

Region	Without occurrence of storm	With occurrence of storm
Nondeltaic	Periodic monitoring of shoreline crossing. Monitored visually with biweekly route survey, but no less frequently than every three months.	Post storm inspection of shoreline crossing, if shoreline changes, then investigate near shore depth-of-cover. Post storm inspection of depth-of-cover is not necessary.
Chenier plain and barrier islands	Periodic monitoring of shoreline crossing. Monitored visually with biweekly route survey, but no less frequently than every three months. Periodic inspections of depth of cover. If shoreline changes, then investigate near shore depth of cover.	Post storm inspection of shoreline crossing and depth of cover.
River mouth	Periodic monitoring of shoreline crossing. Monitored visually with biweekly route survey, but no less frequently than every three months. If shoreline changes, then investigate near shore depth of cover. Periodic inspection of depth of cover is not necessary.	Post storm inspection of shoreline crossing and pipeline (in mudslide areas only).

Analysis of Pipeline Burial Surveys in the Gulf of Mexico.

In June 1997, a comprehensive study was completed by the Texas Transportation Institute to determine the need for inspections of pipeline burial depth in the Gulf of Mexico for pipelines subject to federal pipeline safety regulation. The study made several recommendations addressing administrative, depth of cover, and survey requirements. Comments on these recommendations are invited. A copy of the study is available in the docket for this rulemaking.

The study recommended that natural gas and hazardous liquid pipelines be regulated identically under the periodic depth of burial inspection regulation because the higher risk to persons or property posed by natural gas pipeline facilities is balanced by the higher risk to the environment posed by hazardous liquid pipeline facilities. The study further recommended that all pipeline facilities in waters less than 15 feet deep should be maintained 3 feet below the natural bottom and that the natural bottom should be defined in order to establish a reference point for measurement in the very soft, silty bottoms.

A risk based analysis model for the pipeline burial inspections is included as an appendix to the document.

Proposed Requirements

RSPA/OPS proposes that owners and operators of these underwater pipeline facilities be required to develop procedures to conduct periodic underwater depth of burial inspections of their submerged pipelines. The procedures would assess the risk of a pipeline becoming exposed or a hazard to navigation by taking into account the particular dynamics of the water bottom, including the probability of flotation, scour, erosion, and the

impacts of major storms. The operator should also establish a timetable for inspection of underwater pipelines based on their risks.

II. Comments Requested

RSPA/OPS requests comments from industry and the public on the following topics:

A. Performance Versus Prescriptive

Pipelines found exposed by inspections conducted under the initial inspection program ranged in age from 10 years to 46 years. They were in areas that experienced a variety of erosion levels and storms. Analysis of this information was not persuasive in eliminating any of the potentially affected pipeline from an underwater inspection requirement.

This proposed rulemaking is performance based. It would require an operator to determine the optimal inspection intervals for each of their pipeline facilities. A directionally bored crossing 25 feet beneath a stable river would have dramatically different inspection requirements than a pipeline in a soft, silty bottom prone to erosion or tidal scour.

A prescriptive requirement would mandate a specific inspection interval and protocol. These intervals would be the maximum allowable. Inspections would also be required following a major storm, earthquake, or period of increased or substantial erosion. Comments are solicited on the relative merits of these approaches.

B. Hazard to Navigation

Under the current regulations for offshore inspections in the Gulf of Mexico, "Navigational Hazard" is defined as a pipeline that is buried less than 12 inches below the sea bed in waters less than 15 feet deep, as measured from the mean low water (49

CFR 195.2). This proposed rule would increase the cover requirement to 24 inches and revise the definition to include inland navigable waterways. The increased depth of cover requirement is necessary because a vessel's hull or anchor can easily penetrate below 12 inches, especially in soft, silty bottoms.

Current regulations currently in effect for hazardous liquid pipelines require a burial depth of 48 inches for normal excavations or 24 inches in rock for deepwater port safety zones; 36 inches for normal excavation or 18 inches in rock for all other offshore areas underwater less than 12 feet deep as measured from the mean low tide; and 48 inches for normal excavation or 18 inches in rock for all crossings of inland bodies of water with a width of at least 100 feet from high water mark to high water mark (49 CFR 195.248).

C. Navigable Waters

The phrase "Navigable waters of the United States" (33 CFR 329.4) describes the Federal jurisdiction and can include water where there is little likelihood that vessels could be damaged by pipelines. Under this proposed rule, the affected navigable waterways are those waterways with a substantial likelihood of commercial navigation.

Oak Ridge National Laboratory and Vanderbilt University have created a geographic database of navigable waterways in and around the United States. The database, called the National Waterways Network, was created with input from the National Waterway GIS Design Committee, which is composed of representatives of the USACE, DOT's Bureau of Transportation Statistics (BTS), Volpe National Transportation Systems Center; Maritime Administration; Military Traffic Management Command; Tennessee Valley Authority; U.S. Environmental