

Safety & Environmental Enforcement, Interior

§ 250.908

the shallow hazard and geologic surveys, the Regional Supervisor may require you to perform a subsurface survey. This survey will include a testing program for investigating the stratigraphic and engineering properties of the soil that may affect the foundations or anchoring systems for your facility. The testing program must include adequate in situ testing, boring, and sampling to examine all important soil and rock strata to determine its strength classification, deformation properties, and dynamic characteristics. If required to perform a subsurface survey, you must prepare and submit to the Regional Supervisor a summary report to briefly describe the results of your soil testing program, the various field and laboratory test methods employed, and the applicability of these methods as they pertain to the quality of the samples, the type of soil, and the anticipated design application. You must explain how the engineering properties of each soil stratum affect the design of your platform. In your explanation you must describe the uncertainties inherent in your overall testing program, and the reliability and applicability of each test method.

(d) *Overall site investigation report.* You must prepare and submit to the Regional Supervisor an overall site investigation report for your platform that integrates the findings of your shallow hazards surveys and geologic surveys, and, if required, your subsurface surveys. Your overall site investigation report must include analyses of the potential for:

- (1) Scouring of the seafloor;
- (2) Hydraulic instability;
- (3) The occurrence of sand waves;
- (4) Instability of slopes at the platform location;

- (5) Liquefaction, or possible reduction of soil strength due to increased pore pressures;
- (6) Degradation of subsea permafrost layers;
- (7) Cyclic loading;
- (8) Lateral loading;
- (9) Dynamic loading;
- (10) Settlements and displacements;
- (11) Plastic deformation and formation collapse mechanisms; and
- (12) Soil reactions on the platform foundations or anchoring systems.

§ 250.907 Where must I locate foundation boreholes?

(a) For fixed or bottom-founded platforms and tension leg platforms, your maximum distance from any foundation pile to a soil boring must not exceed 500 feet.

(b) For deepwater floating platforms which utilize catenary or taut-leg moorings, you must take borings at the most heavily loaded anchor location, at the anchor points approximately 120 and 240 degrees around the anchor pattern from that boring, and, as necessary, other points throughout the anchor pattern to establish the soil profile suitable for foundation design purposes.

§ 250.908 What are the minimum structural fatigue design requirements?

(a) API RP 2A-WSD, Recommended Practice for Planning, Designing and Constructing Fixed Offshore Platforms (as incorporated by reference in §250.198), requires that the design fatigue life of each joint and member be twice the intended service life of the structure. When designing your platform, the following table provides minimum fatigue life safety factors for critical structural members and joints.

If . . .	Then . . .
(1) There is sufficient structural redundancy to prevent catastrophic failure of the platform or structure under consideration,	The results of the analysis must indicate a maximum calculated life of twice the design life of the platform.
(2) There is not sufficient structural redundancy to prevent catastrophic failure of the platform or structure,	The results of a fatigue analysis must indicate a minimum calculated life or three times the design life of the platform.
(3) The desirable degree of redundancy is significantly reduced as a result of fatigue damage,	The results of a fatigue analysis must indicate a minimum calculated life of three times the design life of the platform.

(b) The documents incorporated by reference in §250.901 may require larger

safety factors than indicated in paragraph (a) of this section for some key