

## *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.

### **VOTES® Infinity AOV Advanced Signature Analysis Training**

<b>Standard Class Size:</b>	8 students per instructor
<b>Course Duration:</b>	5 days
<b>Prerequisite:</b>	VOTES Infinity AOV Data Acquisition
<b>Supplied Materials:</b>	A training manual and an AOV laptop computer for each student
<b>Suggested Attendees:</b>	Plant instrument and control technicians, electricians and their foreman, engineers, QC personnel and operations personnel

#### **Course Description:**

This course covers the analysis of AOV performance test data acquired using the VOTES Infinity AOV diagnostic system. Eight (8) AOV performance tests are described individually: Baseline, Hysteresis & Deadband, Repeatability and Linearity (HDRL), Step Response, Step Sensitivity, Step Resolution, Frequency Response and Static Calibration. Basic AOV construction and function will be reviewed. Test terminology, physics, calculations and trouble-shooting procedures will be taught for the parameters reported in each test. Numerous case studies shall be examined to demonstrate proper diagnostic procedures and trouble-shooting practice.

#### **Course Terminal Objectives:**

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

- Perform and correctly identify VOTES Infinity AOV test results.
- Become familiar with the physics governing the test parameters and the calculations used in the VOTES Infinity analysis.
- Follow basic trouble-shooting procedures to isolate problem areas.
- Diagnose AOV functional problems and implement effective solutions.

**Course Enabling Objectives:**

At the conclusion of this course, the student will:

- Identify factors that influence the proper function of AOVs.
- Identify AOV problems and implement effective solutions.
- Perform a detailed signature analysis of acquired data.
- Have the ability to determine potential degradations.

**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.