



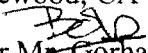
U.S. Department  
of Transportation

Pipeline and Hazardous Materials  
Safety Administration

1200 New Jersey Ave., SE  
Washington, DC 20590

OCT 30 2009

Mr. Robert G. Gorham  
Division Chief  
Office of the State Fire Marshal  
Pipeline Safety Division  
Department of Forestry and Fire Protection  
3950 Paramount Boulevard, #210  
Lakewood, CA 90712

  
Dear Mr. Gorham:

The Pipeline and Hazardous Materials Safety Administration (PHMSA) has reviewed your letter of August 28, 2009, notifying us that the California Office of the State Fire Marshal (CSFM), intends to grant a waiver to the THUMS Long Beach Company (THUMSCO) that will allow for a 315-foot steel hazardous liquid pipeline to be replaced with a pipeline constructed of material other than steel. Specifically, THUMSCO requested that CSFM modify compliance with 49 CFR §§ 195.406(a), 195.452(c)(i)(B) and 195.452(f)(2), as adopted by the State of California pursuant to section 51011 California Government Code. The waiver allows for THUMSCO to use SmartPipe Reinforced Thermoplastic Pipe (SmartPipe) to replace the 315-foot steel pipe (vintage 1965) running between the following THUMSCO facilities:

- Pier J-2 Processing facility (J-2), Long Beach, CA
- Pier J-6 Tank Farm (J-6), Long Beach, CA

The primary function of the proposed non-steel pipeline is to transport crude oil from the processing facilities at THUMSCO's J-2 processing facility to its J-6 above ground storage tanks. The design flow rate is 40,000 barrels/day at an upstream pressure of 40 psig and normal operating temperature 120-125 °F. The SmartPipe will be inserted into and encased within an existing 20-inch steel pipeline that is routed under the Port of Long Beach Railroad tracks in the city of Long Beach, California. The pipeline goes under an access road, multiple railroad tracks, and various ancillary structures. The existing steel pipeline is sleeved in a 30-inch steel culvert pipe buried approximately 10 feet below grade. Both steel pipes will be left in place to provide against external forces and third-party damage. There is also a non-jurisdictional reject (water) pipeline being replaced as part of the project.

In the waiver, CSFM detailed certain aspects of THUMSCO request that were denied in addition to the areas that were acceptable to CSFM based on the imposition of certain conditions. As you know, PHMSA reviewed and clarified these conditions with your office. PHMSA agrees with

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the determination by CSFM that while the product pipe is composed of plastic and other non-steel layers, since it is being used to transport crude oil, 49 CFR Part 195 is the appropriate code to follow. Following our review of the request and accompanying documents, PHMSA does not object to the waiver provided the CSFM's conditions along with the following additional conditions are met:

1. Prior to installation, the operator must provide detail on the following for review and approval by CSFM:
  - Specific detail of the materials that make up the SmartPipe, a composite pipe, used in this application;
  - Design criteria; and
  - Process and calculation to establish maximum operating pressure (MOP) consistent with 49 CFR Part 195.
2. The operator must provide calculations of maximum tensile loads given specific materials used for the SmartPipe for review and approval by CSFM prior to installation. During the pulling in of the pipe under the waiver, the maximum tensile loads must be recorded and must not exceed manufacturer's specifications.
3. The operator must ensure that the pipe specified under this waiver is pulled through in such a manner as to provide sufficient excess footage to allow for visual inspection for any damage that may have occurred during the pulling of the pipe as with most standard bores. Determination of length may be left to the discretion of the operator through discussion with the manufacturer. If damage to the pipe during pulling operations is of an amount that would compromise the design or MOP of the SmartPipe, operator must document findings and promptly notify CSFM.
4. The operator must conduct the initial pressure test at 1.5 times (or 150%) of MOP for a minimum of 24 hours with a recording chart, the results of which must be presented to CSFM for review. If the initial pressure tests, installation and other operation and maintenance of the pipeline show acceptable results, a 4 hour test at 125% of MOP may be conducted every 5 years thereafter as specified by CSFM.
5. Operating temperatures must remain at or below 120°F with appropriate temperature monitoring program in place. If short term temperature spikes above this value are anticipated, CSFM must be informed and appropriate monitoring and remediation plans in place. Under no circumstances may operating temperatures exceed 140 °F.

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6. Prior to installation, the operator must provide detailed construction and Operating and Maintenance (O&M) requirements specific to this section of their pipeline system for review and approval by CSFM. Construction personnel involved in the installation, connections, flanges, and inspection must be trained based on these procedures prior to conducting field operations. All training must be documented and available to CSFM upon request.
7. Manufacturer personnel and/or a certified QA/QC inspector must be onsite at all times during construction, including fabrication of the pipe, installation of all connections and flanges, the pulling in of SmartPipe, and any other tasks as determined necessary by operator and CSFM. The personnel should also be onsite during the beginning of the pressure test, but need not necessarily be onsite the full 24 hrs as long as they are accessible and can respond in a timely manner if any failures occur and repair/remediation is needed.
8. The line must be operated in accordance with Part 195. A detailed operator qualification procedure, including covered tasks, must be provided to CSFM for review and approval prior to installation. All covered tasks must be OQ qualified.
9. The operator must follow its existing Integrity Management Program Practices, modifying as needed for the special permit section, to detect and manage leaks. The Integrity Management Program must also include a plan that allows for inspection of the pipe at appropriate intervals to insure there have been no adverse affects to the pipe's integrity (and its composite layers) that may have occurred through operation of the pipe.
10. The operator must have appropriate corrosion control plans and procedures consistent with 49 CFR Part 195 in place for the pipeline system covered under the waiver.
11. If a venting system will be installed to address inner barrier migration of the product a detailed procedure must be in place.
12. After the SmartPipe is placed into service, THUMSCO must conduct patrolling and leakage surveys on a daily basis for the first week of operations, followed by intervals consistent with Part 195, thereafter.
13. If the SmartPipe is ever found to be deficient, poses a risk to the public, or fails, the operator must inform CSFM immediately and perform mitigative measures to make the situation safe up to and including replacement with pipe currently approved by 49 CFR Part 195.

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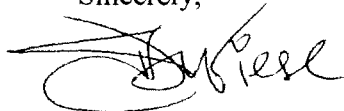
Mr. Robert G. Gorham

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14. Additional safety requirements may be imposed by CSFM if CSFM determines alternate safety measures are necessary to insure the safe operation of the SmartPipe.

Thank you for your participation and cooperation in the State waiver concurrence process. If you wish to discuss this or any other pipeline safety matter, my staff would be pleased to assist you. Please call John Gale, Director of Regulations, at 202-366-0434, for regulatory matters or Alan Mayberry, Director of Engineering and Emergency Support at 202-366-5124 for technical matters.

Sincerely,

A handwritten signature in black ink, appearing to read "J. Wiese", with a large, stylized flourish above the name.

Jeffrey D. Wiese  
Associate Administrator for Pipeline Safety



OFFICE OF THE STATE FIRE MARSHAL  
Pipeline Safety Division  
DEPARTMENT OF FORESTRY AND FIRE PROTECTION  
3950 Paramount Blvd. #210  
Lakewood, CA 90712  
Phone: (562) 487-9100  
Website: [www.fire.ca.gov](http://www.fire.ca.gov)

JUN 22 2009

**CERTIFIED MAIL- RETURNED RECEIPT REQUESTED**

June 16, 2009

Mr. Jeffrey D. Wiese  
Associate Administrator for Pipeline Safety  
U.S. Department of Transportation  
Pipeline & Hazardous Liquids Materials Administration  
1200 New Jersey Avenue, SE  
Washington, D.C. 20590

Dear Mr. Wiese:

Subject: Request for waiver to permit the use of a non-metallic, composite, reinforced thermoplastic pipe on an intrastate transmission pipeline.

Operator: THUMS Long Beach Company - OPINS# 19410  
111 West Ocean Boulevard, Suite 800  
Long Beach, California 90802  
(562) 624-3422

Pipeline: 16" RTP pipe (0.05 miles, 315 foot long) inserted into existing 20" steel pipeline inside 30" casing.

The above operator has requested a waiver of certain 49 CFR Part 195 regulations to permit the use of a non-metallic, composite, reinforced thermoplastic pipe (RTP) manufactured by Smart Pipe Company to transport crude oil between their J-2 Processing facility and Pier J-6 tank farm in Long Beach, California.

Specifically, THUMSCO is asking for approval under 49 CFR §195.8 *Transportation of hazardous liquid or carbon dioxide in pipelines constructed with other than steel pipe*. Additionally, THUMSCO has requested waivers of 49 CFR §195.406(a), §195.452(c)(i)(B) and §195.452(f)(2).

THUMSCO and Smart Pipe Company have provided our office with the project scope and technical information relating to the materials, design, constructions specs, quality control and chemical data.

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Mr. Jeffrey D. Wiese  
June 16, 2009  
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We have provided this material to PHMSA's Western Region representative Jeff Gilliam in May 2009 to provide PHMSA with additional time to consider the waiver request. My engineering staff has reviewed this material and has recommended approval citing the superior advantages that this material has over traditional carbon steel pipelines. This new technology fills a needed gap as companies evaluate the integrity of their aging pipelines.

In this particular case, the insertion of a RTP pipe inside an existing 20-inch diameter unspigable steel pipeline under several railroad tracks will eliminate the uncertainty of undetected corrosion anomalies. We also believe that other operators will consider using RTP as a viable alternative to replacing pipelines in heavily urbanized areas of California. The advantages include eliminating corrosion, increased resistance to third-party damage and reducing environmental impact of construction.

We believe that this small initial pilot project using RTP will provide a good opportunity to evaluate the merits of alternative materials without adversely affecting the environment or public safety.

I find that the proposed request is consistent with pipeline safety and is justified.

Subject to your approval, the Office of the State Fire Marshal proposes to fully support THUMS initiative of incorporating updating technologies to address pipeline integrity. I intend to issue the waiver by late August, so that THUMS can meet their construction schedule.

Sincerely,



ROBERT GORHAM  
Division Chief

Cc: Mr. Chris Hoidal, Chief  
Western Region  
U.S. Department of Transportation  
Office of Pipeline Safety, Western Region  
12300 W. Dakota Ave. Suite 110  
Lakewood, Colorado 80228

Attachments:  
Draft letter granting approval of waiver



OFFICE OF THE STATE FIRE MARSHAL  
Pipeline Safety Division  
DEPARTMENT OF FORESTRY AND FIRE PROTECTION  
3950 Paramount Blvd #210  
Lakewood, CA 90712  
Phone: (562) 497-9100  
Website: [www.fire.ca.gov](http://www.fire.ca.gov)



**CERTIFIED MAIL – RETURN RECEIPT REQUESTED**

August 31, 2009

**DRAFT**

Mr. Charles P. Plant  
Vice President, Production  
THUMS Long Beach Company  
111 West Ocean Boulevard, Suite 800  
Long Beach, California 90801-2900

**RE: Petition for waiver for replacement of oil pipeline with RTP Pipe (Smart Pipe)**

Dear Mr. Plant:

This letter is in response to your petition of March 12, 2009 requesting approval to replace an existing pipeline constructed of material other than steel. We have determined that utilizing reinforced thermoplastic pipe (RTP) as described in your request would not be unduly hazardous and is therefore permitted for installation and operation.

You also asked for a waiver of 49 CFR §195.406(a), §195.452(c)(i)(B) and §195.452(f)(2).

- 49 CFR §195.406(a) addresses establishing a maximum operating pressure based on internal design pressure and pressure testing for steel pipelines. You asked to substitute 49 CFR § 192.513 testing requirements for plastic pipe in establishing MOP as a more appropriate code requirement. We will accept an MOP based on 125% of the minimum test pressure established by the Part 195 Subpart E test conducted prior to initial startup.
- 49 CFR §195.452(c)(i)(B) requires pressure testing to be conducted in accordance with 49 CFR 195 Subpart E. As stated above you are asking to pressure test under 49 CFR § 192.513 requirements. This request is denied and we will require the pipeline to be initially tested as prescribed 49 CFR Part 195 Subpart E
- .49 CFR §195.452(f)(2) requires a baseline assessment plan meeting the requirements of §195.452(c). You are again asking for a waiver of performing the pressure test according to 195 Subpart E. We grant you this request.

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PLEASE REMEMBER TO CONSERVE ENERGY. FOR TIPS AND INFORMATION, VISIT "FLEX YOUR POWER" AT [WWW.CA.GOV](http://WWW.CA.GOV).

Mr. Charles P. Plant  
August 31, 2009  
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However, you would still be subject to Section 51014 of the California Government Code which prescribes a 4 hr test at 125% of MOP every 5 years.

- Additionally, if your integrity management program review of this pipeline determines a more appropriate type of inspection, the California Government Code allows you to request an alternative to pressure testing.

Please note that although 49 CFR 195 subparts C,D,E and F specify minimum requirements for steel pipelines, you are still expected to comply with those code sections that are unaffected by choice of pipeline material.

We have assigned Adriana Crasnean, Pipeline Safety Engineer as lead inspector for this project. Please notify her prior to construction. She can be reached at (562) 627-0054.

Sincerely,

ROBERT G. GORHAM  
Division Chief