development

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How the success of the best practice was measured:

The success of the best practice was evidenced by the significant improvement in PA inputs; **s**takeholders defending DOE's technical positions to others; the process being used at other sites (e.g. Hanford); and the process being identified in the Complex-Wide Review as a "best practice".

Description of process experience using the best practice:

The issuance of NDAA 3116 provided a stronger role for the Nuclear Regulatory Commission (NRC) in DOE's closure of tanks that previous stored high-level waste at the Savannah River Site. This role included the review of the radiological performance assessment (PA) for the F and H Tank Farms.

Normally the contractor develops the PA and submits the draft to the DOE for review and approval. The development of the PA is very complex and includes: developing a conceptual model and developing model input parameters such as inventories, dose conversion factors, bioaccumulation and consumption factors, all pathway and intruder scenarios, hydrogeology, fate and transport assumptions, closure cap design, etc.

The process of reviewing the PA after development was not efficient or timely, with the inclusion of the NRC review, in meeting the schedule for closure of the tanks. In addition, the EPA and the State of South Carolina (SCDHEC) environmental regulatory agencies were also stakeholders in the review process. A decision was made that a more proactive approach was necessary to include all the stakeholders in the upfront development of the PA.

The NRC, EPA and SCDHEC identified representatives that would participate in the process and a series of meetings were schedule. "Input packages" were developed by SRR that would be used to cover certain topics in the technical exchange and review process. The meetings were typically 1 to 2.5 days in length. Meeting minutes, including action items, were developed following each meeting and included any actions that required additional information or further discussion at a later meeting.

The process was very successful in establishing relationships and technical respect by all parties and in ultimately providing a better product, the PA.

ISM Core Function 2: Analysis of hazards