

<b>Safety and Environmental Management Systems (SEMS)</b>	Revision Number:	<b>1</b>
	Revision Date:	2/16/14

**(API RP 75 Element 8) § 250.1916 Mechanical Integrity**

This management program requires each OCS facility to develop and implement written procedures that provide instructions to ensure the mechanical integrity and safe operation of equipment through inspection, testing, and quality assurance. The purpose of mechanical integrity is to ensure that equipment is fit for service. The mechanical integrity program must encompass all critical equipment, i.e. (equipment and systems used to prevent or mitigate uncontrolled releases of hydrocarbons, toxic substances, or other materials that may cause environmental or safety consequences). These procedures must address the following:

- a) The design, procurement, fabrication, installation, calibration, and maintenance of equipment and systems in accordance with the manufacturer’s design and material specifications.**

**Design and Procurement**

Written procedures for design and procurement of critical equipment are developed as part of the overall quality and mechanical integrity program to verify equipment compliance with applicable design and material specifications. General specification and procurement procedures can be obtained via facility emergency control centers and/or by contacting the Engineering Department.

**Fabrication**

Where appropriate written quality control procedures and specifications for critical equipment are established and implemented to confirm that materials and construction, during the fabrication stage, are in accordance with the design specifications. These procedures will be project specific.

**Installation and Calibration**

Appropriate checks and inspection procedures must be established and implemented before startup to verify that the installation of critical equipment is consistent with design specifications and the manufacturer's instructions refer to § 250.1917 (Element 9 –Pre Startup Review). Equipment calibration frequencies shall be an integral part of the mechanical integrity program.

**Maintenance**

Maintenance programs that include appropriate inspection and testing are established and implemented for critical equipment to sustain ongoing mechanical integrity. Maintenance activities focused on this equipment must be structured to enhance safety and protect the environment. Maintenance personnel includes both company and contract employees involved in maintaining equipment on an OCS facility.

- b) Training of each employee involved in maintaining equipment and systems so that employees can implement the mechanical integrity program. It is essential that maintenance personnel are trained**

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in the application of the written mechanical integrity procedures and safe work practices required prior to holding these responsibilities.

- c) The frequency of inspections and tests of equipment and systems. The frequency of inspections and tests must be in accordance with BSEE regulations and meet the manufacturer's recommendations. Inspections and tests can be performed more frequently if determined to be necessary by prior operating experience.
- d) The documentation of each inspection and test that has been performed on equipment and systems. This documentation must identify the date of the inspection or test; include the name and position, and the signature of the person who performed the inspection or test; include the serial number or other identifier of the equipment on which the inspection or test was performed; include a description of the inspection or test performed; and the results of the inspection test.
- e) The correction of deficiencies associated with equipment and systems that are outside the manufacturer's recommended limits. Such corrections must be made before further use of the equipment and system.
- f) The installation of new equipment and constructing systems. The procedures must address the application for which they will be used.
- g) The modification of existing equipment and systems. The procedures must ensure that they are modified for the application for which they will be used.
- h) The verification that inspections and tests are being performed. The procedures must be appropriate to ensure that equipment and systems are installed consistent with design specifications and the manufacturer's instructions.
- i) Quality control procedures to ensure that maintenance materials, spare parts, and equipment are suitable for the applications for which they will be used.