

Mr. H. L. Crawford, Jr.  
Vice President  
Mid-Continent Pipe Line Company  
907 South Detroit Avenue  
Tulsa, Oklahoma 74120

Dear Mr. Crawford:

Your letter of August 11, 1989, to the Office of Pipeline Safety (OPS), with enclosures, gave notice as required by 49 CFR 195.8 of your intention to operate hazardous liquid pipelines constructed of a material other than steel pipe. Specifically, Mid-Continent proposes to install and operate certain crude oil gathering lines in Oklahoma City, Oklahoma, using polyethylene plastic pipe. In an earlier communication with Dennis Fothergill of the Oklahoma Corporation Commission, we found the proposed plastic pipelines to be subject to 49 CFR Part 195.

Additional information and data concerning this notice were supplied verbally by Mr. Brad Lange to an OPS senior staff engineer on August 22, 1989. Mr. R. D. McKenzie of your company provided additional information and data by letter of August 29, 1989. Also, Mr. McKenzie on September 14, 1989, concurred by telephone with the two lists of regulations included in Enclosures 1 and 2 which must be complied with concerning these pipelines.

From the above described sources, the following is our understanding concerning your proposal:

- E Installation will consist of a total of approximately 38,800 feet of polyethylene plastic pipe.
- E The pipe will be 3, 4, and 6 inch, SDR-11, PE 3408, Phillips Driscopipe 6400.
- E The pipe and fittings will be manufactured in compliance with ASTM D2513, "Standard Specification for Thermoplastic Gas Pressure Pipe, Tubing, and Fittings."
- E Joining of polyethylene pipe will be by heat fusion.
- E The pipelines will be installed with a minimum cover of 48 inches.

- E The pipelines will transport crude oil in a gathering system in a commercial/residential area classified per 49 CFR ?192.5 as Class location 3.
- E Each Lease Automatic Custody Transfer (LACT) station feeding the system will be equipped with an automatic shut-down which will deactivate the pump to assure the system operates below the maximum design temperature of 100°F.
- E The pipelines are designed for an estimated life of 50 years.
- E The plastic pipelines will provide no significant increase in hazards to the water table or any body of water in their normal operation as compared with steel pipelines in the same service.
- E Design of plastic pipe will comply with 49 CFR ?192.121 with a factor of 0.20 being substituted for the 0.32 factor shown in the equation.
- E The polyethylene pipelines shall be designed and constructed in accordance with the requirements pertaining to plastic pipelines contained in 49 CFR Part 192 and listed in Enclosure 1 to this letter. Otherwise the pipelines shall comply with the requirements of 49 CFR Part 195 listed in Enclosure 2 to this letter.

Based upon the above information and our technical evaluation of the safety of the proposed pipelines, we have determined in accordance with 49 CFR ?195.8 the use and operation of polyethylene plastic pipe in the above described manner would not be unduly hazardous and the transportation may proceed as planned.

Sincerely,

/signed/

Richard L. Beam  
Director  
Office of Pipeline Safety

Enclosures

## ENCLOSURE 1

Sections from 49 CFR Part 192 required for design, installation, testing, and operation of polyethylene plastic pipelines in a crude oil gathering system in Oklahoma City, Oklahoma.

### Subpart B - Materials

- 192.59 Plastic pipe
- 192.63 Marking of materials

### Subpart C - Pipe Design

- 192.121 Design of plastic pipe (modified by using a .20 factor instead of the .32 factor in the equation)
- 192.123 Design limitations for plastic pipe

### Subpart D - Design of Pipeline Components

- 192.145 Valves
- 192.191 Design pressure of plastic fittings
- 192.193 Valve installation in plastic pipe

### Subpart F - Joining of Materials Other Than by Welding

- 192.281 Plastic pipe
- 192.283 Plastic pipe; qualifying joining procedures
- 192.285 Plastic pipe; qualifying persons to make joints
- 192.287 Plastic pipe; inspection of joints

### Subpart G - General Construction Requirements for Transmission Lines and Mains

- 192.311 Repair of plastic pipe
- 192.321 Installation of plastic pipe

### Subpart J - Test Requirements

- 192.503 General requirements
- 192.513 Test requirements for plastic pipelines
- 192.517 Records

### Subpart L - Operations

- 192.619 Maximum allowable operating pressure: Steel or plastic pipelines

## ENCLOSURE 2

Sections of 49 CFR Part 195 required for polyethylene plastic pipelines in a crude oil gathering system in Oklahoma City, Oklahoma.

Subpart A - General (all sections)

Subpart B - Reporting Accidents and Safety-Related Conditions (all sections)

Subpart C - Design Requirements

- 195.101 Qualifying metallic components other than pipe
- 195.104 Variations in pressure
- 195.108 External pressure
- 195.110 External loads (except for the second sentence in paragraph (a))
- 195.118 Fittings

Subpart D - Construction

- 195.202 Compliance with specifications or standards
- 195.204 Inspection - general
- 195.206 Material inspection
- 195.246 Installation of pipe in a ditch
- 195.250 Clearance between pipe and underground structures
- 195.252 Backfill
- 195.256 Crossing of railroads and highways
- 195.258 Valves: General
- 195.260 Valves: Location
- 195.266 Construction records

Subpart F - Operation and Maintenance

- 195.401 General requirements
- 195.402 Procedural manual for operations, maintenance, and emergencies
- 195.403 Training
- 195.404 Maps and records
- 195.408 Communications
- 195.410 Line markers
- 195.412 Inspection of rights-of-way and crossings under navigable waters
- 195.420 Valve maintenance
- 195.422 Pipeline repairs
- 195.424 Pipe movement
- 195.440 Public education