

## *Technical Description*

Crane Nuclear offers to provide the services as described in this Technical Description subject to the pricing, terms and conditions delineated in the Commercial Description.

### **MC2 Data Acquisition & Analysis**

<b>Standard Class Size:</b>	6 Students per Instructor
<b>Maximum Class Size:</b>	8 Students
<b>Course Duration:</b>	3 Days
<b>Prerequisite:</b>	A working knowledge of Limitorque® actuators
<b>Suggested Attendees:</b>	MOV cognizant Engineers, Electricians, Mechanics, QC personnel, and Operations personnel

### **Course Description**

This course provides instruction on the utilization of the CRANE Nuclear MC<sup>2</sup> data acquisition system through classroom instruction, hands-on laboratory training, and accounts of testing experience. Upon successful course completion, the student shall be able to correctly set-up and operate this equipment to perform basic data acquisition and signature analysis. Instruction will include the following topics: software, proper installation, operation, and maintenance.

### **Terminal objectives:**

Each student shall be required to pass a written test with a minimum score of 80% in order to successfully complete this course. Upon successful course completion, the student shall possess the knowledge to successfully:

- Establish a test database and acquire acceptable test data to perform torque estimations and FFT analysis.
- Generate and analyze motor torque data and compare it to adjusted design basis requirements/limitations.

**Enabling objectives:**

At the conclusion of this course, the student shall have an increased understanding of:

- The purpose and background of MC<sup>2</sup> technology.
- How to establish a test database and create targets and limitations for use with the motor torque and correlated methodologies.
- How to configuring the system for acquisition; acquire, transfer and save test data.
- How to perform analysis of test data to ensure acceptability for usages.
- How to perform torque estimations, analyze motor torque data, and compare to limitations.
- How to perform analysis of baseline data, establish correlation factors and apply correlation factors to periodic verification data.
- The purpose and use of frequency domain analysis and tracking and trending.

**Course Benefits:**

- Increase the plant's self-sufficiency in AOV diagnostic testing.
- Increase the reliability of the plant's AOVs.
- Reduce the plant's cost of AOV diagnostic testing.