



National Dredging Quality Management Program (DQM)

DREDGE PLANT INSTRUMENTATION PLAN (DPIP) PUNCH LIST—PIPELINES

The Dredge Plant Instrumentation Plan (DPIP) for pipeline dredges 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**
 Document Date
 Photo of Plant

Table of Contents

New Page **Dredge Contacts**

- Dredging Company
- Dredge Point of Contact On Site
- Phone Number
- Email Address

Dredge Monitoring System Provider

- Dredge Monitoring System Point of Contact
- Telephone Number
- Email Address

New Page **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
 - With and Without Idler Barge (if applicable)

- Number and Types of Pumps (for example, 1 UW Pump, 2 Main Pumps)
 - RPM and Discharge Velocity Range
 - Inner Diameters of Suction and Discharge Pipes
 - Method for Advancing Dredge (Spud Carriage, Walking Spud, etc.)
 - Cutter Spin Direction

New Page

Sensor Data Collection Method

- Any Averaging
- Transmission from Dredge to DQM Center
- Internet Connection Type and Provider

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

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

Quality Control

- Description of the Contractor's Quality Control Process
- Log of Sensor Calibrations, Repairs, and Modifications

Appendices

- Legible Dimensioned Drawings of the Dredge with Units in Feet
 - A Typical Plan of the Dredge Showing the Following:
 - Overall Dredge Dimensions
 - With and Without Idler Barge (if applicable)
 - Locations of Required Sensors Referenced to Uniform Longitudinal and Transverse Reference Points
 - Dimensions of the Ladder

- Profile View of the Dredge Showing the Following:
 - Overall Dredge Dimensions
 - Locations of Required Sensors Referenced to Uniform Vertical and Longitudinal Reference Points
- Sensor Manuals and Certificates of Calibration