

U.S. Department of Transportation
Research and Special Programs Administration
400 Seventh Street, S.W.
Washington, D.C. 20590

NOV 13 1997

Mr. Edward M. Steele
Chief, Gas Pipeline Safety Section
Consumer Services Department
The Public Utilities Commission of Ohio
180 E. Broad Street
Columbus, OH 43266-0573

Dear Mr. Steele:

We have considered your letter of July 17, 1997, notifying us the Commission granted the Cincinnati Gas and Electric Company a waiver from complying with the plastic pipe installation standard under 49 CFR 192.321(a). The waiver allows the company to install plastic pipe inside a steel casing located above ground on the Hopewell Bridge in Hamilton and Clermont Counties in Ohio.

As the waiver indicates, we have approved several other state waivers authorizing the use of encased plastic pipe on bridges, and these installations have operated safely. Because the present waiver involves similar safety considerations, we have no objection to the waiver.

Sincerely,
Richard B. Felder
Associate Administrator for Pipeline Safety

The Public Utilities Commission of Ohio
180 East Broad Street
Columbus, Ohio 43266-0573

July 17, 1997

Mr. Richard Felder
Associate Administrator of Pipeline Safety
Office of Pipeline Safety
Research and Special Programs Administration
U.S. Department of Transportation
400 Seventh Street, SW
Washington, DC 20590

Dear Mr. Felder:

Today, the Public Utilities Commission of Ohio (PUCO) approved The Cincinnati Gas and Electric Company's (CG&E) waiver application which would permit CG&E to install plastic gas main, encased in steel, in the Hopewell Bridge in Hamilton and Clermont Counties in Ohio. CG&E's contact for the waiver application is:

Mr. William Hoblitzell, Regulatory Compliance
The Cincinnati Gas & Electric Company
Room 460-A
139 East Fourth Street
Cincinnati, OH 45202

The enclosed PUCO "Finding and Order" in triplicate and cover letter serve as notice to the Research and Special Programs Administration (RSPA) of the waiver. If RSPA does not object within sixty days after receipt of this notice, it is our understanding the waiver will become effective.

If you have any questions or comments, please call me at 614/644-8983.

Sincerely,
Edward M. Steele, Chief
Gas Pipeline Safety Section Consumer Services Department

BEFORE
THE PUBLIC UTILITIES COMMISSION OF OHIO

In the Matter of the Request of the)	
Cincinnati Gas and Electric Company)	Case No. 97-578-GA-UNC
for a Waiver of the Requirement)	
of 49 CFR Section 192.321(a).)	

FINDING AND ORDER

The Commission finds:

- (1) Pursuant to Rule 4901:1-16-03(A), Ohio Administrative Code (O.A.C.), this Commission has adopted the gas pipeline safety (GPS) regulations of the U.S. Department of Transportation (USDOT) contained in 49 C.F.R. Parts 192 and 199, including all future amendments, additions, modifications and rescissions.
- (2) On May 27, 1997, the Cincinnati Gas and Electric Company (CG&E, Applicant) filed a motion requesting a waiver of GPS standard 49 CFR Section 192.321(a) on the installation of plastic pipe. If the waiver is granted for the Hopewell Bridge project, CG&E would install an aboveground gas main, encased in steel, in the bridge structure.
- (3) The Commission is a certified State authority pursuant to the Pipeline Safety Act of 1994 as amended, 49 U.S.C.A. 60105, and has authority to grant a waiver of compliance under that Act, 49 U.S.C.A. 60118(d).
- (4) For the Hopewell Bridge project, Applicant seeks a waiver from GPS standard Section 192.321(a) which provides in relevant part that:

"Plastic pipe must be installed below ground level..."

- (5) In support of its request for a waiver, CG&E states that it would install an aboveground 4-inch gas main in an 8-inch steel casing in the Hopewell Bridge, currently under construction. Hopewell as a bi-county bridge would span the Little Miami River and traverse Symmes Township in Hamilton County and Miami Township in Clermont County. The steel casing, about 307 feet in length, would be cast in concrete, five inches below the surface of the bridge sidewalk. The plastic pipe would be a continuous piece supported by insulating spacers (cradles) every six feet to minimize abrasion. The pipeline would operate at or below 60 p.s.i., the design pressure.
- (6) Natural gas is primarily transported across bridges in steel or cast iron pipe. Installing plastic pipe aboveground in a bridge raised concerns about temperature changes which produce thermal stresses in the pipeline. Protection is needed from high temperatures and heat conduction into the pipe.

Applicant would use the Driscopipe 6500 series, a polyethylene pipe manufactured by a division of the Phillips Petroleum Company, which has an HDB (Hydrostatic Design Basis) rating of 1,000 psi, at 140° F. When used in the design formula, this HDB allows CG&E to operate the pipeline at 60 psi. Applicant provided documentation of ambient air temperature extremes in its service area in 1988 and from 1991 to 1996 with a low of -24° F and a high of 103° F.

- (7) Further, the plastic pipe would be shielded from ultraviolet radiation by the concrete sidewalk and steel casing. USDOT has approved waivers of 49 CFR Section 192.321(a) for plastic pipe encased in steel and installed across bridges.
- (8) The Commission's Gas Pipeline Safety Staff recommends approval of the waiver, as not inconsistent with pipeline safety, provided that CG&E:
 - (a) Installs the plastic pipeline in accordance with the ASME Gas Pipeline Safety Research Committee guidelines, "Installation of Plastic Gas Pipeline across Bridges" (1993);

- (b) Maintains official maps with the location and description of the plastic pipeline in the Hopewell Bridge;
 - (c) Physically inspects the sidewalk area above the plastic pipeline in the Hopewell Bridge at least twice each calendar year, but at intervals not exceeding 7 and 1/2 months, and report the results to the Gas Pipeline Safety Staff within 14 days after each patrol. Such inspection would help identify potentially hazardous conditions, including leakage, physical damage and deterioration of the bridge, and the need for additional pipeline location identification;
 - (d) Installs three thermal couplings positioned at 120° intervals around the pipe inside the steel casing. These couplings will be installed on the pipe inside the casing as close to the expansion joints as possible at both ends of the Hopewell Bridge. CG&E shall take periodic temperature readings inside the steel casing each day the ambient air temperature around the Hopewell Bridge exceeds 100° F or falls below 5° F. The temperature readings inside the casing must be taken so that data is obtained for two separate calendar years for each of the temperature extremes. CG&E shall submit these readings to the Gas Pipeline Safety Staff on April 1 and October 1 of each year when the ambient temperature exceeds 100° F or falls below 5° F.
 - (e) If the temperature inside the steel casing exceeds 140° F, or falls below -40° F, CG&E will take the entire pipeline of the Hopewell Bridge out of service until the temperature inside the casing returns below 140° F or above -40° F. Applicant will notify the Gas Pipeline Safety Staff of this condition as soon as practical, but not later than five working days.
- (9) Considering both the arguments made by Applicant and the recommendations of our Gas Pipeline Safety Staff, we find CG&E's request for a waiver to be reasonable.
- (10) CG&E's request for a waiver of GPS standard 49 CFR Section 192.321(a) to install plastic pipe above-ground, as modified by the recommendations of our Gas Pipeline Safety Staff, should be granted. The Commission's waiver of compliance is subject to USDOT review. The waiver will become effective on September 17, 1997 unless USDOT objects in writing, or when USDOT approves the waiver, whichever is earlier.

It is, therefore,

ORDERED, That the motion of the Cincinnati Gas and Electric Company requesting a waiver of gas pipeline safety standard 49 CFR Section 192.321(a), for the Hopewell Bridge project, as modified by the recommendations of our Gas Pipeline Safety Staff, be granted. The waiver will become effective on September 17, 1997, unless USDOT objects in writing, or when USDOT approves the waiver, whichever is earlier. It is, further,

ORDERED, That a copy of this Entry be served upon CG&E and the USDOT Research and Special Programs Administration.

THE PUBLIC UTILITIES COMMISSION OF OHIO

Craig A. Blazer, Chairman

Jolynn Barry Butler
David W. Johnson

Ronda Hartman Fergus
Judith A. Jones