



## **Instrumentation and Monitoring Program Workshop Agenda**

### **Topic 1: Planning an Instrumentation Program – Tuesday 11/10, 10-12 CT**

- Moderator - Georgette Hlepas
- Note taker - Bruce Rogers
- Panelists:
  - Panelist #1 - Bill Walker, representing the perspective of the Owner. Bill will present the goals of an instrumentation program and discuss the questions we, as the planners, need to answer.
  - Panelist #2 - Brent Randall, representing the perspective of the Instrumentation Supplier. Brent will define what makes an effective instrumentation system and present key considerations when selecting instruments.
  - Panelist #3 - Brandon Lanthier, representing the perspective of the Consultant. Brandon will discuss key considerations for an effective dam safety surveillance monitoring program and topics to consider with regard to instrument maintenance.

### **Topic 2: Installation of Dam Monitoring Instrumentation – Thursday 11/12, 10-12 CT**

- Moderator – Matt Sullivan
- Note Taker - Bruce Rogers
- Panelists:
  - Panelist #1 – Rodolfo (Rudy) Saavedra, representing the perspective of the Instrumentation Supplier. Rudy will discuss topics related to installation of piezometers.
  - Panelist #2 - Pierre Choquet, representing the perspective of the Instrumentation Supplier. Pierre will discuss topics related to installation of inclinometers.
  - Panelist #3 - Josh Brown, representing the perspective of the Instrumentation Supplier. Josh will discuss topics related to data acquisition and installation of data acquisition systems.

### **Topic 3: Threshold Values and Action Levels – Tuesday 11/17, 10-12 CT**

- Moderator - Georgette Hlepas
- Note Taker - Bruce Rogers
- Panelists:
  - Panelist #1 - John Hynes, representing the perspective of the Consultant. John will provide an overview of threshold values and action levels, linking the topics to evaluation of instrument data.
  - Panelist #2 - Will Brown, representing the perspective of the Regulator. Will will provide a more detailed discussion on how to establish threshold values and action levels.
  - Panelist #3 - Bill Walker, representing the perspective of the Owner. Bill will present a case study with examples of establishing threshold values and action levels.

#### **Topic 4: Evaluation of Data – Thursday 11/19, 10-12 CT**

- Moderator - Bill Walker
- Note Taker - Bruce Rogers
- Panelists:
  - Panelist #1 - Georgette Hlepas, representing the perspective of the Owner. Georgette will provide an overview of instrument evaluation and discuss best practices and what to look for in the collected data.
  - Panelist #2 - Will Brown, representing the perspective of the Regulator. Will will discuss data evaluation methods and best practices for plotting the collected data.
  - Panelist #3 - Brandon Lanthier, representing the perspective of the Consultant. Brandon will provide a case study to apply the knowledge discussed by panelists 1 and 2.

#### **Workshop Description**

This Workshop will include presentations by panelists and instrumentation equipment displays/demonstrations, which all are intended to provide workshop participants with improved insight, understanding, and comfort with respect to instrumentation.

The Workshop series will consist of four sessions. The topics are 1) Planning an Instrumentation Program, 2) Installation of Dam Monitoring Instrumentation, 3) Threshold Values and Action Levels, and 4) Evaluation of Data. The presentations by the panelists will discuss both embankment and concrete dams with a focus on PFMA in defining monitoring programs, thresholds and action levels, and evaluation of data.

The panelists will consist of representatives from owners, regulators, vendors, and consultants who will provide their perspective with regard to dam safety and the four topics above. The workshop sessions will be organized to allow for both panelist presentations and ample discussion and questions between attendees and the panelists.

Fundamentally, the Workshop will seek to maximize the opportunities for educational discussions among the participants, presenters, and instrumentation equipment suppliers about real-world situations, and how they might best be addressed.

#### **Workshop Objective**

- Understand the purpose of a dam instrument monitoring program:
  - Types of instruments and data collection alternatives
  - Use of data as input for Potential Failure Modes Analysis (PFMA) and risk analysis
  - Purpose of instrumentation with regard to construction monitoring, design verification, and general health monitoring
- Understand key considerations for installation of instrumentation, including best practices and common sources of error.
- Understand the role of thresholds and action levels and considerations to establish them.
- Understand key considerations in data evaluations and project performance.

- Encourage open discussions between panelists from across industry (i.e., owners, regulators, vendors, and consultants) and participants.

### **Workshop Attendees**

Workshop will discuss best practices for planning, implementing, and managing a dam safety program. Panelists will provide a general overview of the role of instrumentation in project performance monitoring and discuss the factors that influence the accuracy, reliability, and use of dam instrumentation data. Novice to seasoned professionals will all benefit from the workshop. Engineers, dam owners, geologists, and technicians involved in dam safety should all attend.