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CENTER FOR NUCLEAR WASTE REGULATORY ANALYSES

MEETING REPORT

SUBJECT: ASQC Energy Division Annual Conference
DATES AND PLACE: September 9-12, 1990, Tucson, Arizona
AUTHOR: Robert D. Brient

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PERSONS PRESENT:

Approximately 330 persons attended and the full attendance list is available from the author. Attendees included T. Trbovich, M. Gonzalez, and R. Weber from SwRI, and J. Gilray and W. Belke, NRC HLW QA staff. Composition of the attendees was primarily nuclear power, but with significant representation from conventional power, petroleum industries, and waste management (high level, low level and mixed). Most of the national laboratories were well represented.

BACKGROUND AND PURPOSE:

This was the seventeenth national ASQC Energy Division conference, the third of which the author has attended. The technical presentations cover a wide range of quality assurance issues relevant to Center activities, particularly those associated with waste management and application of QA in research and development environments. This conference served as the annual Center professional development for the author.

SUMMARY OF ACTIVITIES:

The attached Technical Program Table of Contents provides a detailed listing of conference presentations. Several technical sessions were scheduled simultaneously throughout the conference, so the author attended those of greatest interest and relevance to Center activities. While all of the sessions attended were of general interest, one session in particular captured the interest of the author, and is discussed below. For those desiring more information about the other presentations, the conference proceedings are available from the author.

Session C - Human Factors in Basic Research and Development

The first presentation, by S. Hill of INEL, introduced the science of human factors with a general application to R&D. While the physical aspects of human factors is most commonly studied (as in the ergonomically designed automobile controls), the mental aspects are of primary importance in R&D. By studying and controlling factors that influence the mental processes associated with

conducting research (or SRA within the Center), the quality of the work and its assurance may be enhanced.

The second speaker, M. Shear from Brookhaven, spoke more on the topic of QA program implementation in research environments, but with consideration for the human side. He warned of the natural aversion of scientists to QA, QA semantics and anything else resembling typical QA practices. He suggested the use of approaches that would avoid negative responses from scientists, and recommending building on existing scientific practices which contribute to quality. Some criticism could be made of the presenter's hands-off approach to implementation and the questionable level of QA program compliance that his approach may afford.

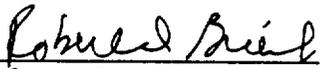
M. Bodnarczuk of Fermilab provided a very stimulating discussion which centered on utilizing innovative techniques to control rather than relying on traditionally used "orthodox" QA methods. He balanced creativity, which thrives on the lack of structure and formality, with the need for control and programmatic formality. He suggested that creative processes could be allowed to proceed freely within certain (predetermined) bounds, but that QA controls would be applied outside those bounds. A similar tactic appears to be taken in DOE HLW research with "scoping" activities, to which "good practices" (as in DOE's old QA level 3) apply, which precede later design input activities which have full qa requirements (QA level 1 or 2) applied. The Center is trying to identify and use innovative QA methods which provide effective contributions to the assurance of quality, which seems consistent with Mr. Bodnarczuk's arguments. Consideration of human factors should facilitate this process.

CONCLUSIONS:

As with most conferences, their success is as much dependent on the quality and enthusiasm of the attendees as of that of the presenters. In this regard this conference was an unqualified success. The professional contacts established and renewed, as well as the discussions outside of the technical sessions, were invaluable.

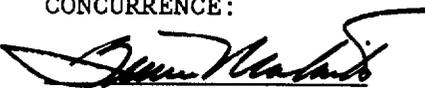
With the inclusion of waste management and R&D quality assurance issues, the ASQC Energy Division National Conferences have rapidly adapted to provide current and valuable assistance to the energy QA industry. This author recommends that the Center presence and participation be maintained at these annual conferences.

SIGNATURE:


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9/24/90
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