

Gaining from Self-Assessment: Entergy Waterford 3 Experience

Paul M. Fransioli, CCM, Technical and Business Systems, Inc.

Mark J. Abrams, ABS Consulting, Inc.

Gregory Hood, Entergy Operations, Inc., Waterford 3

Abstract

Self-Assessments have become very popular tool in the nuclear industry to evaluate performance and to confirm regulatory compliance. The most effective organizations are the ones that are driven to improve from within rather than only changing when external forces require them to do so. Since most of the U.S. nuclear plants have now been in operations for more than 10 years, a self-assessment will determine if the meteorological program meets its objectives relative to prior and new regulatory guidance, and if the program is operating efficiently given improvements in state-of-the art equipment.

The Entergy Operations team at their Waterford 3 plant in Killona, Louisiana contracted with independent meteorologists to cooperatively perform a self-assessment of their meteorological program. The independent perspective provides site management with an objective view of how well the program objectives are being met, and how efficiently the program is being performed. This paper describes a good example of the process of a meteorological self-assessment and the good results attained

1. Introduction

The incentives for initiating an external self-assessment of the Waterford 3 meteorological program came from a variety of factors. The most important program issues are data quality and verification methods, and regulatory compliance. Recent NRC inspections had included increased attention on the program. Data from the program was being subpoenaed for use by nearby industrial facilities for environmental litigation purposes. The data processing and reporting had been moved from an external contractor to in-plant staff, which recognized their own lack of meteorological expertise. The staff was inheriting additional portions of the program previously performed by engineering staff. Rather than perform the assessment with in-plant staff, two independent meteorologists experienced in nuclear programs were contracted to perform the assessment. This allowed for the desired level of meteorological oversight plus the independence in the evaluation process.

2. Assessment Process

Waterford 3 staff identified sixteen specific objectives in the assessment plan. All were focused on obtaining information to evaluate compliance with plant technical specifications and regulatory guidance, including the ANSI/ANS-3.11 standard. The steps included visual inspections of the meteorological towers, interviewing staff performing engineering, technical and operational functions, examining data collection

and processing software, and reports. The independent assessment team was asked to evaluate sensor-siting criteria in addition to operational methods used throughout the program.

The outside assessment team was provided with ample preparatory information in advance. The information included plant reference manuals (FSAR commitments), procedures and quality assurance manuals, and examples of site data. The audit team prepared an audit checklist that included items such as:

- Equipment siting, condition, specifications (e.g. threshold and accuracy)
- Site meteorological data, and quality controls on data processing
- Quality steps of the instruments and operations, maintenance and calibrations
- Record keeping, and references

The assessment team was on-site for two days. The primary plant person responsible for the program arranged ample meeting space, provided examples of documents, and scheduled interviews with appropriate operating staff in addition to being a primary participant in the assessment himself. A corporate environmental representative observed the assessment and participated in the discussions.

3. Results

The two independent meteorologists produced separate reports on their evaluations. The Waterford 3 staff responsible for the program then produced an internal final report following self-assessment guidance. The evaluation produced many positive comments about the operation. The final results were one condition report, one major strength, twenty-two areas for improvement and six observations. The condition report and each of the areas for improvement will be assigned a tracking number and will be followed until the recommended action is completed. This helps to assure that the findings in the report will receive adequate attention by plant personnel. A number of opportunities for improving efficiency and reducing the risk of extended data loss were included in the reports.