



National Dredging Quality Management Program (DQM)

DREDGE PLANT INSTRUMENTATION PLAN (DPIP) PUNCH LIST—PIPELINES

The Dredge Plant Instrumentation Plan (DPIP) for pipelines shall include the following as a minimum.

Note: The DPIP must have a Table of Contents in the following order and tabs separating sections.

Cover Page

- Dredge Name
- Date
- Photo

Table of Contents

Contact Information (Address, Phone, and Email)

- On Site Personnel
- Dredging Company
- Dredge Monitoring System Provider

Table of Dredge Characteristics

- Dredging Method (Cutter, Dustpan, etc.)
- Dredge Dimensions (Length, Width, and Draft)
 - With and Without Idler Barge (if applicable)
- Ladder Length
- Minimum and Maximum Digging Depths
- Minimum and Maximum Cut Width
- Number and Types of Pumps (for example, 1 UW Pump, 2 Main Pumps)
- Minimum and Maximum Pump RPM
- Minimum and Maximum Slurry Discharge Velocity
- Inner Diameters of Suction and Discharge Pipes
- Method for Advancing Dredge (Spud Carriage, Walking Spud, etc.)
- Cutter Spin Direction

Sensor Data Collection and Transmission Methods

- Any Averaging Occurring in Data Collection
- Data Route from the Sensors to the DQM Computer
- Internet Connection Type and Provider
- Sensor Installation, Repair, Replacement, or Modification Methods
- Procedure to Change the Contract Number
- Description of How the UTC Time Stamp is Collected

Sensor Descriptions, Locations and Calibration Methods

- Cutter/Suction Head Horizontal Positioning
 - Brand Name, Model, and Accuracy
 - Any Calculation Done External to the Instrumentation
 - Sensor Location with Referenced Dimensions
- Dredge Heading
 - Brand Name, Model, and Accuracy
 - Any Calculation Done External to the Instrumentation
- Cutter/Suction Head Depth
 - Brand Name, Model, and Accuracy
 - Any Calculation Done External to the Instrumentation
 - Sensor Location with Referenced Dimensions
 - Calibration Procedure
- Slurry Velocity
 - Brand Name, Model, and Accuracy
 - Any Calculation Done External to the Instrumentation
 - Sensor Location with Referenced Dimensions
 - Pipe Diameter at the Velocity Instrumentation
 - Calibration Procedure
- Slurry Density
 - Brand Name, Model, and Accuracy
 - Any Calculation Done External to the Instrumentation
 - Sensor Location with Referenced Dimensions
 - Pipe Diameter at the Density Instrumentation
 - Calibration Procedure
- Pump RPM
 - Brand Name, Model, and Accuracy
 - Any Calculation Done External to the Instrumentation
 - Sensor Location with Referenced Dimensions
 - Calibration Procedure
- Pump Vacuum
 - Brand Name, Model, and Accuracy
 - Any Calculation Done External to the Instrumentation
 - Sensor Location with Referenced Dimensions
 - Calibration Procedure

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- Pump Outlet Pressure
 - Brand Name, Model, and Accuracy
 - Any Calculation Done External to the Instrumentation
 - Sensor Location with Referenced Dimensions
 - Calibration Procedure

Manual and Calculated Parameters

- Vertical Correction
 - Method of Obtaining Vertical Correction (Tidal or River Gauge)
 - Procedure for Updating the Tide Station/River Stage Station Name
- Pipeline Lengths
 - Method of Measuring Pipe Lengths
 - Procedure for Reporting and Updating Pipeline Lengths
- Booster Pumps
 - Method and Procedure for Reporting Booster Pumps that are Added or Removed from Service
- Dredge Advance
 - Method and Procedure for Calculating and Reporting Daily Dredge Advance
- Outfall Information
 - Method and Procedure for Reporting and Updating the Outfall Location Description, Position, Elevation, and Heading
- Outfall Positioning (if Instrumented)
 - Brand Name, Model, and Accuracy
 - Any Calculation Done External to the Instrumentation
 - Sensor Location with Referenced Dimensions
- Non-Effective Events
 - Method and procedure for reporting non-effective events

Quality Control Information

- Contact information for QC Manager
- Description of QC process
- Log of sensor calibrations, repairs and modifications

Appendices

- Typical Plan View Drawing of Dredge in Ft (Including Idler Barge, if Applicable)
 - Overall Dredge & Ladder Dimensions
 - Locations of Required Sensors Referenced to Uniform Longitudinal & Transverse Reference Points
 - Dimensions of Suction & Discharge Piping
- Typical Profile View Drawing of Dredge in Ft (Including Idler Barge, if Applicable)
 - Overall Dredge & Ladder Dimensions
 - Locations of Required Sensors Referenced to Uniform Vertical & Longitudinal Reference Points
- Sensor Manuals & Certificates of Calibration