

U.S. DEPARTMENT OF TRANSPORTATION  
PIPELINE AND HAZARDOUS MATERIALS SAFETY ADMINISTRATION (PHMSA)

**Special Permit Analysis and Findings**

**Purpose:**

The Pipeline and Hazardous Materials Safety Administration (PHMSA) provides this document to describe the relevant facts of the special permit request outlined below, to discuss any public comments received regarding the special permit request, to present the safety analysis accomplished with regards to the special permit request, and to list the findings of that analysis. This document is used to justify the grant of a special permit to Southern LNG, Inc. (SLNG) for the Elba Island III Terminal Expansion Project, Elba Island, Savannah, Georgia, waiving compliance from the Federal pipeline safety regulations in 49 CFR § 193.2301.

**Special Permit Information:**

Docket Number: PHMSA-2008-0143

Pipeline Operator: Southern LNG, Inc.

Date Requested: April 28, 2008

Code Section(s): 49 CFR § 193.2301

System Affected: This special permit request pertains to the Southern LNG, Inc. (SLNG), Elba Island III Terminal Expansion Project, Elba Island, Savannah, Georgia

**Special Permit Request**

On April 28, 2008, SLNG requested a waiver of compliance from the Federal pipeline safety regulations in 49 CFR § 193.2301 for a 1.25 million barrel (nominal) liquefied natural gas (LNG) storage tank at its LNG import terminal at Elba Island, Savannah, Georgia. The tank is being constructed as part of the Elba Island III Terminal Expansion Project. The existing regulations in § 193.2301 require LNG tank welds to undergo radiographic examination. SLNG proposes instead to use ultrasonic examination (UT). According to SLNG, the examination would consist *"of full semi-automated and manual UT examination using shear wave probes and a volumetric UT examination using a combination of creep wave (CW) probes and focused angled longitudinal wave (ALW) probes."*

**Public Notice:**

On June 23, 2008, PHMSA posted a notice of this special permit request in the Federal Register (73 FR 35437). We did not receive any comments for or against this special permit request as a result of this notice. The request letter, Federal Register notice and all other pertinent documents are available for review in Docket No. PHMSA-2008-0143 in the Federal Docket Management System (FDMS) located on the Internet at [www.Regulations.gov](http://www.Regulations.gov).

**Analysis:**

The Federal pipeline safety regulations require each LNG facility constructed after March 31, 2000, to comply with 49 CFR Part 193 and the National Fire Protection Association's Standard 59A (NFPA 59A), 2001 Edition. The NFPA 59A, 2001 Edition requires that welded LNG containers designed for not more than 15 pounds per square inch gauge (psig) comply with the Eighth Edition, 1990, of American Petroleum Institute Standard 620 (API 620), "*Design and Construction of Large, Welded, Low-Pressure Storage Tanks (Appendix Q)*." The Eighth Edition of API 620, in turn, calls for the full radiographic examination of all vertical and horizontal butt welds associated with the container.

The NFPA issued a Tentative Interim Amendment to the NFPA 59A, 2006 Edition, effective February 14, 2006 (59A TIA06). The amendment incorporates API 620, Tenth Edition, 2002, Addendum 1, 2004, which adds ultrasonic examination (UT) as an acceptable non-destructive testing method for LNG storage tank welds. The addendum states, "the term 'examination'...shall be understood to refer to radiographic or ultrasonic examination."

**Findings:**

PHMSA finds that granting this special permit to SLNG to use UT to non-destructively test the welds on a newly constructed LNG storage tank at the Elba Island Terminal, Savannah, Georgia, is not inconsistent with pipeline safety. Doing so will provide a level of safety equal to, or greater than, that which would be provided if the welds were examined using the radiographic examination as currently required by the pipeline regulations in 49 CFR § 193.2301.

We do so because the special permit analysis shows the following:

1. Both the API and the NFPA have approved ultrasonic testing as an acceptable method to non-destructively test welds on LNG storage tanks.
2. SLNG will complete the non-destructive weld testing in accordance with API 620, 10th Edition, February 2002, Addendum 1, Appendix U, June 2004.

Completed in Washington DC on: JAN 08 2009