

Billing Code: 4910-60-P

DEPARTMENT OF TRANSPORTATION

Research and Special Programs Administration

[Docket No. RSPA-04-18757]

Pipeline Safety: Petition for Waiver; Columbia Gas Transmission

AGENCY: Research and Special Programs Administration (RSPA), DOT.

ACTION: Notice; Petition for Waiver to Install Fiberglass Reinforced Polyethylene Pipe

SUMMARY: Columbia Gas Transmission (Columbia) has petitioned the Research and Special Programs Administration's Office of Pipeline Safety (RSPA/OPS) for a waiver of the pipeline safety regulations to install fiberglass reinforced polyethylene pipe in its high pressure natural gas storage field operations.

DATE: Persons interested in submitting written comments on the waiver proposed in this notice must do so by [INSERT DATE 30 DAYS AFTER PUBLICATION IN THE FEDERAL REGISTER]. Late-filed comments will be considered so far as practicable.

ADDRESSES: You may submit written comments by mailing or delivering an original and two copies to the Dockets Facility, U.S. Department of Transportation, Room PL-401, 400 Seventh Street, SW, Washington, DC 20590-0001. The Dockets Facility is open from 10:00 a.m. to 5:00 p.m., Monday through Friday, except on Federal holidays when the facility is closed.

Alternatively, you may submit written comments to the docket electronically at the following

Web address: <http://dms.dot.gov>.

All written comments should identify the docket and notice numbers stated in the heading of this notice. Anyone who wants confirmation of mailed comments must include a self-addressed stamped postcard. To file written comments electronically, after logging on to <http://dms.dot.gov>, click on “Comment/Submissions.” You can also read comments and other material in the docket at <http://dms.dot.gov>. General information about our pipeline safety program is available at <http://ops.dot.gov>.

Anyone is able to search the electronic form of all comments received into any of our dockets by the name of the individual submitting the comment (or signing the comment, if submitted on behalf of an association, business, labor union, etc.). You may review DOT's complete Privacy Act Statement in the Federal Register published on April 11, 2000 (Volume 65, Number 70; Pages 19477-78) or you may visit <http://dms.dot.gov>.

FOR FURTHER INFORMATION CONTACT: James Reynolds by phone at 202-366-2786, by fax at 202-366-4566, by mail at DOT, RSPA, OPS, 400 Seventh Street, SW, Washington, DC, 20590, or by e-mail at james.reynolds@rspa.dot.gov.

SUPPLEMENTARY INFORMATION:

Columbia has petitioned RSPA/OPS for a waiver from compliance with 49 CFR §§ 192.53(c), 192.121, 192.123, and 192.619(a) to allow for installation and operation of fiberglass reinforced polyethylene pipe in its high pressure natural gas storage field operations. Columbia believes that fiberglass reinforced polyethylene pipe represents both a technological and economical alternative to conventional steel pipe currently used in high pressure gas storage fields.

Columbia's petition and supporting materials are available in the docket.

Columbia seeks to demonstrate the viability of spooled composite products in regulated, high - pressure gas service and proposes to install approximately 4,200 feet of 4-inch Fiberspar[®] spooled, non-metallic composite line pipe in its Dundee Storage Field.

Columbia seeks approval to use the following design formula from API 15HR:

$$P_r = S_s \times S_f \times (R_o^2 - R_i^2) / (R_o^2 + R_i^2)$$

Where:

P_r = Design Pressure Rating, psig

S_s = 95 percent Lower Confidence Limit (LCL) of the Long-Term Hydrostatic Strength (LTHS) @ 20 years per ASTM D 2992, Procedure B, psig

S_f = 0.67 service (design) factor per API 15 HR.

R_o = radius of the pipe at the outside of the minimum reinforced wall thickness, inches

R_i = radius of the pipe at the inside of the minimum reinforced wall thickness, inches

Columbia's Dundee Storage Field is located in Schulyer County, New York. The storage field covers approximately 15,130 acres and includes 135 wells and 26.8 miles of 4-inch through 16-inch diameter pipeline operating at a maximum allowable operating (MAOP) pressure of 825 psig.

Within the storage field, Columbia has identified a group of five storage wells and six pipelines to serve as installation sites for the fiberglass reinforced polyethylene pipe. Because the five wells have a history of producing low levels of hydrogen sulfide (H₂S), Columbia is proposing to replace the existing steel pipelines with Fiberspar® spooled line pipe.

The current location of the Dundee Storage Field is predominately abandoned hay fields with no dwellings or High Consequence Areas (HCA) within the defined class location. Future construction near the storage field includes a proposed road crossing and two stream crossings. The storage facility impacts four parcels of land and two individual landowners. The new pipe installation will also include a location for cleaning ball launchers and receivers, alcohol injection points, blow offs valves, fittings, and line valves.

Within the Dundee Storage Field, Columbia is proposing to identify five locations for installation of Fiberspar® pipe and inspection. The inspections will include non-destructive and destructive testing. Non-destructive testing will focus on material composition and degradation of the fiberglass matrix, while destructive testing will be a hydrotest to burst. The burst pressure will be compared to the manufacturer's burst test and to 95 percent of the LCL of the LTHS.

The five inspections will be scheduled for 1, 2.5, 5, 7.5, and 10 years post installation of the fiberglass reinforced polyethylene pipe. Each inspection will involve, at a minimum, the removal of a ten foot segment. The segment will be replaced using mechanical couplings and fiberglass reinforced polyethylene line pipe. Columbia will select the exact locations of the inspections based on previous sampling data, including elevation, leak history, and H₂S concentration.

Based on the results of the five inspections, Columbia intends to schedule future inspections beyond the ten year inspection period. Specifically, Columbia intends to seek validation of the product life cycle and LTHS basis beyond the 20 year rating per ASTM D 2992 procedure.

Fiberspar[®] will offer training and certification to Columbia's Dundee field operations staff, training center staff, engineers, and technical staff on the qualification of joining methods unique to that application and installation of Fiberspar[®] spooled fiberglass pipe. Fiberspar[®] will also develop a written installation procedure for Columbia's staff and oversee staff members performing covered tasks during the initial installations.

Columbia is requesting a waiver from §§ 192.53(c), 192.121, 192.123, and 192.619(a) for its high pressure natural gas pipeline because it believes that fiberglass reinforced polyethylene pipe is:

- well suited for storage well line applications;
- non-metallic to eliminate internal corrosion; and

- impervious to acid gas corrosion caused by H₂S.

Columbia also contends that fiberglass reinforced polyethylene pipe will:

- eliminate the need for cathodic protection equipment such as rectifiers, ground beds, insulation joints, test stations, and anodes;
- eliminate coating repairs; and
- reduce the need for pipe joining.

Columbia believes fiberglass reinforced polyethylene pipe is both a technological and economical alternative to conventional steel well lines and deserves a closer examination for use within the pipeline industry. RSPA/OPS is publishing this notice in the Federal Register to provide an opportunity for public comment. At the conclusion of the comment period, RSPA/OPS will make a determination on the proposed waiver and publish its decision in the Federal Register.

Authority: 49 App. U.S.C. 60118(c) and 2015; and 49 CFR 1.53

Issued in Washington, DC on _____.

William H. Gute,

Acting Associate Administrator for Pipeline Safety