FINAL SUPPORTING STATEMENT FOR

COLLECTION OF OPERATOR SIMULATOR TRAINING DATA

(3150-XXXX)

NEW

B. COLLECTIONS OF INFORMATION EMPLOYING STATISTICAL METHODS

1. Respondent Description

The respondents are the U.S. nuclear power stations with onsite simulators. The maximum number of respondents being offered the opportunity to collaborate with the NRC on this information collection is about 76 (i.e., the number of nuclear power stations in the USA); 15 respondents are expected to participate. Each nuclear power station conducts routine simulator training for its operating crews.

2. Procedures for collecting the information

Under 10 CFR Part 50, licensees must maintain records of training activities. SACADA is a software tool to analyze simulator training data which for most participating licensees would replace their existing tools. The procedures for performing simulator training of the licensees would remain unchanged. The trainers author simulation scenarios, typically by modifying the scenarios in the licensee's scenario bank. After the simulation is complete, the operating crew and the trainer get together to debrief the crew on their performance. This information collection provides a tool (i.e., SACADA software) to author the simulation scenarios and document the debriefing results (i.e., crew performance). This information collection provides the advanced SACADA tool (free of charge) for the licensees to perform the tasks. To participate in the data collection, the licensees will install the software, on site, to be used for simulator training. The software provides a function to transmit the collected data to a SACADA master database currently hosted at the Idaho National Laboratory and is sponsored by the NRC.

3. Methods to maximize response rates and to deal with statistical issues of nonresponse

Participation is voluntary. The likely participants are the licensees who see the benefits of the SACADA software for their simulator training programs. The NRC staff had promoted voluntary use of the SACADA tool at the NRC's Regulatory Information Conference 2017 and various non-NRC conferences. The NRC staff intends to continue to promote the use of SACADA to collect simulator data for HRA by advertising the benefits of the software and the South Texas Project Nuclear Operating Company's very positive user experience.

Each data point (i.e., a training objective element) contains sufficient information in itself for data analysis. Less licensee participation would result in fewer data points

available for statistical analysis. However, any data collected via SACADA will improve the NRC's current human reliability analysis methodologies.

4. Tests or procedures

The NRC staff has proposed a few ways to analyze the data (documented in a paper published in the journal of Reliability Engineering & System Safety mentioned above, and available in ADAMS by searching ML17080A074 and ML17080A077). In addition, RES is developed two contracts for domain experts to analyze sample data to explore data analysis techniques suitable for the SACADA data.

5. Contacts for Statistical Aspects and Data Collection

NRC staff who may be involved in the collection and/or analysis of the information include:

Yung Hsien James Chang
Human Reliability Engineer, Division of Risk Analysis
Office of Nuclear Regulatory Research
James.Chang@nrc.gov
(301) 415-2378

Carmen Franklin
Reliability and Risk Analyst, Division of Risk Analysis
Office of Nuclear Regulatory Research
Carmen.Franklin@nrc.gov
(301) 415-2386

Geoffrey Warren
Senior Health Physicist, Division of Nuclear Materials Safety
Region III
Geoffrey.Warren@nrc.gov
(630) 829-9742

Irene Wu
Project Manager, Division of Material Safety, State, Tribal, and Rulemaking Programs
Office of Nuclear Materials Safety and Safeguards
Irene.Wu@nrc.gov
(301) 415-1951