OBJECTIVES

The organizational self-assessment process was borne out of the Total Quality Management (TQM) movement. The first self-assessments, known as self-appraisals, were performed as one of the criteria for the Malcolm Baldridge National Quality Award (MBNQA). One objective of this research study is to test the supposition that the self-assessments performed by the nuclear power industry differ from other industries. Recent scholarly literature indicates that the existing models for conducting self-assessment for continuous improvement are outdated. In addition, the literature indicates that each industry or organization should develop their own models or adapt the existing TQM model to optimize the benefits of self-assessments. A further supposition of this research is that there are no standard attributes for the performance of self-assessments in the nuclear industry. This research attempts to identify those attributes of the nuclear power industry so a standard model may be constructed to optimize the investments made by the nuclear power industry in the use of self-assessments. In addition, this research will determine the relationships, if any, between survey characteristics (e.g., participant level in the organization, those that believe that self-assessment improves performance, the purpose of self-assessment, etc.).

METHODS

The data that is utilized for this research was collected via the use of a survey instrument. The survey was sent to three separate people at each operating commercial nuclear plant in this country. The site vice president, the plant manager, and the quality manager were the recipients of the mailed surveys. In addition, the quality manager was asked to select two other individuals at the plant that are involved in the self-assessment process to participate in the survey. There are several types of questions contained in the survey. Some are nothing more than simple selection, while others ask for a rating. The survey was constructed with brevity in mind in an attempt to improve the response rate. The survey generated a 39% response rate, which is considered acceptable.

Each question was analyzed individually utilizing descriptive statistics. This provides valuable insight into the minds of utility managers that are involved with the self-assessment process. The review of these descriptive statistics provides insight into the state of knowledge regarding this process in the nuclear industry. Further, these statistics are used to help identify the major attributes that are important for nuclear industry self-assessments.

In addition to an evaluation of the individual descriptive statistics, there were analyses conducted between survey questions. Analysis of Variance and Correlation Analysis are used to determine relationships between responses.

RESULTS

Clearly, the three levels of management (executive, senior, middle) surveyed in nuclear power management levels have a sophisticated understanding of the true purpose of this process (continuous improvement). This indicates that the process is similar to other industries. However, differences exist in perceptions of the purpose of the process at the three levels of management surveyed. In general, all three levels believe the purpose of self-assessment is continuous improvement. Yet, the senior level managers are strongest in this belief. Coincidentally, the executive level and the middle level managers maintain the same level of understanding of this purpose. Further, the industry believes that the process improves
performance. In fact, the nuclear industry feels stronger about this than do other industries.

CONCLUSIONS

This research identified the top five attributes that the industry considers important during the conduct of self-assessments. These attributes are shown below and coincide well the principles of HRO.

1. Human error prevention
2. Personnel training and qualification
3. Emergency response organization performance
4. Unplanned reactor shutdowns
5. Regulatory findings

These attributes clearly translate to other safety-significant industries with the exception of the fourth attribute.

REFERENCES