

Hopper DPIIP Requirements

The DPIIP shall include the following as a minimum:
(DPIIP must have table of contents in the following order)

1. Dredging Company
 - a. Dredge Point of Contact
 - b. Telephone Number
 - c. Email address
2. Dredge Monitoring System Provider
 - a. Dredge Monitoring System Point of Contact
 - b. Telephone Number
 - c. Email address
3. Dredge Name
4. Sensor data collection method
 - a. Any averaging
 - b. Route from sensor to DQM computer
5. DQM Computer Hardware & Components
 - a. Brand names and specifications
 - b. User guides and owner manuals
6. Sensor repair, replacement, installation, modification or calibration methods
7. Dimensioned Drawings of the Dredge
 - a. A typical plan and profile view of the dredge showing:
 - i. Hopper dredge cross section
 - ii. Locations of required sensors referenced to:
 - (1) Fore and aft perpendicular
 - (2) Hopper dredge length, depth, width, zero reference
 - (3) External hull draft markings (latitudinal, longitudinal, keel)
 - (4) Each other
 - iii. Overall dredge dimensions
 - iv. Dimensions of draghead
 - (1) Length
 - (2) Pipe inside diameter at sensor locations
 - (3) Offset to positioning system antenna
8. Criteria and method used to increment load number
9. Description of how the UTC date/time stamp is collected
10. Positioning system
 - a. Brand name and specifications
 - b. Dredge heading instrumentation brand name and specifications
 - c. Instrument used to calculate Coarse Over Ground (COG)
 - d. Any calculation done external to the instrumentation
 - e. Certificates of calibration and/or manufacturer certificates of compliance
 - f. Description of how dredge speed is determined
11. Tide
 - a. Description of how tidal information is entered into the data string.
12. Hull status

- a. Instrumentation brand name and specifications
 - b. Certificates of calibration and/or manufacturer certificates of compliance
 - c. Any calculation done external to the instrumentation
13. Drafts:
- a. Instrumentation brand name and specifications
 - b. Certificates of calibration and/or manufacturer certificates of compliance
 - c. Any calculation done external to the instrumentation
14. Displacement:
- a. Method used by Contractor to calculate displacement based on fore and aft draft
 - b. Method used by Contractor to calculate lightship displacement
 - c. Hydrostatic curves
 - d. Tables listing (fresh and salt water) displacement as a function of draft certified by a licensed marine surveyor/ naval architect independent of the Contractor (feet and tenths of feet)
 - e. These methods and tables shall be an accurate reflection of the current configuration and displacement
15. Hopper Ullage:
- a. Sensor brand name and specifications
 - b. Certificates of calibration and/or manufacturer certificates of compliance
 - c. Any calculation done external to the instrumentation
16. Hopper Volume:
- a. Method used by Contractor to calculate hopper dredge volume based on fore and aft hopper dredge ullage
 - b. Table listing the hopper dredge volume as a function of hopper dredge ullage, certified by a licensed marine surveyor/ naval architect independent of the Contractor (feet and tenths of feet).
 - c. These methods and tables shall be an accurate reflection of the current configuration and volume
17. Draghead
- a. Draghead Depth
 - i. Sensor brand name and specifications
 - ii. Certificates of calibration and/or manufacturer certificates of compliance
 - iii. Any calculation done external to the instrumentation
 - b. Draghead Depth Check
 - i. Method used
 - ii. If applicable, sensor brand name and specifications
 - iii. If applicable, certificates of calibration and/or manufacturer certificates of compliance
 - iv. If applicable, any calculation done external to the instrumentation
 - c. Drag Head Position
 - i. Sensor brand name and specifications
 - ii. Any calculation done external to the instrumentation
 - iii. Certificates of calibration and/or manufacturer certificates of compliance
18. Slurry Density and Velocity Sensors:
- a. Sensor brand name and specifications
 - b. Any calculation done external to the instrumentation
 - c. Certificates of calibration and/or manufacturer certificates of compliance
19. Pump RPM

- a. Sensor brand name and specifications
 - b. Any calculation done external to the instrumentation
 - c. Certificates of calibration and/or manufacturer certificates of compliance
 - d. Description of the pump for which the RPM is reported
20. Criteria used to determine
- a. Minimum pump effort
 - b. Pumping water
 - c. Material recovery
 - d. Pumpout
21. Refractometer:
- a. Brand
 - b. Resolution and accuracy
 - c. Method of calibration
22. Criteria used to determine open/closed status of hopper dredge
23. Documentation of :
- a. Test methods used by the Contractor to provide quality control of data
 - b. Verification that the reported values are applicable for the sensor and application
24. Remote log in information
- a. Static IP address (Host)
 - b. Incoming and outgoing port settings (Host)
 - c. Username and password (Host)
25. Log of sensor performance and modifications
26. Log of Contractor data backup as per Section 3.3.7
27. Quality Control Plan as per section 3.5
- a. Name of Quality Control Systems Manager
 - b. Procedures for checking collected data against know values
 - c. Procedures for verifying telemetry is functioning
 - d. Procedures for verifying DQM computer is on
 - e. Procedures for verifying DQMOBS is running