

Approved March 2, 1989  
Date

MINUTES OF THE HOUSE SUB COMMITTEE ON ENERGY AND NATURAL RESOURCES

The meeting was called to order by Representative Kerry Patrick at  
Chairperson

3:30 ~~AM~~/p.m. on February 22, 1989n room 526-S of the Capitol.

All members were present except:

Committee staff present:

Lynne Holt, Legislative Research  
Mary Torrence, Revisor of Statutes' Office  
Betty Ellison, Committee Secretary

Conferees appearing before the committee:

Lynne Holt, Legislative Research  
Robert Elliott, Chief Engineer, Kansas Corporation Commission  
Karen Arnold-Burger, First Assistant City Attorney,  
City of Overland Park, Kansas

The meeting was called to order by Subcommittee Chairman Kerry Patrick.

Lynne Holt of the Legislative Research Department provided background information relative to Regulation of Natural Gas Pipeline Safety. Staff commented that the information in her overview had come primarily from the Kansas Corporation Commission (KCC). In the section dealing with federal regulations, it was emphasized that states are authorized to adopt additional or more stringent safety standards for intrastate pipeline transportation if these standards are compatible with the federal minimum standards. Temporary rules and regulations adopted by the KCC in October, 1988 incorporating minimum federal standards were addressed. Also discussed were proposed, more stringent safety regulations (on file in the Legislative Research Department). Differences between the minimum standards and the more severe restrictions proposed by the KCC were noted. Budget and staff responsibilities were included in the briefing. Attachment 1.

Staff responded to questions of the committee.

Karen Arnold-Burger represented the City of Overland Park, Kansas. She discussed two natural gas explosions in that city in December, 1987 and September, 1988 which had prompted their delving into the area of gas pipeline safety. She related their observations in this area and their encounters with the Kansas Corporation Commission. The December, 1987 explosion in Overland Park and another in September, 1987 in Independence, Kansas both were on Union Gas lines. The September, 1988 explosion in Overland Park was on a KPL line. Ms. Arnold-Burger listed several problems found and recommendations made as a result of Overland Park's investigation of natural gas pipeline safety. Attachment 2. Included with her written testimony were copies of Mayor Ed Eilert's testimony at both the technical and public hearings in Overland Park. Attachments 2a and 2b.

Discussion followed.

Robert Elliott appeared on behalf of the Kansas Corporation Commission. He listed legislation proposed for improving safety of the natural gas system. Attachment 3.

CONTINUATION SHEET

MINUTES OF THE HOUSE SUB COMMITTEE ON ENERGY AND NATURAL RESOURCES,  
room 526-S, Statehouse, at 3:30 ~~xxx~~ p.m. on February 22, 19 89

During discussion, Mr. Elliott commented that one more inspector would raise Kansas above the federal requirement. He felt that more stringent regulations, rather than more inspectors, would be the best way to handle the situation. He commented that in Kansas as well as other states, the emphasis is on minimum standards of safety and enforcing those when violations occur. Further discussion related to training of classified inspectors, the safety factor in rate increase applications and the complexity of the natural gas system.

Chairman Patrick announced that the Special Subcommittee on Natural Gas Pipeline Safety would meet again at 3:30 p.m. March 1, 1989 in Room 526-S.

The meeting was adjourned at 4:40 p.m.

Date: Feb. 22, 1989

GUEST REGISTER

HOUSE

COMMITTEE ON ENERGY AND NATURAL RESOURCES

NAME	ORGANIZATION	ADDRESS	PHONE
Thad Altko	Topeka Cap-Town	Topeka	
Woody Woodman	KEP&L	KC Mo	816 556-2155
Cliff Uddenberg	Boy Scouts	Olathe	
Brenda Uddenberg	Blackwell Sanders	Overland Park	345-8400
JAMES LUDWIG	KPL GAS SERVICE	TOPEKA	296-1978
Randy Paap	Peoples Natural Gas	Omaha, NE	4022212105
Ed Hatter	Peoples Natural Gas Co.	Popillion, NE	402-592-7670
TRIEVA POTTER	" " " "	TOPEKA	235-5798
Karen Arnold Berg	City of Overland Park	O.P.	381-5252
George Duggan	KS Dept. on Aging	Rm. 122-S Docking	296-4986
Janet Kerr	Southwestern Bell	Rm 515, 220 E. 6th	276-8980
<del>Mike Reed</del>	AT&T	TOPEKA	232 2128
Paula Dumbelaw	Skint Ebert Lobbying	Topeka	273-1441
Kevin Kelly	SUN	Overland Park	
James Schwery	KN Energy	Topeka	
Bill Asbury	KN Energy	Hastings, Mo.	402-462-2141
Bob Boumann	✓	Wakarusa, CO	303-989-1790
Don Schuacke	KIOGA	Topeka	232-7772
Paul Mackay	MAPCO	Tulsa, OK	918-599-3643
George Barbee	ENRON	Topeka	
Louis Stroup Jr.	KANSAS Municipal Utilities	McPherson	316 241-1423
DICK COMPTON	MIDWEST ENERGY	HAYS	913 625-3421
HARLAN MURPHY	-	-	-



# MEMORANDUM

February 21, 1989

TO: Subcommittee on Natural Gas Pipeline Safety  
FROM: Kansas Legislative Research Department  
RE: Background Information on Regulation of Natural Gas Pipeline Safety

## I. State Statutes

K.S.A. 66-1,150 et seq. governs the regulation of natural gas pipeline safety (Attachment 1). Pursuant to K.S.A. 66-1,150, the State Corporation Commission is authorized to adopt rules and regulations to conform with the federal Natural Gas Pipeline Safety Act (NGPSA) of 1968. Other statutes provide for civil penalties for violations, fees for inspection and supervision, and computation and disposition of the fees. Since December 29, 1970, the State Corporation Commission has issued 15 orders to enforce provisions of the NGPSA. (See Attachment 2 for Commission order to establish minimum safety standards for gas pipelines by adopting federal standards and Attachment 3 for list of orders.) According to information provided by the Commission, 98 jurisdictional pipeline safety operators are regulated by Commission rules and regulations adopted in October, 1988.

## II. Federal Regulations

The NGPSA (49 USCA 1671 et seq.) pertains to interstate transmission facilities and intrastate pipeline facilities (Attachment 4). In Section 1672, the U.S. Secretary of Transportation is required, by regulation, to establish minimum federal safety standards for the transportation of gas and pipeline facilities. These standards may apply to the design, installation, inspection, emergency plans and procedures, testing, construction, extension, operation, replacement, and maintenance of pipeline facilities. States are authorized to adopt additional or more stringent safety standards for intrastate pipeline transportation if these standards are compatible with the federal minimum standards. An operator of pipeline facilities is required to participate in a public safety program and, effective as of October 23, 1987, an operator of pipeline facilities, not including master meters, is also required to report to the U.S. Secretary of Transportation any condition that constitutes a hazard to life or property and any safety-related condition that causes or has caused a significant change or restriction in the operation of pipeline facilities. A provision for waiver of compliance of standards is also included in the federal regulations. Section 1673 addresses the Technical Pipeline Safety Standards Committee which is responsible for reviewing and proposing safety standards. As specified in Sections 1674(a) and (b), federal standards do not apply to intrastate pipeline transportation, provided that the state regulatory agency submits an annual certification to, or has entered into an agreement with, the U.S. Secretary of Transportation. Section 1674(d) authorizes federal grants to be made to assist in state enforcement of safety standards and specifies conditions under which such funding may be withheld. In CY 1987, for example, Kansas was reimbursed almost \$91,600 by the U.S. Secretary of Transportation under this program. Minimum safety standards for liquified natural gas (LNG) facilities and financial responsibility for certain LNG facilities are addressed in 1674a and b, but the State Corporation Commission has no statutory authority to

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Attachment 1

regulate LNG facilities. Section 1675 provides for judicial review; Section 1676 for cooperation with the Federal Energy Regulatory Commission and state regulatory commissions; Section 1677 for compliance requirements imposed upon transporters of gas or owners or operators of pipeline facilities; and Section 1679 for civil and criminal penalties and other special relief. (1989 H.B. 2457 proposes to increase the civil penalty provisions pursuant to the federal Pipeline Safety Reauthorization Act of 1988.) Transporters of gas or owners and operators of intrastate pipeline transportation facilities are required in Section 1680 to prepare and execute a written current plan for the inspection and maintenance of their respective facilities. Powers and duties of the U.S. Secretary of Transportation are enumerated in Section 1681 and mandated coordination efforts on the part of the Secretary are addressed in Section 1682. Section 1682 also encompasses the requirements governing the schedule of Pipeline Safety User Fees, collection of those fees, liability provisions, and time of fee assessment. Section 1683 requires that the Secretary prepare and submit to Congress an annual report which accounts for safety accidents, federal standards, reasons for waivers, and other information, as specified in this section. Section 1685 requires that transporters of gas conduct a consumer education program regarding the possible hazards associated with gas leaks and the importance of reporting gas odors or leaks to appropriate authorities. Finally, Section 1686 authorizes citizens to initiate civil action for mandatory or prohibitive injunctive relief against persons alleged to be in violation of the NGPSA. All of the above federal provisions have been incorporated by the Office of Pipeline Safety, U.S. Department of Transportation into 49 CFR Parts 190 et seq.

### III. Rules and Regulations

The State Corporation Commission adopted temporary rules and regulations in October, 1988 which incorporated minimum federal standards, addressed above. This was followed immediately by the proposed, more stringent regulations explained below (on file in the Legislative Research Department). One of the most significant changes to the adopted rules and regulations is the requirement that utilities perform special electrical surveys of each bare steel line in the state by May 1, 1991 and, if leaks are detected, protect the pipes against corrosion or replace them. In lieu of conducting this electrical survey, utilities would be required to replace all bare steel lines prior to December 31, 1993, or replace all lines within certain areas when 25 percent of the natural gas lines have been replaced because of leaks, or install anodes (which prevent corrosion) on all such lines. Another change is the imposition of stiffer standards for natural gas lines that run from meters near the property line into homes; such lines would be inspected annually. Other proposed changes which are more stringent than the minimum federal standards include: more distribution line valves; the elimination of the grandfathering of overpressure protection devices; removal of all imperfections or damage to plastic pipes; placement of all above-ground pipelines underground; written corrosion procedures used by operators; and required use of external protective coating and installation of a cathodic protection system on all pipelines. In addition, the stricter regulations: impose more stringent reporting requirements on operators; require that operators submit written operating and maintenance plans, including future revisions, to the Gas Pipeline Safety Section of the Commission; require that operators investigate every accident and failure, implement changes that would avert recurrences, and submit a written report within 90 days of the incident detailing the cause and possible actions that may be undertaken to avert recurrence. Other proposed regulations increase the specificity of certain federal requirements, specify approved leakage survey equipment and time intervals, require that all buried customer-owned piping in Kansas be leak surveyed by flame-ionization within 12 months of the effective date of the emergency

regulations, and seek to eliminate all buried customer-owned piping. The economic impact statement (Attachment 5) which accompanies the Commission's proposed rules and regulations indicates that perhaps the greatest effect on utility rates will result from the phase-in effort to place all aboveground pipelines underground. Several other rules and regulations may have a significant impact on a statewide basis, but may not be reflected in substantially increased utility rates.

The above rules and regulations were submitted for public comment. The public comment period ended on February 6, 1989. At an administrative meeting, the State Corporation Commission is scheduled to review them on Wednesday morning, February 22.

#### IV. Budget

The Commission's pipeline safety program is funded from three sources: the Public Service Regulations (PSR) Fund which assesses public utilities, the Gas Pipeline Inspection Fee Fund which assesses gas pipeline utilities not assessed by the PSR for inspections and safety measures, and federal reimbursements for up to 50 percent of total expenditures incurred by the Commission for conducting inspections and investigations in accordance with the NGPSA. (See Attachment 6 for program expenditures by state fiscal and grant year.)

Due to internal reorganization, there are presently 7.0 FTE positions in the Gas Pipeline Safety Section of the Corporation Commission -- 5.0 FTE pipeline inspectors, a supervisory position, and a clerical position. The Section intends to add another inspection position which would bring the total staffing complement to 8.0. The Commission does not disaggregate the Utilities Division budget to reflect projected expenditures for the Gas Pipeline Safety Section. However, actual expenditures are monitored internally. As of February 22, 1989, a total of \$141,733.94 was expended for the salaries and wages (\$111,289.19) and other operating expenditures (\$30,444.75) of the staff. Of the total of \$144,733.94, 18.4 percent was financed from federal funds and the remaining 81.6 percent from fee funds. It should be noted that, due to internal reorganization, these expenditures defy easy annualization.

#### V. Staff Responsibilities

The Gas Pipeline Safety Section is responsible for annual inspections of jurisdictional pipeline safety operators to monitor their compliance with government regulations. This type of inspection involves an office review of their records and a field verification of information provided to the Commission. The staff also conducts inspections of construction projects involving pipelines and other related facilities. It is estimated that the annual inspections and construction inspections consume almost all of the inspectors' time. In addition, inspections are conducted on accidents, and complaints referred to the Section by the Commission's Public Information Office are investigated. Finally, staff is expected to follow up on inspections and complaints.

carrier certificate; persons engaged in such business July 1, 1969, or before; forms for application; issuance of certificate. Any person engaged in the business of a local cartage carrier on or before July 1, 1969, shall be granted a local cartage carrier certificate, if an application is filed with the Kansas corporation commission within ninety (90) days after the effective date of this act. Applications shall be on forms prescribed by the commission and shall be supported with documentary and other evidence as the Kansas corporation commission deems necessary to establish that the applicant has been engaged in such bona fide motor carrier operations. Such showing being made, a local cartage carrier certificate will be issued.

History: L. 1970, ch. 270, § 3; July 1.

**66-1,148.** Same; forms; information; hearing; notice. Any application filed other than in accordance with the provision of K.S.A. 66-1,147 shall be on forms prescribed by the commission and contain such information as the commission deems necessary. Each application shall be scheduled for hearing by the commission and proper notice of hearing shall be given in the manner required by K.S.A. 66-1,114.

History: L. 1970, ch. 270, § 4; July 1.

**66-1,149.** Same; filing fee; annual fee; renewals; applications subject to motor carrier act. All applications for a local cartage carrier certificate shall be accompanied by filing fee of ten dollars (\$10.00). In addition, each holder of a local cartage carrier certificate shall pay an annual fee of ten dollars (\$10.00) for each self-propelled motor vehicle operated under the registration. Upon payment of this fee, the commission shall issue proper identification. Operations under a local cartage carrier certificate shall be renewable annually in the same manner as prescribed for holders of certificates or permits. All operations shall be subject to the applicable provisions of the motor carrier act governing liability of common carriers and powers of the commission over carrier operations.

History: L. 1970, ch. 270, § 5; July 1.

#### GAS PIPELINE SAFETY

**66-1,150.** Rules and regulations in conformance with federal pipeline safety

act; application. The state corporation commission is hereby authorized to adopt such rules and regulations as may be necessary to be in conformance with the natural gas pipeline safety act of 1968 (49 USCA 1671 *et seq.*). For the purpose of gas pipeline safety such rules and regulations shall be applicable to all public utilities and all municipal corporations or quasi-municipal corporations rendering gas utility service, the exemption provisions of K.S.A. 66-104, 66-131 and related statutes notwithstanding. Nothing in this section shall be construed as invalidating any present rules or regulations of the state corporation commission, concerning the regulation of pipelines and pipeline companies.

History: L. 1970, ch. 271, § 1; L. 1971, ch. 219, § 1; July 1.

#### CASE ANNOTATIONS

1. Application to one-city gas public utilities considered. *Kearney v. Kansas Public Service Co.*, 233 K. 492, 493, 499, 506, 507, 665 P.2d 757 (1983).

**66-1,151.** Same; penalty for violation; limitation. Any person who violates any rule or regulation adopted pursuant to this act, or any regulation adopted by the commission and in effect on July 1, 1969, shall be subject to a civil penalty not to exceed one thousand dollars (\$1,000) for each violation for each day that the violation persists. However, the maximum civil penalty shall not exceed two hundred thousand dollars (\$200,000) for any related series of violations.

History: L. 1970, ch. 271, § 2; July 1.

#### CASE ANNOTATIONS

1. Application to one-city gas public utilities considered. *Kearney v. Kansas Public Service Co.*, 233 K. 492, 506, 665 P.2d 757 (1983).

**66-1,152.** Same; compromise of penalty; considerations; deductions from amount owing by state; recovery. Any civil penalty may be compromised by the state corporation commission. In determining the amount of the penalty or the amount agreed in compromise, the appropriateness of the penalty to the size of the business, the gravity of the violation, and the good faith of the person charged in attempting to achieve compliance, shall be considered. The amount of the penalty, when finally determined, or the amount agreed upon in compromise, may be deducted from any sums



owing by the state of Kansas to the person charged or may be recovered in a civil action in the appropriate district court.

**History:** L. 1970, ch. 271, § 3; July 1.

#### CASE ANNOTATIONS

1. Application to one-city gas public utilities considered. *Kearney v. Kansas Public Service Co.*, 233 K. 492, 506, 665 P.2d 757 (1983).

**66-1,153. Fees for inspection and supervision authorized; gas pipeline safety standards.** Every public utility engaged in the operation of gas pipeline systems in this state which is subject to the jurisdiction and control of the state corporation commission, shall pay annually to the commission a fee for the inspection and supervision of the standards of safety prescribed by rules and regulations adopted in conformance with the natural gas pipeline safety act of 1968 (49 U.S.C.A. § 1671 *et seq.*): *Provided*, That nothing in this act shall apply to any public utility required to pay the fee provided for by K.S.A. 66-1503. Said fee shall be due and payable on or before September 1 of each year, commencing in the year 1973, and shall be for the fiscal year in which payment is due. Such fee shall be in addition to any and all property, franchise or license fees and other taxes, fees and charges fixed, assessed or charged by law against such utility.

**History:** L. 1973, ch. 261, § 1; July 1.

**66-1,154. Same; computation of fees.** The amount of such fee shall be measured by the number of active gas meters in service within the service area of each public utility engaged in the operation of a gas pipeline system. The fee shall be assessed as follows:

For 2,000 meters or less	20¢ per meter
For 2,001 meters to 10,000 meters	15¢ per meter
For 10,001 meters to 50,000 meters	10¢ per meter
For 50,001 meters or more	7½¢ per meter

**History:** L. 1973, ch. 261, § 2; July 1.

**66-1,155. Same; disposition of fees; gas pipeline inspection fee fund.** The chairman of the corporation commission shall remit all moneys received by or for it from fees, charges or penalties to the state treasurer at least monthly. Upon receipt of any such remittance the state treasurer shall deposit the entire amount thereof in the state treasury. Twenty percent (20%) of each such deposit shall be credited to the state general fund and the balance shall be

credited to the gas pipeline inspection fee fund. All expenditures from such fund shall be made in accordance with appropriation acts upon warrants of the director of accounts and reports issued pursuant to vouchers approved by the chairman or by a person or persons designated by him.

**History:** L. 1973, ch. 261, § 3; July 1.

**66-1,156. Same; frequency of remittances.** Nothing in this act shall be deemed to authorize remittances to be made less frequently than is authorized under K.S.A. 75-4215.

**History:** L. 1973, ch. 261, § 4; July 1.

**66-1,157. Same; default in certain payments; applicable provisions.** Any default in payment of fees, penalties therefor, suits for collection, counsel fees and liens for any fees and penalties in case of default in the payment of any fee or part thereof, shall be governed by the provisions of K.S.A. 66-1504.

**History:** L. 1973, ch. 261, § 5; July 1.

#### ELECTRIC GENERATION FACILITIES

**66-1,158. Electric generation facility siting; definitions.** As used in this act, the following words and phrases shall have the meanings ascribed to them herein:

(a) "Commission" means the state corporation commission;

(b) "Electric generation facility" means any physical plant used for the production or generation of electricity or electric power except that the remodeling, reconditioning or retrofitting of any existing physical plant shall not be deemed an addition to an electric generation facility;

(c) "Electric utility" means every public utility, as defined by K.S.A. 66-104, which owns, controls, operates or manages any equipment, plant or generating machinery for the production, transmission, delivery or furnishing, of electricity or electric power;

(d) "Landowner" means any person having an estate or interest in any land, which land is proposed to be acquired by an electric utility in connection with the construction, operation and maintenance of an electric generation facility or an addition to an electric generation facility;

(e) "Party" means any landowner, electric utility, governmental board or agency, or any other person allowed to intervene in any proceeding under this act;

THE STATE CORPORATION COMMISSION  
OF THE STATE OF KANSAS

Before Commissioners: Dale E. Saffels, Chairman  
Jules V. Doty  
Vernon A. Stroberg

In the Matter of Adoption of Rules and )	
Regulations to conform to the Natural )	DOCKET NO. 91,100-U
Gas Pipeline Safety Act of 1968 )	
(49 USCA 1671 et seq.). )	Order No. 2

ORDER

Now on this 29th day of December, 1970, the above-entitled matter comes on for consideration and determination by the State Corporation Commission of the State of Kansas upon the Commission's own motion; and the Commission, having examined its files and records, finds:

1. That Chapter 271 of the 1970 Session Laws of the State of Kansas authorizes this Commission to adopt such rules and regulations as may be necessary to be in conformance with the Natural Gas Pipeline Safety Act of 1968 (49 USCA 1671 et seq.).
2. That for purposes of compliance with said Natural Gas Pipeline Safety Act, it is now necessary to establish minimum safety standards for gas pipeline transportation facilities by adopting the standards adopted and published by the Office of Pipeline Safety of the United States Department of Transportation in the Federal Register, Volume 35, No. 161, on August 19, 1970, now designated as Part 192 of Title 49, Code of Federal Regulations.

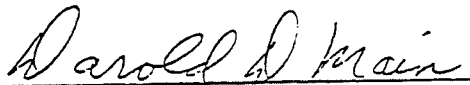
IT IS, THEREFORE, BY THE COMMISSION ORDERED:

That the minimum standards for gas pipeline transportation facilities as adopted and published by the Office of Pipeline Safety of the United States Department of Transportation in the Federal Register, Volume 5, No. 161, on August 19, 1970, now designated as Part 191 of Title 49, Code of Federal Regulations, be, and they are hereby, adopted as minimum standards of Gas Pipeline Safety of this Commission; a copy of said Regulations being attached hereto at Exhibit "A" and incorporated by reference herein.

IT IS FURTHER ORDERED: That the Commission retains jurisdiction of the subject matter and the parties for the purpose of entering such further order or orders as from time to time it may deem necessary.

BY THE COMMISSION IT IS SO ORDERED.

Saffels, Chairman; Doty, Com. ; and Stroberg, Com.

  
Darold D. Main  
Darold D. Main, Secretary

SF:sh

<p style="text-align: center;">Subpart A—General</p>		192.109	Requirements for design of pressure relief and limiting devices.
Sec.		192.201	Required capacity of pressure relieving and limiting stations.
192.1	Scope of part.	192.203	Instrument, control, and sampling pipe and components.
192.3	Definitions.	<p style="text-align: center;">Subpart E—Welding of Steel in Pipelines</p>	
192.5	Class locations.	192.221	Scope.
192.7	Incorporation by reference.	192.223	General.
192.9	Gathering lines.	192.225	Qualification of welding procedures.
192.11	Petroleum gas systems.	192.227	Qualification of welders.
192.13	General.	192.229	Limitations on welders.
192.15	Rules of regulatory construction.	192.231	Protection from weather.
<p style="text-align: center;">Subpart B—Materials</p>		192.233	Miter joints.
192.51	Scope.	192.235	Preparation for welding.
192.53	General.	192.237	Preheating.
192.55	Steel pipe.	192.239	Stress relieving.
192.57	Cast iron or ductile iron pipe.	192.241	Inspection and test of welds.
192.59	Plastic pipe.	192.243	Nondestructive testing.
192.61	Copper pipe.	192.245	Repair or removal of defects.
192.63	Marking of materials.	<p style="text-align: center;">Subpart F—Joining of Materials Other Than by Welding</p>	
192.65	Transportation of pipe.	192.271	Scope.
<p style="text-align: center;">Subpart C—Pipe Design</p>		192.273	General.
192.101	Scope.	192.275	Cast iron pipe.
192.103	General.	192.277	Ductile iron pipe.
192.105	Design formula for steel pipe.	192.279	Copper pipe.
192.107	Yield strength (S) for steel pipe.	192.281	Plastic pipe.
192.109	Nominal wall thickness (t) for steel pipe.	<p style="text-align: center;">Subpart G—General Construction Requirements for Transmission Lines and Mains</p>	
192.111	Design factor (F) for steel pipe.	192.301	Scope.
192.113	Longitudinal joint factor (E) for steel pipe.	192.303	Compliance with specifications or standards.
192.115	Temperature derating factor (T) for steel pipe.	192.305	Inspection: general.
192.117	Design of cast iron pipe.	192.307	Inspection of materials.
192.119	Design of ductile iron pipe.	192.309	Repair of steel pipe.
192.121	Design of plastic pipe.	192.311	Repair of plastic pipe.
192.123	Design limitations for plastic pipe.	192.313	Bends and elbows.
192.125	Design of copper pipe.	192.315	Wrinkle bends in steel pipe.
<p style="text-align: center;">Subpart D—Design of Pipeline Components</p>		192.317	Protection from hazards.
192.141	Scope.	192.319	Installation of pipe in a ditch.
192.143	General requirements.	192.321	Installation of plastic pipe.
192.145	Valves.	192.323	Casing.
192.147	Flanges and flange accessories.	192.325	Underground clearance.
192.149	Standard fittings.	192.327	Cover.
192.151	Tapping.	<p style="text-align: center;">Subpart H—Customer Meters, Service Regulators, and Service Lines</p>	
192.153	Components fabricated by welding.	192.351	Scope.
192.155	Welded branch connections.	192.353	Customer meters and regulators: location.
192.157	Extruded outlets.	192.355	Customer meters and regulators: protection from damage.
192.159	Flexibility.	192.357	Customer meters and regulators: installation.
192.161	Supports and anchors.	192.359	Customer meter installations: operating pressure.
192.163	Compressor stations: design and construction.	192.361	Service lines: installation.
192.165	Compressor stations: liquid removal.	192.363	Service lines: valve requirements.
192.167	Compressor stations: emergency shutdown.	192.365	Service lines: location of valves.
192.169	Compressor stations: pressure limiting devices.	192.367	Service lines: general requirements for connections to main piping.
192.171	Compressor stations: additional safety equipment.	192.369	Service lines: connections to cast iron or ductile iron mains.
192.173	Compressor stations: ventilation.	192.371	Service lines: steel.
192.175	Pipe-type and bottle-type holders.	192.373	Service lines: cast iron and ductile iron.
192.177	Additional provisions for bottle-type holders.	192.375	Service lines: plastic.
192.179	Transmission line valves.	192.377	Service lines: copper.
192.181	Distribution line valves.	<p style="text-align: center;">Subpart I—[Reserved]</p>	
192.183	Vaults: structural design requirements.	<p style="text-align: center;">Subpart J—Test Requirements</p>	
192.185	Vaults: accessibility.	192.501	Scope.
192.187	Vaults: sealing, venting, and ventilation.	192.503	General requirements.
192.189	Vaults: drainage and waterproofing.		
192.191	Design pressure of plastic fittings.		
192.193	Valve installation in plastic pipe.		
192.195	Protection against accidental overpressuring.		
192.197	Control of the pressure of gas delivered from high-pressure distribution systems.		

- Sec. 192.505** Strength test requirements for steel pipeline to operate at a hoop stress of 30 percent or more of SMYS.
- 192.507** Test requirements for pipeline to operate at a hoop stress less than 30 percent of SMYS and above 100 p.s.i.g.
- 192.509** Test requirements for pipelines to operate at or below 100 p.s.i.g.
- 192.511** Test requirements for service lines.
- 192.515** Environmental protection and safety requirements.
- 192.517** Records.
- Subpart K—Upgrading**
- 192.551** Scope.
- 192.553** General requirements.
- 192.555** Upgrading to a pressure that will produce a hoop stress of 30 percent or more of SMYS in steel pipelines.
- 192.557** Upgrading steel pipelines to a pressure that will produce a hoop stress less than 30 percent of SMYS; plastic, cast iron, and ductile iron pipelines.
- Subpart L—Operations**
- 192.601** Scope.
- 192.603** General provision.
- 192.605** Essentials of operating and maintenance plan.
- 192.607** Initial determination of class location and confirmation or establishment of maximum allowable operating pressure.
- 192.609** Change in class location: required study.
- 192.611** Change in class location: confirmation or revision of maximum allowable operating pressure.
- 192.613** Continuing surveillance.
- 192.615** Emergency plans.
- 192.617** Investigation of failures.
- 192.619** Maximum allowable operating pressure: steel or plastic pipelines.
- 192.621** Maximum allowable operating pressure: high-pressure distribution systems.
- 192.623** Maximum and minimum allowable operating pressure: low-pressure distribution systems.
- 192.625** Odorization of gas.
- 192.627** Tapping pipelines under pressure.
- 192.629** Purging of pipelines.
- Subpart M—Maintenance Procedures**
- 192.701** Scope.
- 192.703** General.
- 192.705** Transmission lines: patrolling.
- 192.707** Transmission lines: markers.
- 192.709** Transmission lines: recordkeeping.
- 192.711** Transmission lines: general requirements for repair procedures.
- 192.713** Transmission lines: permanent field repair of imperfections and damage.
- 192.715** Transmission lines: permanent repair of welds.
- 192.717** Transmission lines: permanent field repair of leaks.
- 192.719** Transmission lines: testing of repairs.
- 192.721** Distribution systems: patrolling.
- 192.723** Distribution systems: leakage surveys and procedures.
- 192.725** Test requirement for reinstating service lines.
- 192.727** Abandonment or inactivation of facilities.
- 192.729** Compressor stations: procedures for gas compressor units.
- 192.731** Compressor stations: inspection and testing of relief services.
- 192.733** Compressor stations: isolation of equipment for maintenance or alterations.
- Sec. 192.735** Compressor stations: storage of combustible materials.
- 192.737** Pipe-type and bottle-type holders: plan for inspection and testing.
- 192.739** Pressure limiting and regulating stations: inspection and testing.
- 192.741** Pressure limiting and regulating stations: telemetering or recording gauges.
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- 192.745** Valve maintenance: transmission lines.
- 192.747** Valve maintenance: distribution systems.
- 192.749** Valve maintenance.
- 192.751** Prevention of accidental ignition.
- 192.753** Caulked bell and spigot joints.
- Appendix A—Materials incorporated by reference.**
- Appendix B—Qualification of pipe.**
- Appendix C—Qualification of welders for low stress level pipe.**
- Authority:** The provisions of this Part 192 issued under 49 U.S.C. 1571 et seq.
- Subpart A—General**
- § 192.1** Scope of part.
- (a) This part prescribes minimum safety requirements for pipeline facilities and the transportation of gas, including pipeline facilities and the transportation of gas within the limits of the outer continental shelf as that term is defined in the Outer Continental Shelf Lands Act (43 U.S.C. 1331).
- (b) This part does not apply to the gathering of gas outside of the following areas:
- (1) An area within the limits of any incorporated or unincorporated city, town, or village.
  - (2) Any designated residential or commercial area such as a subdivision, business or shopping center, or community development.
- § 192.3** Definitions.
- As used in this part—**
- “Distribution Line” means a pipeline other than a gathering or transmission line.
- “Gas” means natural gas, flammable gas, or gas which is toxic or corrosive.
- “Gathering Line” means a pipeline that transports gas from a current production facility to a transmission line or main.
- “High pressure distribution system” means a distribution system in which the gas pressure in the main is higher than the pressure provided to the customer.
- “Listed specification” means a specification listed in section I of Appendix B of this part.
- “Low-pressure distribution system” means a distribution system in which the gas pressure in the main is substantially the same as the pressure provided to the customer.
- “Main” means a distribution line that serves as a common source of supply for more than one service line.
- “Maximum actual operating pressure” means the maximum pressure that occurs during normal operations over a period of 1 year.
- “Maximum allowable operating pressure” means the maximum pressure at which a pipeline or segment of a pipeline may be operated under this part.
- “Municipality” means a city, county, or any other political subdivision of a State.
- “Operator” means a person who engages in the transportation of gas.
- “Person” means any individual, firm, joint venture, partnership, corporation, association, State, municipality, cooperative association, or joint stock association, and includes any trustee, receiver, assignee, or personal representative thereof.
- “Pipe” means any pipe or tubing used for the transportation of gas, including pipe-type holders.
- “Pipeline” means all parts of those physical facilities through which gas moves in transportation, including pipe, valves, and other appurtenance attached to pipe, compressor units, metering stations, regulator stations, delivery stations, holders, and fabricated assemblies.
- “Pipeline facility” means new and existing pipelines, rights-of-way, and any equipment, facility, or building used in the transportation of gas or in the treatment of gas during the course of transportation.
- “Secretary” means the Secretary of Transportation or any person to whom he has delegated authority in the matter concerned.
- “Service Line” means a distribution line that transports gas to a customer meter set assembly from a common source of supply.
- “SMYS” means specified minimum yield strength is—
- (1) For steel pipe manufactured in accordance with a listed specification, the yield strength specified as a minimum in that specification; or
  - (2) For steel pipe manufactured in accordance with an unknown or unlisted specification, the yield strength determined in accordance with § 192.107(b).
- “State” means each of the several States, the District of Columbia, and the Commonwealth of Puerto Rico.
- “Transmission line” means a pipeline, other than a gathering line, that—
- (1) Transports gas from a gathering line or storage facility to a distribution center or storage facility;
  - (2) Operates at a hoop stress of 20 percent or more of SMYS; or
  - (3) Transports gas within a storage field.
- “Transportation of gas” means the gathering, transmission, or distribution of gas by pipeline or the storage of gas, in or affecting interstate or foreign commerce.
- § 192.5** Class locations.
- (a) Class location is determined by applying the criteria set forth in this section. The class location unit is an area that extends 220 yards on either side of the centerline of any continuous 1-mile length of pipeline. Except as provided in paragraphs (d) (2) and (f) of this section, the class location is determined by the buildings in the class location unit. For the purposes of this

section, each separate dwelling unit in a multiple dwelling unit building is counted as a separate building intended for human occupancy.

(b) A Class 1 location is any class location unit that has 10 or less buildings intended for human occupancy.

(c) A Class 2 location is any class location unit that has more than 10 but less than 46 buildings intended for human occupancy.

(d) A Class 3 location is—  
(1) Any class location unit that has 46 or more buildings intended for human occupancy; or

(2) An area where the pipeline lies within 100 yards of any of the following:  
(i) A building that is occupied by 20 or more persons during normal use.

(ii) A small, well-defined outside area that is occupied by 20 or more persons during normal use, such as a playground, recreation area, outdoor theater, or other place of public assembly.

(e) A Class 4 location is any class location unit where buildings with four or more stories above ground are prevalent.

(f) The boundaries of the class locations determined in accordance with paragraphs (a) through (e) of this section may be adjusted as follows:

(1) A Class 4 location ends 220 yards from the nearest building with four or more stories above ground.

(2) When a cluster of buildings intended for human occupancy requires a Class 3 location, the Class 3 location ends 220 yards from the nearest building in the cluster.

(3) When a cluster of buildings intended for human occupancy requires a Class 2 location, the Class 2 location ends 220 yards from the nearest building in the cluster.

§ 192.7 Incorporation by reference.

(a) Any documents or parts thereof incorporated by reference in this part are a part of this regulation as though set out in full.

(b) All incorporated documents are available for inspection in the Office of Pipeline Safety, Room 107, 400 Sixth Street SW., Washington, D.C. In addition, the documents are available at the addresses provided in Appendix A to this part.

(c) The full titles for the publications incorporated by reference in this part are provided in Appendix A to this part.

§ 192.9 Gathering lines.

Each gathering line must comply with the requirements of this part applicable to transmission lines.

§ 192.11 Petroleum gas systems.

(a) No operator may transport petroleum gas in a system that serves 10 or more customers, or in a system, any portion of which is located in a public place (such as a highway), unless that system meets the requirements of this part and of NFPA Standards No. 58 and No. 59. In the event of a conflict, the requirements of this part prevail.

(b) Each petroleum gas system covered by paragraph (a) of this section must comply with the following:

(1) Aboveground structures must have open vents near the floor level.

(2) Belowground structures must have forced ventilation that will prevent any accumulation of gas.

(3) Relief valve discharge vents must be located so as to prevent any accumulation of gas at or below ground level.

(4) Special precautions must be taken to provide adequate ventilation where excavations are made to repair an underground system.

(c) For the purpose of this section, petroleum gas means propane, butane, or mixtures of these gases, other than a gas air mixture that is used to supplement supplies in a natural gas distribution system.

§ 192.13 General.

(a) No person may operate a segment of pipeline that is readied for service after March 12, 1971, unless that pipeline has been designed, installed, constructed, initially inspected, and initially tested in accordance with this part.

(b) No person may operate a segment of pipeline that is replaced, relocated, or otherwise changed after November 12, 1970, unless that replacement, relocation, or change has been made in accordance with this part.

(c) Each operator shall maintain, modify as appropriate, and follow the plans, procedures, and programs that it is required to establish under this part.

§ 192.15 Rules of regulatory construction.

(a) As used in this part—

"Includes" means including but not limited to.

"May" means "is permitted to" or "is authorized to".

"May not" means "is not permitted to" or "is not authorized to".

"Shall" is used in the mandatory and imperative sense.

(b) In this part—

(1) Words importing the singular include the plural;

(2) Words importing the plural include the singular; and

(3) Words importing the masculine gender include the feminine.

Subpart C—Materials

§ 192.51 Scope.

This subpart prescribes minimum requirements for the selection and qualification of pipe and components for use in pipelines.

§ 192.53 General.

Materials for pipe and components must be—

(a) Able to maintain the structural integrity of the pipeline under temperature and other environmental conditions that may be anticipated;

(b) Chemically compatible with any gas that they transport and with any other material in the pipeline with which they are in contact; and

(c) Qualified in accordance with the applicable requirements of this subpart.

§ 192.55 Steel pipe.

(a) New steel pipe is qualified for use under this part if—

(1) It was manufactured in accordance with a listed specification;

(2) It meets the requirements of paragraphs II-A through II-D of Appendix B of this part; or

(3) It is used in accordance with paragraph (c) of this section.

(b) Used steel pipe is qualified for use under this part if—

(1) It was manufactured in accordance with a listed specification and it meets the requirements of paragraph II-C of Appendix B to this part;

(2) It meets the requirements of paragraph II-A through II-D of Appendix B to this part.

(3) It has been used in an existing line of the same or higher pressure and meets the requirements of paragraph II-C of Appendix B to this part; or

(4) It is used in accordance with paragraph (c) of this section.

(c) New or used steel pipe may be used at a pressure resulting in a hoop stress of less than 6,000 p.s.i. where no close coiling or close bending is to be done. If visual examination indicates that the pipe is in good condition and that it is free of split seams and other defects that would cause leakage, if it is to be welded, steel pipe that has not been manufactured to a listed specification must also pass the weldability tests prescribed in paragraph II-B of Appendix B to this part.

(d) New steel pipe that has been cold expanded must comply with the mandatory provisions of API Standard 5LX.

§ 192.57 Cast iron or ductile iron pipe.

(a) New cast iron or new ductile iron pipe is qualified for use under this part if it has been manufactured in accordance with a listed specification.

(b) Used cast iron or used ductile iron pipe is qualified for use under this part if inspection shows that the pipe is sound and allows the makeup of tight joints and—

(1) It has been removed from an existing pipeline that operated at the same or higher pressure; or

(2) It was manufactured in accordance with a listed specification.

§ 192.59 Plastic pipe.

(a) New plastic pipe is qualified for use under this part if—

(1) It is manufactured in accordance with a listed specification; and

(2) It is resistant to chemicals with which contact may be anticipated.

(b) Used plastic pipe is qualified for use under this part if—

(1) It meets the requirements of a listed specification;

(2) It is resistant to chemicals with which contact may be anticipated;

(3) It has been used only in natural gas service;

(4) Its dimensions are still within the tolerances of the specification to which it was manufactured; and

(5) It is free of visible defects.

§ 192.61 Copper pipe.

Copper pipe is qualified for use under this part if it has been manufactured in accordance with a listed specification.

§ 192.63 Marking of materials.

(a) Each valve, fitting, length of pipe, and other component must be marked as prescribed in—

(1) The specification or standard to which it was manufactured; or

(2) MSS standard practice, SP-25.

(b) Surfaces of pipe and components that are subject to stress from internal pressure may not be field die stamped.

(c) If any item is marked by die stamping, the die must have blunt or rounded edges that will minimize stress concentrations.

§ 192.65 Transportation of pipe.

In a pipeline to be operated at a hoop stress of 20 percent or more of SMYS, no operator may use pipe having an outer diameter to wall thickness ratio of 70 to one, or more, that is transported by railroad unless that transportation was performed in accordance with API RP5L1.

Subpart C—Pipe Design

§ 192.101 Scope.

This subpart prescribes the minimum requirements for the design of pipe.

§ 192.103 General.

Pipe must be designed with sufficient wall thickness, or must be installed with adequate protection, to withstand anticipated external pressures and loads that will be imposed on the pipe after installation.

§ 192.105 Design formula for steel pipe.

(a) The design pressure for steel pipe is determined in accordance with the following formula:

$$P = \frac{2St}{D} \times F \times E \times T$$

P=Design pressure in pounds per square inch gage.

S=Yield strength in pounds per square inch determined in accordance with § 192.107.

D=Nominal outside diameter of the pipe in inches.

t=Nominal wall thickness of the pipe in inches. If this is unknown, it is determined in accordance with § 192.109. Additional wall thickness required for concurrent external loads in accordance with § 192.103 may not be included in computing design pressure.

F=Design factor determined in accordance with § 192.111.

E=Longitudinal joint factor determined in accordance with § 192.113.

T=Temperature derating factor determined in accordance with § 192.115.

(b) If steel pipe that has been cold worked to meet the SMYS is heated, other than by welding, to 650° F. or more, the design pressure is limited to 75 percent of the pressure determined under paragraph (a) of this section.

§ 192.107 Yield strength (S) for steel pipe.

(a) For pipe that is manufactured in accordance with a specification listed in section I of Appendix B of this part, the yield strength to be used in the design formula in § 192.105 is the SMYS stated

in the listed specification, if that value is known.

(b) For pipe that is manufactured in accordance with a specification not listed in section I of Appendix B to this part or whose specification or tensile properties are unknown, the yield strength to be used in the design formula in § 192.105 is one of the following:

(1) If the pipe is tensile tested in accordance with section II-D of Appendix B to this part, the lower of the following:

(i) 80 percent of the average yield strength determined by the tensile tests.

(ii) The lowest yield strength determined by the tensile tests, but not more than 52,000 p.s.i.

(2) If the pipe is not tensile tested as provided in subparagraph (1) of this paragraph 24,000 p.s.i.

§ 192.109 Nominal wall thickness (t) for steel pipe.

(a) If the nominal wall thickness for steel pipe is not known, it is determined by measuring the thickness of each piece of pipe at quarter points on one end.

(b) However, if the pipe is of uniform grade, size, and thickness and there are more than 10 lengths, only 10 percent of the individual lengths, but not less than 10 lengths, need be measured. The thickness of the lengths that are not measured must be verified by applying a gage set to the minimum thickness found by the measurement. The nominal wall thickness to be used in the design formula in § 192.105 is the next wall thickness found in commercial specifications that is below the average of all the measurements taken. However, the nominal wall thickness used may not be more than 1.14 times the smallest measurement taken on pipe less than 20 inches in outside diameter, nor more than 1.11 times the smallest measurement taken on pipe 20 inches or more in outside diameter.

§ 192.111 Design factor (F) for steel pipe.

(a) Except as otherwise provided in paragraphs (b), (c), and (d) of this section, the design factor to be used in the design formula in § 192.105 is determined in accordance with the following table:

Class location	Design factor (F)
1	0.72
2	0.60
3	0.50
4	0.40

(b) A design factor of 0.60 or less must be used in the design formula in § 192.105 for steel pipe in Class 1 locations that:

(1) Crosses the right-of-way of an unimproved public road, without a casing;

(2) Crosses without a casing, or makes a parallel encroachment on, the right-of-way of either a hard surfaced road, a highway, a public street, or a railroad;

(3) Is supported by a vehicular, pedestrian, railroad, or pipeline bridge; or

(4) Is used in a fabricated assembly, (including separators, mainline valve as-

semblies, cross-connections, and river crossing headers) or is used within five pipe diameters in any direction from the last fitting of a fabricated assembly, other than a transition piece or an elbow used in place of a pipe bend which is not associated with a fabricated assembly.

(c) For Class 2 locations, a design factor of 0.50, or less, must be used in the design formula in § 192.105 for uncased steel pipe that crosses the right-of-way of a hard surfaced road, a highway, a public street, or a railroad.

(d) For Class 1 or Class 2 locations, a design factor of 0.50, or less, must be used in the design formula in § 192.105 for each compressor station, regulator station, and measuring station.

§ 192.113 Longitudinal joint factor (E) for steel pipe.

The longitudinal joint factor to be used in the design formula in § 192.105 is determined in accordance with the following table:

Specification	Pipe class	Longitudinal joint factor (E)
ASTM A 33	Seamless	1.00
	Electric resistance welded	1.00
	Furnace butt welded	1.00
ASTM A 106	Seamless	1.00
ASTM A 134	Electric fusion arc welded	0.99
ASTM A 135	Electric resistance welded	1.00
ASTM A 139	Electric fusion welded	0.90
ASTM A 133	Electric fusion arc welded	1.00
ASTM A 211	Spiral welded steel pipe	0.90
ASTM A 252	Seamless	1.00
	Electric resistance welded	1.00
ASTM A 351	Double submerged arc welded	1.00
APIS L	Seamless	1.00
	Electric resistance welded	1.00
	Electric flash welded	1.00
	Submerged arc welded	0.90
	Furnace butt welded	1.00
	Furnace lap welded	0.90
APIS LN	Seamless	1.00
	Electric resistance welded	1.00
	Electric flash welded	1.00
	Submerged arc welded	1.00
APIS LS	Electric resistance welded	1.00
	Submerged arc welded	1.00
Other	Pipe over 4 inches	0.90
Other	Pipe 4 inches or less	0.90

If the type of longitudinal joint cannot be determined, the joint factor to be used must not exceed that designated for "Other".

§ 192.115 Temperature derating factor (T) for steel pipe.

The temperature derating factor to be used in the design formula in § 192.105 is determined as follows:

Gas temperature in Degrees Fahrenheit	Temperature derating factor (T)
250 or less	1.000
300	0.967
350	0.933
400	0.900
450	0.857

For intermediate gas temperatures, the derating factor is determined by interpolation.

§ 192.117 Design of cast iron pipe.

Cast iron pipe must be designed in accordance with ANSI A 21.1 using the following values for S (bursting tensile

strength) and R (modulus of rupture) in the design equations:

Specification	Type of pipe	S	R
ANSI A 21.3	Pit cast	11,000	51,000
ANSI A 21.7	Centrifugal (metal mold)	15,000	40,000
ANSI A 21.9	Centrifugal (standard lined mold)	13,000	40,000

§ 192.119 Design of ductile iron pipe.

(a) Ductile iron pipe must be designed in accordance with ANSI A21.50 using the following values in the design equations:

s (design hoop stress) = 16,000 p.s.i.  
f (design bending stress) = 36,000 p.s.i.

(b) Ductile iron pipe must be grade 60-42-10 and must conform to the requirements of ANSI A21.52.

§ 192.121 Design of plastic pipe.

(a) The design pressure for plastic pipe is determined in accordance with the following formula and is subject to the limitations of § 192.123:

$$P = 2S \frac{t}{(D-t)} \times F$$

P = Design pressure in pounds per square inch gage.

S = For thermoplastic pipe, the long-term hydrostatic strength in pounds per square inch as stated in the listed specification; for thermosetting plastic pipe, 11,000 p.s.i.

t = Specified wall thickness in inches.

D = Specified outside diameter in inches.

F = Design factor for plastic pipe.

(b) The design factor for plastic pipe is determined as follows:

Class location	Design factor
1	0.32
2	0.25
3	0.23
4	0.20

§ 192.123 Design limitations for plastic pipe.

(a) The design pressure may not exceed 100 p.s.i.g. for plastic pipe used in—

- (1) Distribution systems; or
- (2) Classes 3 and 4 locations.

(b) Plastic pipe may not be used where operating temperatures of the pipe will be—

- (1) Below minus 20° F.; or
- (2) Above 100° F. for thermoplastic pipe or above 150° F. for reinforced thermosetting plastic pipe.

(c) The wall thickness for thermoplastic pipe may not be less than 0.062 inches.

(d) The wall thickness for reinforced thermosetting plastic pipe may not be less than that listed in the following table:

Nominal size in inches	Minimum wall thickness in inches
2	0.060
3	0.060
4	0.070
6	0.100

§ 192.125 Design of copper pipe.

(a) Copper pipe used in mains must have a minimum wall thickness of 0.065 inches and must be hard drawn.

(b) Copper pipe used in service lines must have a minimum wall thickness as specified for type "L" pipe in ASTM B 38.

(c) Copper pipe used in mains and service lines may not be used at pressures in excess of 100 p.s.i.g.

(d) Copper pipe that does not have an internal corrosion resistant lining may not be used to carry gas that has an average hydrogen sulfide content of more than 0.3 grains per 100 standard cubic feet of gas.

Subpart D—Design of Pipeline Components

§ 192.141 Scope.

This subpart prescribes minimum requirements for the design and installation of pipeline components and facilities. In addition, it prescribes requirements relating to protection against accidental overpressuring.

§ 192.143 General requirements.

Each component of a pipeline must be able to withstand operating pressures and other anticipated loadings with unit stresses equivalent to those allowed for comparable material in pipe in the same location and kind of service.

§ 192.145 Valves.

(a) Each valve must meet the minimum requirements of API 6D, or MSS SP-52, or the equivalent, and may not be used under operating conditions that exceed the applicable pressure-temperature ratings contained in those standards.

(b) Each valve must be able to meet the anticipated operating conditions.

(c) No valve having shell components made of ductile iron may be used at pressures exceeding 80 percent of the pressure ratings for comparable steel valves at their listed temperature. However, a valve having shell components made of ductile iron may be used at pressures up to 60 percent of the pressure ratings for comparable steel valves at their listed temperature, if—

(1) The temperature-adjusted service pressure does not exceed 1,000 p.s.i.g.; and

(2) Welding is not used on any ductile iron component in the fabrication of the valve shells or their assembly.

(d) No valve having pressure containing parts made of ductile iron may be used in the gas pipe components of compressor stations.

§ 192.147 Flanges and flange accessories.

(a) General requirements. Each flange or flange accessory must meet the minimum requirements of ANSI B16.5, MSS SP-44, or ANSI B16.24, or the equivalent.

(b) Each flange assembly must be able to withstand the maximum pres-

sure at which the pipeline is to be operated and to maintain its physical and chemical properties at any temperature to which it is anticipated that it might be subjected in service.

§ 192.149 Standard fittings.

(a) The minimum metal thickness of threaded fittings may not be less than specified for the pressures and temperatures in the applicable standards referenced in this part, or their equivalent.

(b) Each steel butt-welding fitting must have pressure and temperature ratings based on stresses for pipe of the same or equivalent material. The actual bursting strength of the fitting must at least equal the computed bursting strength of pipe of the designated material and wall thickness, as determined by a prototype that was tested to at least the pressure required for the pipeline to which it is being added.

§ 192.151 Tapping.

(a) Each mechanical fitting used to make a hot tap must be designed for at least the operating pressure of the pipeline.

(b) Where a ductile iron pipe is tapped, the extent of full-thread engagement and the need for the use of outside-sealing service connections, tapping saddles, or other fixtures must be determined by service conditions.

(c) Where a threaded tap is made in cast iron or ductile iron pipe, the diameter of the tapped hole may not be more than 25 percent of the nominal diameter of the pipe unless the pipe is reinforced, except that

(1) Existing taps may be used for replacement service, if they are free of cracks and have good threads; and

(2) A 1¼-inch tap may be made in a 4-inch cast iron or ductile iron pipe, without reinforcement.

However, in areas where climate, soil, and service conditions may create unusual external stresses on cast iron pipe, unreinforced taps may be used only on 6-inch or larger pipe.

§ 192.153 Components fabricated by welding.

(a) Except for branch connections and assemblies of standard pipe and fittings joined by circumferential welds, the design pressure of each component fabricated by welding, whose strength cannot be determined, must be established in accordance with paragraph UG-101 of section VIII of the ASME Boiler and Pressure Vessel Code.

(b) Each prefabricated unit that uses plate and longitudinal seams must be designed, constructed, and tested in accordance with the ASME Boiler and Pressure Vessel Code, except for the following:

(1) Regularly manufactured butt-welding fittings.

(2) Pipe that has been produced and tested under a specification listed in Appendix B to this part.

(3) Partial assemblies such as split rings or collars.



(c) Orange-peel bull plugs and orange-peel swages may not be used on pipelines that are to operate at a hoop stress of 20 percent or more of the SMYS of the pipe.

(d) Except for flat closures designed in accordance with section VIII of the ASME Boiler and Pressure Code, flat closures and fish tails may not be used on pipe that either operates at 100 p.s.i.g. or more, or is more than 3 inches nominal diameter.

**§ 192.155 Welded branch connections.**

Each welded branch connection made to pipe in the form of a single connection, or in a header or manifold as a series of connections, must be designed to ensure that the strength of the pipeline system is not reduced, taking into account the stresses in the remaining pipe wall due to the opening in the pipe or header, the shear stresses produced by the pressure acting on the area of the branch opening, and any external loadings due to thermal movement, weight, and vibration.

**§ 192.157 Extruded outlets.**

Each extruded outlet must be suitable for anticipated service conditions and must be at least equal to the design strength of the pipe and other fittings in the pipeline to which it is attached.

**§ 192.159 Flexibility.**

Each pipeline must be designed with enough flexibility to prevent thermal expansion or contraction from causing excessive stresses in the pipe or components, excessive bending or unusual loads at joints, or undesirable forces or moments at points of connection to equipment, or at anchorage or guide points.

**§ 192.161 Supports and anchors.**

(a) Each pipeline and its associated equipment must have enough anchors or supports to—

- (1) Prevent undue strain on connected equipment;
- (2) Resist longitudinal forces caused by a bend or offset in the pipe; and
- (3) Prevent or damp out excessive vibration.

(b) Each exposed pipeline must have enough supports or anchors to protect the exposed pipe joints from the maximum end force caused by internal pressure and any additional forces caused by temperature expansion or contraction or by the weight of the pipe and its contents.

(c) Each support or anchor on an exposed pipeline must be made of durable, noncombustible material and must be designed and installed as follows:

- (1) Free expansion and contraction of the pipeline between supports or anchors may not be restricted.
- (2) Provision must be made for the service conditions involved.
- (3) Movement of the pipeline may not cause disengagement of the support equipment.

(d) Each support on an exposed pipeline operated at a stress level of 50 percent or more of SMYS must comply with the following:

(1) A structural support may not be welded directly to the pipe.

(2) The support must be provided by a member that completely encircles the pipe.

(3) If an encircling member is welded to a pipe, the weld must be continuous and cover the entire circumference.

(e) Each underground pipeline that is connected to a relatively unyielding line or other fixed object must have enough flexibility to provide for possible movement, or it must have an anchor that will limit the movement of the pipeline.

(f) Each underground pipeline that is being connected to new branches must have a firm foundation for both the header and the branch to prevent lateral and vertical movement.

**§ 192.163 Compressor stations: design and construction.**

(a) *Location of compressor building.* Each main compressor building of a compressor station must be located on property under the control of the operator. It must be far enough away from adjacent property, not under control of the operator, to minimize the possibility of fire being communicated to the compressor building from structures on adjacent property. There must be enough open space around the main compressor building to allow the free movement of fire-fighting equipment.

(b) *Building construction.* Each building on a compressor station site must be made of noncombustible materials if it contains either—

(1) Pipe more than 2 inches in diameter that is carrying gas under pressure; or

(2) Gas handling equipment other than gas utilization equipment used for domestic purposes.

(c) *Exits.* Each operating floor of a main compressor building must have at least two separated and unobstructed exits located so as to provide a convenient possibility of escape and an unobstructed passage to a place of safety. Each door latch on an exit must be of a type which can be readily opened from the inside without a key. Each swinging door located in an exterior wall must be mounted to swing outward.

(d) *Fenced areas.* Each fence around a compressor station must have at least two gates located so as to provide a convenient opportunity for escape to a place of safety, or have other facilities affording a similarly convenient exit from the area. Each gate located within 200 feet of any compressor plant building must open outward and, when occupied, must be openable from the inside without a key.

(e) *Electrical facilities.* Electrical equipment and wiring installed in compressor stations must conform to the National Electrical Code, ANSI Standard C1, so far as that code is applicable.

**§ 192.165 Compressor stations: liquid removal.**

(a) Where entrained vapors in gas may liquefy under the anticipated pressure and temperature conditions, the

compressor must be protected against the introduction of these liquids in quantities that could cause damage.

(b) Each liquid separator used to remove entrained liquids at a compressor station must—

(1) Have a manually operable means of removing these liquids.

(2) Where slugs of liquid could be carried into the compressors, have either automatic liquid removal facilities, an automatic compressor shutdown device, or a high liquid level alarm; and

(3) Be manufactured in accordance with section VIII of the ASME Boiler and Pressure Vessel Code, except that liquid separators constructed of pipe and fittings without internal welding must be fabricated with a design factor of 0.4, or less.

**§ 192.167 Compressor stations: emergency shutdown.**

(a) Except for unattended field compressor stations of 1,000 horsepower or less, each compressor station must have an emergency shutdown system that meets the following:

(1) It must be able to block gas out of the station and blow down the station piping.

(2) It must discharge gas from the blowdown piping at a location where the gas will not create a hazard.

(3) It must provide means for the shutdown of gas compressing equipment, gas fires, and electrical facilities in the vicinity of gas headers and in the compressor building, except that—

(i) Electrical circuits that supply emergency lighting required to assist station personnel in evacuating the compressor building and the area in the vicinity of the gas headers must remain energized; and

(ii) Electrical circuits needed to protect equipment from damage may remain energized.

(4) It must be operable from at least two locations, each of which is—

(i) Outside the gas area of the station;

(ii) Near the exit gates in the station fence; and

(iii) Not more than 500 feet from the limits of the station.

(b) If a compressor station supplies gas directly to a distribution system with no other adequate source of gas available, the emergency shutdown system must be designed so that it will not function at the wrong time and cause an unintended outage on the distribution system.

**§ 192.169 Compressor stations: pressure limiting devices.**

(a) Each compressor station must have pressure relief or other suitable protective devices of sufficient capacity and sensitivity to ensure that the maximum allowable operating pressure of the station piping and equipment is not exceeded by more than 10 percent.

(b) Each vent line that exhausts gas from the pressure relief valves of a compressor station must extend to a location where the gas may be discharged without hazard.

§ 192.171 Compressor stations: additional safety equipment.

- (a) Each compressor station must have adequate fire protection facilities. If fire pumps are a part of these facilities, their operation may not be affected by the emergency shutdown system.
- (b) Each compressor station prime mover, other than an electrical induction or synchronous motor, must have an automatic device to shut down the unit before the speed of either the prime mover or the driven unit exceeds a maximum safe speed.
- (c) Each compressor unit in a compressor station must have a shutdown or alarm device that operates in the event of inadequate cooling or lubrication of the unit.
- (d) Each compressor station gas engine that operates with pressure gas injection must be equipped so that stoppage of the engine automatically shuts off the fuel and vents the engine distribution manifold.
- (e) Each muffler for a gas engine in a compressor station must have vent slots or holes in the baffles of each compartment to prevent gas from being trapped in the muffler.

§ 192.173 Compressor stations: ventilation.

Each compressor station building must be ventilated to ensure that employees are not endangered by the accumulation of gas in rooms, sumps, attics, pits, or other enclosed places.

§ 192.175 Pipe-type and bottle-type holders.

- (a) Each pipe-type and bottle-type holder must be designed so as to prevent the accumulation of liquids in the holder, in connecting pipe, or in auxiliary equipment, that might cause corrosion or interfere with the safe operation of the holder.
- (b) Each pipe-type or bottle-type holder must have minimum clearance from other holders in accordance with the following formula:

$$C = \frac{3D \times P \times F}{1,000}$$

in which:

- C=Minimum clearance between pipe containers or bottles in inches.
- D=Outside diameter of pipe containers or bottles in inches.
- P=Maximum allowable operating pressure, p.s.i.g.
- F=Design factor as set forth in § 192.111 of this part.

§ 192.177 Additional provisions for bottle-type holders.

- (a) Each bottle-type holder must be—
- (1) Located on a storage site entirely surrounded by fencing that prevents access by unauthorized persons and with minimum clearance from the fence as follows:

Maximum allowable operating pressure	Minimum clearance (feet)
Less than 1,000 p.s.i.g.	25
1,000 p.s.i.g. or more	100

- (2) Designed using the design factors set forth in § 192.111; and
- (3) Buried with a minimum cover in accordance with § 192.327.

(b) Each bottle-type holder manufactured from steel that is not weldable under field conditions must comply with the following:

- (1) A bottle-type holder made from alloy steel must meet the chemical and tensile requirements for the various grades of steel in either API Standard 5A or ASTM A 372.
- (2) The actual yield-tensile ratio of the steel may not exceed 0.55.
- (3) Welding may not be performed on the holder after it has been heat treated or stress relieved, except that copper wires may be attached to the small diameter portion of the bottle end closure for cathodic protection if a localized thermit welding process is used.
- (4) The holder must be given a mill hydrostatic test at a pressure that produces a hoop stress at least equal to 85 percent of the STYS.
- (5) The holder, connection pipe, and components must be leak tested after installation as required by Subpart J of this part.

§ 192.179 Transmission line valves.

(a) Each transmission line, other than offshore segments, must have sectionalizing block valves spaced as follows:

- (1) Each point on the pipeline in a Class 4 location must be within 2½ miles of a valve.
- (2) Each point on the pipeline in a Class 3 location must be within 4 miles of a valve.
- (3) Each point on the pipeline in a Class 2 location must be within 7½ miles of a valve.
- (4) Each point on the pipeline in a Class 1 location must be within 10 miles of a valve.

(b) Each sectionalizing block valve on a transmission line, other than offshore segments, must comply with the following:

- (1) The valve and the operating device to open or close the valve must be readily accessible and protected from tampering and damage.
- (2) The valve must be supported to prevent settling of the valve or movement of the pipe to which it is attached.
- (c) Each section of a transmission line, other than offshore segments, between main line valves must have a blow-down valve with enough capacity to allow the transmission line to be blown down as rapidly as practicable. Each blowdown discharge must be located so the gas can be blown to the atmosphere without hazard and, if the transmission line is adjacent to an overhead electric line, so that the gas is directed away from the electrical conductors.

§ 192.181 Distribution line valves.

(a) Each high-pressure distribution system must have valves spaced so as to reduce the time to shut down a section of main in an emergency. The valve spacing is determined by the operating pres-

sure, the size of the mains, and the local physical conditions.

(b) Each regulator station controlling the flow or pressure of gas in a distribution system must have a valve installed on the inlet piping at a distance from the regulator station sufficient to permit the operation of the valve during an emergency that might preclude access to the station.

(c) Each valve on a main installed for operating or emergency purposes must comply with the following:

- (1) The valve must be placed in a readily accessible location so as to facilitate its operation in an emergency.
- (2) The operating stem or mechanism must be readily accessible.
- (3) If the valve is installed in a buried box or enclosure, the box or enclosure must be installed so as to avoid transmitting external loads to the main.

§ 192.183 Vaults: structural design requirements.

(a) Each underground vault or pit for valves, pressure relieving, pressure limiting, or pressure regulating stations, must be able to meet the loads which may be imposed upon it, and to protect installed equipment.

(b) There must be enough working space so that all of the equipment required in the vault or pit can be properly installed, operated, and maintained.

(c) Each pipe entering, or within, a regulator vault or pit must be steel for sizes 10 inches, and less, except that control and gage piping may be copper. Where pipe extends through the vault or pit structure, provision must be made to prevent the passage of gasses or liquids through the opening and to avert strains in the pipe.

§ 192.185 Vaults: accessibility.

Each vault must be located in an accessible location and, so far as practical, away from—

- (a) Street intersections or points where traffic is heavy or dense;
- (b) Points of minimum elevation, catch basins, or places where the access cover will be in the course of surface waters; and
- (c) Water, electric, steam, or other facilities.

§ 192.187 Vaults: sealing, venting, and ventilation.

Each underground vault or closed top pit containing either a pressure regulating or reducing station, or a pressure limiting or relieving station, must be sealed, vented or ventilated, as follows:

(a) When the internal volume exceeds 200 cubic feet—

(1) The vault or pit must be ventilated with two ducts, each having at least the ventilating effect of a pipe 4 inches in diameter;

(2) The ventilation must be enough to minimize the formation of combustible atmosphere in the vault or pit; and

(3) The ducts must be high enough above grade to disperse any gas-air mixtures that might be discharged.

(b) When the internal volume is more than 75 cubic feet but less than 200 cubic feet—

(1) If the vault or pit is sealed, each opening must have a tight fitting cover without open holes through which an explosive mixture might be ignited, and there must be a means for testing the internal atmosphere before removing the cover;

(2) If the vault or pit is vented, there must be a means of preventing external sources of ignition from reaching the vault atmosphere; or

(3) If the vault or pit is ventilated, paragraph (a) or (c) of this section applies.

(c) If a vault or pit covered by paragraph (b) of this section is ventilated by openings in the covers or gratings and the ratio of the internal volume, in cubic feet, to the effective ventilating area of the cover or grating, in square feet, is less than 20 to 1, no additional ventilation is required.

**§ 192.169 Vaults: drainage and waterproofing.**

(a) Each vault must be designed so as to minimize the entrance of water.

(b) A vault containing gas piping may not be connected by means of a drain connection to any other underground structure.

(c) All electrical equipment in vaults must conform to the applicable requirements of Class I, Group D, of the National Electrical Code, ANSI Standard C1.

**§ 192.191 Design pressure of plastic fittings.**

(a) Thermosetting fittings for plastic pipe must conform to ASTM D 2517.

(b) The design pressure of alpha-buna-styrene (ABS) and polyvinyl chloride (PVC) Schedule 40 and 80 thermoplastic fittings must be obtained from the following table:

**DESIGN PRESSURE OF THERMOPLASTIC FITTINGS, P.S.I.G. OF VARIOUS STRENGTHS, MATERIALS AND CLASS LOCATIONS**

Size inches	Schedule	ABS Type I and PVC Type II class location				PVC Type I class location			
		1	2 and 3	4		1	2 and 3	4	
1/2	40	100	100	100	100	100	100		
1/2	80	100	100	100	100	100	100		
1	40	100	100	90	100	100	100		
1	80	100	100	100	100	100	100		
1 1/2	40	100	100	74	100	100	100		
1 1/2	80	100	100	100	100	100	100		
2	40	100	100	66	100	100	100		
2	80	100	100	94	100	100	100		
2 1/2	40	100	100	51	100	100	100		
2 1/2	80	100	100	83	100	100	100		
3	40	100	100	53	100	100	100		
3	80	100	100	73	100	100	100		
3 1/2	40	100	100	45	100	100	98		
3 1/2	80	100	100	69	100	100	100		
4	40	100	100	44	100	100	99		
4	80	100	100	65	100	100	100		
5	40	100	100	39	100	97	93		
5	80	100	100	59	100	100	100		
6	40	100	100	33	100	83	71		
6	80	100	100	56	100	100	100		

Note: These pressure ratings are the same value as the design pressure of the corresponding pipe size and schedule in the same class location, as determined by the formula given in 192.191 and the limitations in 192.191(b)(3).

**§ 192.193 Valve installation in plastic pipe.**

Each valve installed in plastic pipe must be designed so as to protect the plastic material against excessive torsional or shearing loads when the valve or shutoff is operated, and from any other secondary stresses that might be exerted through the valve or its enclosure.

**§ 192.195 Protection against accidental overpressuring.**

(a) *General requirements.* Except as provided in § 192.197, each pipeline that is connected to a gas source so that the maximum allowable operating pressure could be exceeded as the result of pressure control failure or of some other type of failure, must have pressure relieving or pressure limiting devices that meet the requirements of §§ 192.199 and 192.201.

(b) *Additional requirements for distribution systems.* Each distribution system that is supplied from a source of gas that is at a higher pressure than the maximum allowable operating pressure for the system must—

(1) Have pressure regulation devices capable of meeting the pressure, load, and other service conditions that will be experienced in normal operation of the system, and that could be activated in the event of failure of some portion of the system; and

(2) Be designed so as to prevent accidental overpressuring.

**§ 192.197 Control of the pressure of gas delivered from high-pressure distribution systems.**

(a) If the maximum actual operating pressure of the distribution system is under 60 p.s.i.g. or less and a service regulator having the following characteristics is used, no other pressure limiting device is required:

(1) A regulator capable of reducing distribution line pressure to pressures recommended for household appliances.

(2) A single port valve with proper orifice for the maximum gas pressure at the regulator inlet.

(3) A valve seat made of resilient material designed to withstand abrasion of the gas, impurities in gas, cutting by the valve, and to resist permanent deformation when it is pressed against the valve port.

(4) Pipe connections to the regulator not exceeding 2 inches in diameter.

(5) A regulator that, under normal operating conditions, is able to regulate the downstream pressure within the necessary limits of accuracy and to limit the build-up of pressure under no-flow conditions to prevent a pressure that would cause the unsafe operation of any connected and properly adjusted gas utilization equipment.

(6) A self-contained service regulator with no external static or control lines.

(b) If the maximum actual operating pressure of the distribution system is 60 p.s.i.g. or less, and a service regulator that does not have all of the characteristics listed in paragraph (a) of this

section is used, or if the gas contains materials that seriously interfere with the operation of service regulators, there must be suitable protective devices to prevent unsafe overpressuring of the customer's appliances if the service regulator fails.

(c) If the maximum actual operating pressure of the distribution system exceeds 60 p.s.i.g., one of the following methods must be used to regulate and limit, to the maximum safe value, the pressure of gas delivered to the customer:

(1) A service regulator having the characteristics listed in paragraph (a) of this section, and another regulator located upstream from the service regulator. The upstream regulator may not be set to maintain a pressure higher than 60 p.s.i.g. A device must be installed between the upstream regulator and the service regulator to limit the pressure on the inlet of the service regulator to 60 p.s.i.g. or less in case the upstream regulator fails to function properly. This device may be either a relief valve or an automatic shutoff that shuts, if the pressure on the inlet of the service regulator exceeds the set pressure (60 p.s.i.g. or less), and remains closed until manually reset.

(2) A service regulator and a monitoring regulator set to limit, to a maximum safe value, the pressure of the gas delivered to the customer.

(3) A service regulator with a relief valve vented to the outside atmosphere, with the relief valve set to open so that the pressure of gas going to the customer does not exceed a maximum safe value. The relief valve may either be built into the service regulator or it may be a separate unit installed downstream from the service regulator. This combination may be used alone only in those cases where the inlet pressure on the service regulator does not exceed the manufacturer's safe working pressure rating of the service regulator, and may not be used where the inlet pressure on the service regulator exceeds 125 p.s.i.g. For higher inlet pressures, the methods in subparagraph (1) or (2) of this paragraph must be used.

(4) A service regulator and an automatic shutoff device that closes upon a rise in pressure downstream from the regulator and remains closed until manually reset.

**§ 192.199 Requirements for design of pressure relief and limiting devices.**

Each pressure relief or pressure limiting device must—

(a) Be constructed of materials such that the operation of the device will not be impaired by corrosion;

(b) Have valves and valve seats that are designed not to stick in a position that will make the device inoperative;

(c) Be designed and installed so that it can be readily operated to determine if the valve is free, can be tested to determine the pressure at which it will operate, and can be tested for leakage when in the closed position;

(d) Have support made of noncombustible material;

(e) Have discharge stacks, vents, or outlet ports designed to prevent accumulation of water, ice, or snow, located where gas can be discharged into the atmosphere without undue hazard;

(f) Be designed and installed so that the size of the openings, pipe, and fittings located between the system to be protected and the pressure relieving device, and the size of the vent line, are adequate to prevent hammering of the valve and to prevent impairment of relief capacity;

(g) Where installed at a district regulator station to protect a pipeline system from overpressuring, be designed and installed to prevent any single incident such as an explosion in a vault or damage by a vehicle from affecting the operation of both the overpressure protective device and the district regulator; and

(h) Except for a valve that will isolate the system under protection from its source of pressure, be designed to prevent unauthorized operation of any stop valve that will make the pressure relief valve or pressure limiting device inoperative.

**§ 192.201 Required capacity of pressure relieving and limiting stations.**

(a) Each pressure relief station or pressure limiting station or group of those stations installed to protect a pipeline must have enough capacity, and must be set to operate, to prevent—

(1) The pressure from exceeding the maximum allowable operating pressure plus 10 percent or the pressure that produces a hoop stress of 75 percent of SMYS, whichever is lower; or

(2) In a low-pressure distribution system, a pressure that would cause the unsafe operation of any connected and properly adjusted gas utilization equipment.

(b) When more than one pressure regulating or compressor station feeds into a pipeline, relief valves or other protective devices must be installed at each station to ensure that the complete failure of the largest capacity regulator or compressor, or any single run of lesser capacity regulators or compressors in that station, will not impose pressures on any part of the pipeline or distribution system in excess of those for which it was designed, or against which it was protected, whichever is lower.

(c) Relief valves or other pressure limiting devices must be installed at or near each regulator station in a low-pressure distribution system, with a capacity to limit the maximum pressure in the main to a pressure that will not exceed the safe operating pressure for any connected and properly adjusted gas utilization equipment.

**§ 192.202 Instrument, control, and sampling pipe and components.**

(a) *Applicability.* This section applies to the design of instrument, control, and sampling pipe and components. It does not apply to permanently closed systems, such as fluid-filled temperature-responsive devices.

(b) *Materials and design.* All materials employed for pipe and components must be designed to meet the particular conditions of service and the following:

(1) Each takeoff connection and attaching boss, fitting, or adapter must be made of suitable material, be able to withstand the maximum service pressure and temperature of the pipe or equipment to which it is attached, and be designed to satisfactorily withstand all stresses without failure by fatigue.

(2) A shutoff valve must be installed in each takeoff line as near as practicable to the point of takeoff. Blowdown valves must be installed where necessary.

(3) Brass or copper material may not be used for metal temperatures greater than 400° F.

(4) Pipe or components that may contain liquids must be protected by heating or other means from damage due to freezing.

(5) Pipe or components in which liquids may accumulate must have drains or drips.

(6) Pipe or components subject to clogging from solids or deposits must have suitable connections for cleaning.

(7) The arrangement of pipe, components, and supports must provide safety under anticipated operating stresses.

(8) Each joint between sections of pipe, and between pipe and valves or fittings, must be made in a manner suitable for the anticipated pressure and temperature condition. Slip type expansion joints may not be used. Expansion must be allowed for by providing flexibility within the system itself.

(9) Each control line must be protected from anticipated causes of damage and must be designed and installed to prevent damage to any one control line from making both the regulator and the over-pressure protective device inoperative.

**Subpart E—Welding of Steel in Pipelines**

**§ 192.221 Scope.**

(a) This subpart prescribes minimum requirements for welding steel materials in pipelines.

(b) This subpart does not apply to welding that occurs during the manufacture of steel pipe or steel pipeline components.

**§ 192.223 General.**

(a) Welding must be performed in accordance with established written welding procedures that have been qualified under § 192.225 to produce sound, ductile welds.

(b) Welding must be performed by welders who are qualified under §§ 192.227 and 192.229 for the welding procedure to be used.

**§ 192.225 Qualification of welding procedures.**

(a) Each welding procedure must be qualified under either section IX of the ASME Boiler and Pressure Vessel Code or section 2 of API Standard 1104,

whichever is appropriate to the function of the weld.

(b) When a welding procedure is being qualified under section IX of the ASME Boiler and Pressure Vessel Code, the following steels are considered to fall within the P-Number 1 grouping for the purpose of the essential variables and do not require separate qualification of welding procedures:

(1) Carbon steels that have a carbon content of 0.32 percent (ladle analysis) or less.

(2) Carbon steels that have a carbon equivalent ( $C + \frac{1}{4} Mn$ ) of 0.65 percent (ladle analysis) or less.

(3) Alloy steels with weldability characteristics that have been shown to be similar to the carbon steels listed in subparagraphs (1) and (2) of this paragraph.

Alloy steels and carbon steels that are not covered by subparagraph (1), (2), or (3) of this paragraph require separate qualification of procedures for each individual pipe specification in accordance with sections VIII and IX of the ASME Boiler and Pressure Vessel Code.

(c) Each welding procedure must be recorded in detail during the qualifying tests. This record must be retained and followed whenever the procedure is used.

**§ 192.227 Qualification of welders.**

(a) Except as provided in paragraph (c) of this section, each welder must be qualified in accordance with one of the following:

(1) Section IX of the ASME Boiler and Pressure Vessel Code.

(2) Section 3 of API Standard 1104.

(b) When a welder is being qualified under section IX of the ASME Boiler and Pressure Vessel Code, the following steels are considered to fall within the P-Number 1 grouping for the purpose of the essential variables and do not require separate qualification:

(1) Carbon steels that have a carbon content of 0.32 percent (ladle analysis) or less.

(2) Carbon steels that have a carbon equivalent ( $C + \frac{1}{4} Mn$ ) of 0.65 percent (ladle analysis) or less.

(3) Alloy steels with weldability characteristics that have been shown to be similar to the carbon steels listed in subparagraphs (1) and (2) of this paragraph.

Alloy steels and carbon steels that are not covered by subparagraph (1), (2), or (3) of this paragraph require separate qualification of welders for each individual pipe specification in accordance with sections VIII and IX of the ASME Boiler and Pressure Vessel Code.

(c) A welder may qualify to perform welding on pipe to be operated at a pressure that produces a hoop stress of less than 20 percent of SMYS by performing an acceptable test weld, for the process to be used, under the test set forth in section I of Appendix C to this part. A welder who makes welded service line connections to mains must also perform an acceptable test weld under section II of Appendix C to this part as a part of

his qualifying test. After initial qualification, a welder may not perform welding unless—

(1) Within the preceding 12 calendar months, he has requalified; or

(2) Within the preceding 6 calendar months he has had—

(i) A production weld cut out, tested and found acceptable in accordance with the qualifying test; or

(ii) For welders who work only on service lines 2 inches or smaller in diameter, two sample welds tested and found acceptable in accordance with the test in section III of Appendix C to this part.

#### § 192.229 Limitations on welders.

(a) No welder whose qualification is based on nondestructive testing may weld compressor station pipe and components.

(b) No welder may weld with a particular welding process unless, within the preceding 6 calendar months, he has engaged in welding with that process.

(c) No welder who is qualified under § 192.227(a) may weld unless, within the preceding 6 calendar months, he has had at least one weld tested and found acceptable under either section 3 or 6 of API Standards 1104.

#### § 192.231 Protection from weather.

The welding operation must be protected from weather conditions that would impair the quality of the completed weld.

#### § 192.233 Miter joints.

(a) A miter joint on steel pipe to be operated at a pressure that produces a hoop stress of 30 percent or more of SMYS may not defect the pipe more than 3".

(b) A miter joint on steel pipe to be operated at a pressure that produces a hoop stress of less than 30 percent, but more than 10 percent, of SMYS may not defect the pipe more than 12½" and must be a distance equal to one pipe diameter or more away from any other miter joint, as measured from the crotch of each joint.

(c) A miter joint on steel pipe to be operated at a pressure that produces a hoop stress of 10 percent or less of SMYS may not defect the pipe more than 90".

#### § 192.235 Preparation for welding.

Before beginning any welding, the welding surfaces must be clean and free of any material that may be detrimental to the weld, and the pipe or component must be aligned to provide the most favorable condition for depositing the root bead. This alignment must be preserved while the root bead is being deposited.

#### § 192.237 Preheating.

(a) Carbon steel that has a carbon content in excess of 0.32 percent (ladle analysis) or a carbon equivalent (C+¼ Mn) in excess of 0.65 percent (ladle analysis) must be preheated for welding.

(b) Carbon steel that has a lower carbon content or carbon equivalent than the steels covered by paragraph (a) of this section must be preheated for welding when preheating will alleviate exist-

ing conditions that would limit the welding technique or tend to adversely affect the quality of the weld.

(c) When steel materials with different preheat temperatures are being preheated for welding, the higher temperature must be used.

(d) Preheat temperature must be monitored to ensure that the required preheat temperature is reached before, and maintained during, the welding operation.

#### § 192.239 Stress relieving.

(a) Except as provided in paragraph (f) of this section, each weld on carbon steel that has a carbon content in excess of 0.32 percent (ladle analysis) or a carbon equivalent (C+¼ Mn) in excess of 0.65 percent (ladle analysis) must be stress relieved as prescribed in section VIII of the ASME Boiler and Pressure Vessel Code.

(b) Except as provided in paragraph (f) of this section, each weld on carbon steel that has a carbon content of less than 0.22 percent (ladle analysis) or a carbon equivalent (C+¼ Mn) of less than 0.65 percent (ladle analysis) must be thermally stress relieved when conditions exist which cool the weld at a rate detrimental to the quality of the weld.

(c) Except as provided in paragraph (f) of this section, each weld on carbon steel pipe with a wall thickness of more than 1¼ inches must be stress relieved.

(d) When a weld connects pipe or components that are of different thickness, the wall thickness to be used in determining whether stress relieving is required under this section is—

(1) In the case of pipe connections, the thicker of the two pipes joined; or

(2) In the case of branch connections, slip-on flanges, or socket weld fittings, the thickness of the pipe run or header.

(e) Each weld of different materials must be stress relieved, if either material requires stress relieving under this section.

(f) Notwithstanding paragraphs (a), (b), and (c) of this section, stress relieving is not required for the following:

(1) A fillet or groove weld one-half inch, or less, in size (leg) that attaches a connection 2 inches, or less, in diameter; or

(2) A fillet or groove weld three-eighths inch, or less, in groove size that attaches a supporting member or other nonpressure attachment.

(g) Stress relieving required by this section must be performed at a temperature of at least 1,100° F. for carbon steels and at least 1,200° F. for ferritic alloy steels. When stress relieving a weld between steel materials with different stress relieving temperatures, the higher temperature must be used.

(h) When stress relieving, the temperature must be monitored to ensure that a uniform temperature is maintained and that the proper stress relieving cycle is accomplished.

#### § 192.241 Inspection and test of welds.

(a) Visual inspection of welding must be conducted to insure that—

(1) The welding is performed in accordance with the welding procedure; and

(2) The weld is acceptable under paragraph (c) of this section.

(b) The welds on a pipeline to be operated at a pressure that produces a hoop stress of 20 percent or more of SMYS must be nondestructively tested in accordance with § 192.243, except that welds that are visually inspected and approved by a qualified welding inspector need not be nondestructively tested if—

(1) The pipe has a nominal diameter of less than 6 inches; or

(2) The pipeline is to be operated at a pressure that produces a hoop stress of less than 40 percent of SMYS and the welds are so limited in number that nondestructive testing is impractical.

(c) The acceptability of a weld that is nondestructively tested or visually inspected is determined according to the standards in section 6 of API Standard 1104.

#### § 192.243 Nondestructive testing.

(a) Nondestructive testing of welds must be performed by any process, other than prepanning, that will clearly indicate defects that may affect the integrity of the weld.

(b) Nondestructive testing of welds must be performed—

(1) In accordance with written procedures; and

(2) By persons who have been trained and qualified in the established procedures and with the equipment employed in testing.

(c) Procedures must be established for the proper interpretation of each nondestructive test of a weld to ensure the acceptability of the weld under § 192.241(c).

(d) When nondestructive testing is required under § 192.241(b), the following percentages of each day's field butt welds, selected at random by the operator, must be nondestructively tested over their entire circumference:

(1) In Class 1 locations, at least 10 percent.

(2) In Class 2 locations, at least 15 percent.

(3) In Classes 3 and 4 locations and at crossings of major or navigable rivers, 100 percent if practicable, but not less than 90 percent.

(4) Within railroad or public highway rights-of-way, including tunnels, bridges and overhead road crossings and at pipeline tie-ins, 100 percent.

(e) Except for a welder whose work is isolated from the principal welding activity, a sample of each welder's work for each day must be nondestructively tested, when nondestructive testing is required under § 192.241(b).

(f) When nondestructive testing is required under § 192.241(b), each operator must retain, for the life of the pipeline, a record showing by milepost, engineering station, or by geographic feature, the number of fifth welds made, the number nondestructively tested, the number rejected, and the disposition of the rejects.

§ 192.245 Repair or removal of defects.

(a) Each weld that is unacceptable under § 192.241(c) must be removed or repaired. A weld must be removed if it has a crack that is more than 2 inches long or that penetrates either the root or second bead.

(b) Each weld that is repaired must have the defect removed down to clean metal and the segment to be repaired must be preheated. After repair, the segment of the weld that was repaired must be inspected to insure its acceptability. If the repair is not acceptable, the weld must be removed.

Subpart F—Joining of Materials Other Than by Welding

§ 192.271 Scope.

(a) This subpart prescribes minimum requirements for joining materials in pipelines, other than by welding.

(b) This subpart does not apply to joining during the manufacture of pipe or pipeline components.

§ 192.273 General.

(a) The pipeline must be designed and installed so that each joint will sustain the longitudinal pullout or thrust forces caused by contraction or expansion of the piping or by anticipated external or internal loading.

(b) Each joint must be made in accordance with written procedures that have been proven by test or experience to produce strong gastight joints.

(c) Each joint must be inspected to insure compliance with this subpart.

§ 192.275 Cast iron pipe.

(a) Each caulked bell and spigot joint in cast iron pipe must be sealed with mechanical leak clamps.

(b) Each mechanical joint in cast iron pipe must have a gasket made of a resilient material as the sealing medium. Each gasket must be suitably confined and retained under compression by a separate gland or follower ring.

(c) Cast iron pipe may not be joined by threaded joints.

(d) Cast iron pipe may not be joined by brazing.

(e) Each flange on a flanged joint in cast iron pipe must conform in dimensions and drilling to ANSI Standard B16.1 and be cast integrally with the pipe, valve, or fitting.

§ 192.277 Ductile iron pipe.

(a) Each mechanical joint in ductile iron pipe must conform to ANSI Standard A21.52 and ANSI Standard A21.11.

(b) Ductile iron pipe may not be joined by threaded joints.

(c) Ductile iron pipe may not be joined by brazing.

§ 192.279 Copper pipe.

Copper pipe may not be threaded, except that copper pipe used for joining screw fittings or valves may be threaded if the wall thickness is equivalent to the comparable size of standard wall pipe, as defined in ANSI Standard B36.10.

§ 192.281 Plastic pipe.

(a) General. Each plastic pipe joint must be made in accordance with written procedures that have been proven by destructive burst test to produce joints at least as strong as the pipe being joined. A plastic pipe joint that is joined by solvent cement, adhesive, or heat fusion may not be disturbed until it has properly set. Plastic pipe may not be joined by a threaded joint or miter joint.

(b) Solvent cement joints. Each solvent cement joint on plastic pipe must comply with the following:

(1) The mating surfaces of the joint must be clean, dry, and free of material which might be detrimental to the joint.

(2) The solvent cement must conform to ASTM Specification D 2513.

(3) The safety requirements of Appendix A of ASTM Specification D 2513 must be met.

(4) The joint may not be heated to accelerate the setting of the cement.

(c) Heat-fusion joints. Each heat-fusion joint on plastic pipe must comply with the following:

(1) A butt heat-fusion joint must be joined by a device that holds the heater element square to the ends of the piping, compresses the heated ends together, and holds the pipe in proper alignment while the plastic hardens.

(2) A socket heat-fusion joint must be joined by a device that heats the mating surfaces of the joint uniformly and simultaneously to essentially the same temperature.

(3) Heat may not be applied with a torch or other open flame.

(d) Adhesive joints. Each adhesive joint on plastic pipe must comply with the following:

(1) The adhesive must conform to ASTM Specification D 2517.

(2) The materials and adhesive must be compatible with each other.

(e) Mechanical joints. Each compression type mechanical joint on plastic pipe must comply with the following:

(1) The gasket material in the coupling must be compatible with the plastic.

(2) A rigid internal tubular stiffener, other than a split tubular stiffener, must be used in conjunction with the coupling.

Subpart G—General Construction Requirements for Transmission Lines and Mains

§ 192.301 Scope.

This subpart prescribes minimum requirements for constructing transmission lines and mains.

§ 192.303 Compliance with specifications or standards.

Each transmission line or main must be constructed in accordance with comprehensive written specifications or standards that are consistent with this part.

§ 192.305 Inspection: general.

Each transmission line or main must be inspected to ensure that it is constructed in accordance with this part.

§ 192.307 Inspection of materials.

Each length of pipe and each other component must be visually inspected at the site of installation to ensure that it has not sustained any visually detectable damage that could impair its serviceability.

§ 192.309 Repair of steel pipe.

(a) Each imperfection or damage that impairs the serviceability of a length of steel pipe must be repaired or removed. If a repair is made by grinding, the remaining wall thickness must at least be equal to either:

(1) The minimum thickness required by the tolerances in the specification to which the pipe was manufactured; or

(2) The nominal wall thickness required for the design pressure of the pipeline.

(b) Each of the following dents must be removed from steel pipe to be operated at a pressure that produces a hoop stress of 20 percent, or more, of SMYS:

(1) A dent that contains a stress concentrator such as a scratch, gouge, groove, or arc burn.

(2) A dent that affects the longitudinal weld or a circumferential weld.

(3) In pipe to be operated at a pressure that produces a hoop stress of 40 percent or more of SMYS, a dent that has a depth of—

(I) More than one-quarter inch in pipe 12 3/4 inches or less in outer diameter; or

(II) More than 20 percent of the nominal pipe diameter in pipe over 12 3/4 inches in outer diameter.

For the purpose of this section a "dent" is a depression that produces a gross disturbance in the curvature of the pipe-wall without reducing the pipe-wall thickness. The depth of a dent is measured as the gap between the lowest point of the dent and a prolongation of the original contour of the pipe.

(c) Each arc burn on steel pipe to be operated at a pressure that produces a hoop stress of 40 percent, or more, of SMYS must be repaired or removed. If a repair is made by grinding, the arc burn must be completely removed and the remaining wall thickness must be at least equal to either:

(1) The minimum wall thickness required by the tolerances in the specification to which the pipe was manufactured; or

(2) The nominal wall thickness required for the design pressure of the pipeline.

(d) A gouge, groove, arc burn, or dent may not be repaired by insert patching or by pounding out.

(e) Each gouge, groove, arc burn, or dent that is removed from a length of pipe must be removed by cutting out the damaged portion as a cylinder.

§ 192.311 Repair of plastic pipe.

Each imperfection or damage that would impair the serviceability of plastic pipe must be repaired by a patching saddle or removed.

### § 192.313 Bends and elbows.

(a) Each field bend in steel pipe, other than a wrinkle bend made in accordance with § 192.315, must comply with the following:

(1) A bend may not impair the serviceability of the pipe.  
 (2) On pipe containing a longitudinal weld, the longitudinal seam must be as near as practicable to the neutral axis of the bend.  
 (3) A bend on pipe that is 12 inches, or more, in nominal diameter must not deflect the pipe more than  $1\frac{1}{2}$ " in any length of pipe equal to the diameter.

(4) For pipe more than 4 inches in nominal diameter, the difference between the maximum and minimum diameter at a bend may not be more than 2½ percent of the nominal diameter.

(b) Each circumferential weld of steel pipe that is subjected to stress during bending must be nondestructively tested.

(c) Wrought-steel welding elbows and transverse segments of these elbows may not be used for changes in direction on steel pipe that is 2 inches or more in diameter unless the arc length, as measured along the crotch, is at least 1 inch.

(d) Each bend, other than a wrinkle bend made in accordance with § 192.315, must have a smooth contour and be free of mechanical damage.

### § 192.315 Wrinkle bends in steel pipe.

(a) A wrinkle bend may not be made on steel pipe to be operated at a pressure that produces a hoop stress of 30 percent, or more, of SMYS.

(b) Each wrinkle bend on steel pipe must comply with the following:

(1) The bend must not have any sharp kinks.

(2) When measured along the crotch of the bend, the wrinkles must be a distance of at least one pipe diameter.

(3) On pipe 16 inches or larger in diameter, the bend may not have a deflection of more than  $1\frac{1}{2}$ " for each wrinkle.

(4) On pipe containing a longitudinal weld the longitudinal seam must be as near as practicable to the neutral axis of the bend.

### § 192.317 Protection from hazards.

(a) Each transmission line or main must be protected from washouts, floods, unstable soil, landslides, or other hazards that may cause the pipe to move or to sustain abnormal loads.

(b) Each transmission line or main that is constructed above ground must be protected from accidental damage by vehicular traffic or other similar causes, either by being placed at a safe distance from the traffic or by installing barricades.

### § 192.319 Installation of pipe in a ditch.

(a) When installed in a ditch, each transmission line that is to be operated at a pressure producing a hoop stress of 20 percent or more of SMYS must be installed so that the pipe fits the ditch so as to minimize stresses and protect the pipe coating from damage.

(b) Each ditch for a transmission line or main must be backfilled in a manner that—

(1) Provides firm support under the pipe; and

(2) Prevents damage to the pipe and pipe coating from equipment or from the backfill material.

### § 192.321 Installation of plastic pipe.

(a) Plastic pipe must be installed below-ground level.

(b) Plastic pipe that is installed in a vault or any other below grade enclosure must be completely encased in gas-tight metal pipe and fittings that are adequately protected from corrosion.

(c) Plastic pipe must be installed so as to minimize shear or tensile stresses.

(d) Thermoplastic pipe that is not encased must have a minimum wall thickness of 0.050 inches, except that pipe with an outside diameter of 0.875 inches or less may have a minimum wall thickness of 0.062 inches.

(e) Plastic pipe that is not encased must have an electrically conductive wire or other means of locating the pipe while it is underground.

(f) Plastic pipe that is being encased must be inserted into the casing pipe in a manner that will protect the plastic. The leading end of the plastic must be closed before insertion.

### § 192.323 Casing.

Each casing used on a transmission line or main under a railroad or highway must comply with the following:

(a) The casing must be designed to withstand the superimposed loads.

(b) If there is a possibility of water entering the casing, the ends must be sealed.

(c) If the ends of an unvented casing are sealed and the sealing is strong enough to retain the maximum allowable operating pressure of the pipe, the casing must be designed to hold this pressure at a stress level of not more than 72 percent of SMYS.

(d) If vents are installed on a casing, the vents must be protected from the weather to prevent water from entering the casing.

### § 192.325 Underground clearance.

(a) Each transmission line must be installed with at least 12 inches of clearance from any other underground structure not associated with the transmission line. If this clearance cannot be attained, the transmission line must be protected from damage that might result from the proximity of the other structure.

(b) Each main must be installed with enough clearance from any other underground structure to allow proper maintenance and to protect against damage that might result from proximity to other structures.

(c) In addition to meeting the requirements of paragraph (a) or (b) of this section, each plastic transmission line or main must be installed with sufficient clearance, or must be insulated,

from any source of heat so as to prevent the heat from impairing the serviceability of the pipe.

(d) Each pipe-type or bottle-type holder must be installed with a minimum clearance from any other holder as prescribed in § 192.175(b).

### § 192.327 Cover.

(a) Except as provided in paragraph (c) of this section, each buried transmission line must be installed with a minimum cover as follows:

Location	Normal soil	Consolidated rock
Class 1 locations	36	18
Class 2, 3, and 4 locations	36	34
Drainage ditches of public roads and railroad crossings	36	34

(b) Except as provided in paragraphs (c) and (d) of this section, each buried main must be installed with at least 24 inches of cover.

(c) Where an underground structure prevents the installation of a transmission line or main with the minimum cover, the transmission line or main may be installed with less cover if it is provided with additional protection to withstand anticipated external loads.

(d) A main may be installed with less than 24 inches of cover if the law of the State or municipality—

(1) Establishes a minimum cover of less than 24 inches;

(2) Requires that mains be installed in a common trench with other utility lines; and

(3) Provides adequately for prevention of damage to the pipe by external forces.

### Subpart M—Customer Meters, Service Regulators, and Service Lines

#### § 192.331 Scope.

This subpart prescribes minimum requirements for installing customer meters, service regulators, service lines, service line valves, and service line connections to mains.

#### § 192.333 Customer meters and regulators: location.

(a) Each meter and service regulator, whether inside or outside of a building, must be installed in a readily accessible location and be protected from corrosion and other damage. However, the upstream regulator in a series may be buried.

(b) Each service regulator installed within a building must be located as near as practical to the point of service line entrance.

(c) Each meter installed within a building must be located in a ventilated place and not less than 3 feet from any source of ignition or any source of heat which might damage the meter.

(d) Where feasible, the upstream regulator in a series must be located outside the building, unless it is located in a separate metering or regulating building.

§ 192.355 Customer meters and regulators: protection from damage.

(a) Protection from vacuum or back pressure. If the customer's equipment might create either a vacuum or a back pressure, a device must be installed to protect the system.

(b) Service regulator vents and relief vents. The outside terminal of each service regulator vent and relief vent must—

- (1) Be rain and insect resistant;
- (2) Be located at a place where gas from the vent can escape freely into the atmosphere and away from any opening into the building; and
- (3) Be protected from damage caused by subsurgence in areas where flooding may occur.

(c) Pits and vaults. Each pit or vault that houses a customer meter or regulator at a place where vehicular traffic is anticipated, must be able to support that traffic.

§ 192.357 Customer meters and regulators: installation.

(a) Each meter and each regulator must be installed so as to minimize anticipated stresses upon the connecting piping and the meter.

(b) When close all-thread nipples are used, the wall thickness remaining after the threads are cut must meet the minimum wall thickness requirements of this part.

(c) Connections made of lead or other easily damaged material may not be used in the installation of meters or regulators.

(d) Each regulator that might release gas in its operation must be vented to the outside atmosphere.

§ 192.359 Customer meter installations: operating pressure.

(a) A meter may not be used at a pressure that is more than 67 percent of the manufacturer's shell test pressure.

(b) Each new meter must have been tested by the manufacturer to a minimum of 10 p.s.i.g.

(c) A rebuilt or repaired thinned steel case meter may not be used at a pressure that is more than 50 percent of the pressure used to test the meter after rebuilding or repairing.

§ 192.361 Service lines: installation.

(a) Depth. Each buried service line must be installed with at least 12 inches of cover in private property and at least 18 inches of cover in streets and roads. However, where an underground structure prevents installation at those depths, the service line must be able to withstand any anticipated external load.

(b) Support and backfill. Each service line must be properly supported on undisturbed or well-compacted soil, and material used for backfill must be free of materials that could damage the pipe or its coating.

(c) Grading for drainage. Where condensate in the gas might cause interruption in the gas supply to the customer, the service line must be graded so as to drain into the main or into drips at the low points in the service line.

(d) Protection against piping strain and external loading. Each service line

must be installed so as to minimize anticipated piping strain and external loadings.

(e) Installation of service lines into buildings. Each underground service line installed below grade through the outer foundation wall of a building must—

- (1) In the case of a metal service line, be protected against corrosion;
- (2) In the case of a plastic service line, be protected from shearing action and backfill settlement; and
- (3) Be sealed at the foundation wall to prevent leakage into the building.

(f) Installation of service lines under buildings. Where an underground service line is installed under a building—

- (1) It must be encased in a gas-tight conduit;
- (2) The conduit and the service line must, if the service line supplies the building it underlies, extend into a normally usable and accessible part of the building; and
- (3) The space between the conduit and the service line must be sealed to prevent gas leakage into the building and, if the conduit is sealed at both ends, a vent line from the annular space must extend to a point where gas would not be a hazard, and extend above grade, terminating in a rain and insect resistant fitting.

§ 192.363 Service lines: valve requirements.

(a) Each service line must have a service-line valve that meets the applicable requirements of Subparts B and D of this part. A valve incorporated in a meter bar, that allows the meter to be bypassed, may not be used as a service-line valve.

(b) A soft seat service line valve may not be used if its ability to control the flow of gas could be adversely affected by exposure to anticipated heat.

(c) Each service-line valve on a high-pressure service line, installed above ground or in an area where the blowing of gas would be hazardous, must be designed and constructed to minimize the possibility of the removal of the core of the valve with other than specialized tools.

§ 192.365 Service lines: location of valves.

(a) Relation to regulator or meter. Each service-line valve must be installed upstream of the regulator or, if there is no regulator, upstream of the meter.

(b) Outside valves. Each service line must have a shut-off valve in a readily accessible location that, if feasible, is outside of the building.

(c) Underground valves. Each underground service-line valve must be located in a covered durable curb box or standpipe that allows ready operation of the valve and is supported independently of the service lines.

§ 192.367 Service lines: general requirements for connections to main piping.

(a) Location. Each service-line connection to a main must be located at the

top of the main or, if that is not practical, at the side of the main, unless a suitable protective device is installed to minimize the possibility of dust and moisture being carried from the main into the service line.

(b) Compression-type connection to main. Each compression-type service line to main connection must—

- (1) Be designed and installed to effectively sustain the longitudinal pull-out or thrust forces caused by contraction or expansion of the piping, or by anticipated external or internal loading; and
- (2) If gaskets are used in connecting the service line to the main connection fitting, have gaskets that are compatible with the kind of gas in the system.

§ 192.369 Service lines: connections to cast iron or ductile iron mains.

(a) Each service line connected to a cast iron or ductile iron main must be connected by a mechanical clamp, by drilling and tapping the main, or by another method meeting the requirements of § 192.473.

(b) If a threaded tap is being inserted, the requirements of § 192.151 (b) and (c) must also be met.

§ 192.371 Service lines: steel.

Each steel service line to be operated at less than 100 p.s.i.g. must be designed for a minimum of 100 p.s.i.g.

§ 192.373 Service lines: cast iron and ductile iron.

(a) Cast or ductile iron pipe less than 6 inches in diameter may not be installed for service lines.

(b) If cast iron pipe or ductile iron pipe is installed for use as a service line, the part of the service line which extends through the building wall must be of steel pipe.

(c) A cast iron or ductile iron service line may not be installed in unstable soil or under a building.

§ 192.375 Service lines: plastic.

(a) Each plastic service line outside a building must be installed below ground level, except that it may terminate above ground and outside the building, if—

- (1) The above ground part of the plastic service line is protected against deterioration and external damage; and
- (2) The plastic service line is not used to support external loads.

(b) Each plastic service line inside a building must be protected against external damage.

§ 192.377 Service lines: copper.

Each copper service line installed within a building must be protected against external damage.

Subpart I—[Reserved]

Subpart J—Test Requirements

§ 192.501 Scope.

This subpart prescribes minimum leak-test and strength-test requirements for pipelines.

§ 192.503 General requirements.

(a) No person may operate a new segment of pipeline, or return to service a



ment of pipeline that has been replaced or replaced, until—

- (1) It has been tested in accordance with this subpart to substantiate the proposed maximum allowable operating pressure; and
- (2) Each potentially hazardous leak has been located and eliminated.

(b) The test medium must be liquid, air, natural gas, or inert gas that is—

- (1) Compatible with the material of which the pipeline is constructed;
- (2) Relatively free of sedimentary materials; and
- (3) Except for natural gas, nonflammable.

(c) Except as provided in § 192.505 (a), if air, natural gas, or inert gas is used as the test medium, the following maximum hoop stress limitations apply:

Class location	Maximum hoop stress allowed as percentage of SMYS	
	Natural gas	Air or inert gas
1.....	50	50
2.....	30	75
3.....	30	50
.....	30	40

(d) Each weld used to tie-in a test segment of pipeline is excepted from the test requirements of this subpart.

**§ 192.505 Strength test requirements for steel pipeline to operate at a hoop stress of 30 percent or more of SMYS.**

(a) Except for service lines, each segment of a steel pipeline that is to operate at a hoop stress of 30 percent or more of SMYS must be strength tested in accordance with this section to substantiate the proposed maximum allowable operating pressure. In addition, in a Class 1 or Class 2 location, if there is a building intended for human occupancy within 300 feet of a pipeline, a hydrostatic test must be conducted to a test pressure of at least 125 percent of maximum operating pressure on that segment of the pipeline within 300 feet of such a building, but in no event may the test section be less than 600 feet unless the length of the newly installed or relocated pipe is less than 600 feet. However, if the buildings are evacuated while the hoop stress exceeds 50 percent of SMYS, air or inert gas may be used as the test medium.

(b) In a Class 1 or Class 2 location, each compressor station, regulator station, and measuring station, must be tested to at least Class 3 location test requirements.

(c) Except as provided in paragraph (e) of this section, the strength test must be conducted by maintaining the pressure at or above the test pressure for at least 8 hours.

(d) If a component other than pipe is the only item being replaced or added to a pipeline, a strength test after installation is not required, if the manufacturer of the component certifies that—

- (1) The component was tested to at least the pressure required for the pipeline to which it is being added; or
- (2) The component was manufactured under a quality control system that en-

sure that each item manufactured is at least equal in strength to a prototype and that the prototype was tested to at least the pressure required for the pipeline to which it is being added.

(e) For fabricated units and short sections of pipe, for which a post installation test is impractical, a preinstallation strength test must be conducted by maintaining the pressure at or above the test pressure for at least 4 hours.

**§ 192.507 Test requirements for pipelines to operate at a hoop stress less than 30 percent of SMYS and above 100 p.s.i.g.**

Except for service lines and plastic pipelines, each segment of a pipeline that is to be operated at a hoop stress less than 30 percent of SMYS and above 100 p.s.i.g. must be tested in accordance with the following:

(a) The pipeline operator must use a test procedure that will ensure discovery of all potentially hazardous leaks in the segment being tested.

(b) If, during the test, the segment is to be stressed to 20 percent or more of SMYS and natural gas, inert gas, or air is the test medium—

(1) A leak test must be made at a pressure between 100 p.s.i.g. and the pressure required to produce a hoop stress of 20 percent of SMYS; or

(2) The line must be walked to check for leaks while the hoop stress is held at approximately 20 percent of SMYS.

(c) The pressure must be maintained at or above the test pressure for at least 1 hour.

**§ 192.509 Test requirements for pipelines to operate at or below 100 p.s.i.g.**

Except for service lines and plastic pipelines, each segment of a pipeline that is to be operated at or below 100 p.s.i.g. must be leak tested in accordance with the following:

(a) The test procedure used must ensure discovery of all potentially hazardous leaks in the segment being tested.

(b) Each main that is to be operated at less than 1 p.s.i.g. must be tested to at least 10 p.s.i.g. and each main to be operated at or above 1 p.s.i.g. must be tested to at least 90 p.s.i.g.

**§ 192.511 Test requirements for service lines.**

(a) Each segment of a service line (other than plastic) must be leak tested in accordance with this section before being placed in service. If feasible, the service-line connection to the main must be included in the test; if not feasible, it must be given a leakage test at the operating pressure when placed in service.

(b) Each segment of a service line (other than plastic) intended to be operated at a pressure of at least 1 p.s.i.g. but not more than 40 p.s.i.g. must be given a leak test at a pressure of not less than 50 p.s.i.g.

(c) Each segment of a service line (other than plastic) intended to be operated at pressures of more than 40 p.s.i.g. must be tested to at least 90

p.s.i.g., except that each segment of a steel service line stressed to 20 percent or more of SMYS must be tested in accordance with § 192.507 of this subpart.

**§ 192.513 Test requirements for plastic pipelines.**

(a) Each segment of a plastic pipeline must be tested in accordance with this section.

(b) The test procedure must insure discovery of all potentially hazardous leaks in the segment being tested.

(c) The test pressure must be at least 150 percent of the maximum operating pressure or 50 p.s.i.g., whichever is greater. However, the maximum test pressure may not be more than three times the design pressure of the pipe.

(d) The temperature of thermoplastic material must not be more than 100° F. during the test.

**§ 192.515 Environmental protection and safety requirements.**

(a) In conducting tests under this subpart, each operator shall insure that every reasonable precaution is taken to protect its employees and the general public during the testing. Whenever the hoop stress of the segment of the pipeline being tested will exceed 50 percent of SMYS, the operator shall take all practicable steps to keep persons not working on the testing operation outside of the testing area until the pressure is reduced to or below the proposed maximum allowable operating pressure.

(b) The operator shall insure that the test medium is disposed of in a manner that will minimize damage to the environment.

**§ 192.517 Records.**

Each operator shall make, and retain for the useful life of the pipeline, a record of each test performed under §§ 192.505 and 192.507. The record must contain at least the following information:

- (a) The operator's name, the name of the operator's employee responsible for making the test, and the name of any test company used.
- (b) Test medium used.
- (c) Test pressure.
- (d) Test duration.
- (e) Pressure recording charts, or other record of pressure readings.
- (f) Elevation variations, whenever significant for the particular test.
- (g) Leaks and failures noted and their disposition.

**Subpart K—Upgrading**

**§ 192.551 Scope.**

This subpart prescribes minimum requirements for increasing maximum allowable operating pressures (upgrading) for pipelines.

**§ 192.553 General requirements.**

(a) **Pressure increases.** Whenever the requirements of this subpart require that an increase in operating pressure be made in increments, the pressure must be increased gradually, at a rate that can be controlled, and in accordance with the following:

(1) At the end of each incremental increase, the pressure must be held constant while the entire segment of pipeline that is affected is checked for leaks.

(2) Each leak detected must be repaired before a further pressure increase is made, except that a leak determined not to be potentially hazardous need not be repaired, if it is monitored during the pressure increase and it does not become potentially hazardous.

(b) *Records.* Each operator who uprates a segment of pipeline shall retain for the life of the segment a record of each investigation required by this subpart, of all work performed, and of each pressure test conducted, in connection with the uprating.

(c) *Written plan.* Each operator who uprates a segment of pipeline shall establish a written procedure that will ensure that each applicable requirement of this subpart is complied with.

(d) *Limitation on increase in maximum allowable operating pressure.* Except as provided in § 192.555(c), a new maximum allowable operating pressure established under this subpart may not exceed the maximum that would be allowed under this part for a new segment of pipeline constructed of the same materials in the same location.

§ 192.555 Uprating to a pressure that will produce a hoop stress of 30 percent or more of SMYS in steel pipelines.

(a) Unless the requirements of this section have been met, no person may subject any segment of a steel pipeline to an operating pressure that will produce a hoop stress of 30 percent or more of SMYS and that is above the established maximum allowable operating pressure.

(b) Before increasing operating pressure above the previously established maximum allowable operating pressure the operator shall—

(1) Review the design, operating, and maintenance history and previous testing of the segment of pipeline and determine whether the proposed increase is safe and consistent with the requirements of this part; and

(2) Make any repairs, replacements, or alterations in the segment of pipeline that are necessary for safe operation at the increased pressure.

(c) After complying with paragraph (b) of this section, an operator may increase the maximum allowable operating pressure of a segment of pipeline constructed before September 12, 1970, to the highest pressure that is permitted under § 192.610, using as test pressure the highest pressure to which the segment of pipeline was previously subjected (either in a strength test or in actual operation).

(d) After complying with paragraph (b) of this section, an operator that does not qualify under paragraph (c) of this section may increase the previously established maximum allowable operating pressure if at least one of the following requirements is met:

(1) The segment of pipeline is successfully tested in accordance with the requirements of this part for a new line

of the same material in the same location.

(2) An increased maximum allowable operating pressure may be established for a segment of pipeline in a Class I location if the line has not previously been tested, and if—

(i) It is impractical to test it in accordance with the requirements of this part;

(ii) The new maximum operating pressure does not exceed 80 percent of that allowed for a new line of the same design in the same location; and

(iii) The operator determines that the new maximum allowable operating pressure is consistent with the condition of the segment of pipeline and the design requirements of this part.

(e) Where a segment of pipeline is uprated in accordance with paragraph (c) or (d) (2) of this section, the increase in pressure must be made in increments that are equal to—

(1) 10 percent of the pressure before the uprating; or

(2) 25 percent of the total pressure increase,

whichever produces the fewer number of increments.

§ 192.557 Uprating: steel pipelines to a pressure that will produce a hoop stress less than 30 percent of SMYS; plastic, cast iron, and ductile iron pipelines.

(a) Unless the requirements of this section have been met, no person may subject—

(1) A segment of steel pipeline to an operating pressure that will produce a hoop stress less than 30 percent of SMYS and that is above the previously established maximum allowable operating pressure; or

(2) A plastic, cast iron, or ductile iron pipeline segment to an operating pressure that is above the previously established maximum allowable operating pressure.

(b) Before increasing operating pressure above the previously established maximum allowable operating pressure, the operator shall—

(1) Review the design, operating, and maintenance history of the segment of pipeline;

(2) Make a leakage survey (if it has been more than 1 year since the last survey) and repair any leaks that are found, except that a leak determined not to be potentially hazardous need not be repaired, if it is monitored during the pressure increase and it does not become potentially hazardous;

(3) Make any repairs, replacements, or alterations in the segment of pipeline that are necessary for safe operation at the increased pressure;

(4) Reinforce or anchor offsets, bends and dead ends in pipe joined by compression couplings or bell and spigot joints to prevent failure of the pipe joint, if the offset, bend, or dead end is exposed in an excavation;

(5) Isolate the segment of pipeline in which the pressure is to be increased from any adjacent segment that will

continue to be operated at a lower pressure; and

(6) If the pressure in mains or service lines, or both, is to be higher than the pressure delivered to the customer, install a service regulator on each service line and test each regulator to determine that it is functioning. Pressure may be increased as necessary to test each regulator, after a regulator has been installed on each pipeline subject to the increased pressure.

(c) After complying with paragraph (b) of this section, the increase in maximum allowable operating pressure must be made in increments that are equal to 10 p.s.i.g. or 25 percent of the total pressure increase, whichever produces the fewer number of increments. Whenever the requirements of paragraph (b) (6) of this section apply, there must be at least two approximately equal incremental increases.

(d) If records for cast iron or ductile iron pipeline facilities are not complete enough to ascertain compliance with § 192.117 or § 192.119, as applicable, the following procedures must be followed:

(1) If the original laying conditions cannot be ascertained, the operator shall assume, when applying the design formulas of ANSI A21.1, that cast iron pipe was supported on blocks with tamped backfill and, when applying the design formulas of ANSI A21.50, that ductile iron pipe was laid without blocks with tamped backfill.

(2) Unless the actual maximum cover depth is known, the operator shall measure the actual cover in at least three places where the cover is most likely to be greatest and shall use the greatest cover measured.

(3) Unless the actual nominal wall thickness is known, the operator shall determine the wall thickness by cutting and measuring coupons from at least three separate pipe lengths. The coupons must be cut from pipe lengths in areas where the cover depth is most likely to be the greatest. The average of all measurements taken must be increased by the allowance indicated in the following table:

Pipe size (inches)	Allowance (inches)		
	Cast iron pipe		Ductile iron pipe
	Pit cast pipe	Centrifugally cast pipe	
3-4	0.075	0.063	0.045
10-12	0.04	0.07	0.07
11-21	0.04	0.04	0.075
20-30	0.04	0.04	0.075
48	0.02	0.02	0.05
54-72	0.02		

NOTE.—The nominal wall thickness of the cast iron is the standard thickness listed in table 17 or table 11, as applicable, of ANSI A21.1 nearest the value obtained under this subparagraph. The nominal wall thickness of ductile iron pipe is the standard thickness listed in table 4 of ANSI A21.50 nearest the value obtained under this subparagraph.

(4) For cast iron pipe, unless the pipe manufacturing process is known, the operator shall assume that the pipe is pit case pipe with a bursting tensile strength of 11,000 p.s.i. and a modulus of rupture of 31,000 p.s.i.

Subpart L—Operations

§ 192.601 Scope.

This subpart prescribes minimum requirements for the operation of pipeline facilities.

§ 192.602 General provisions.

(a) No person may operate a segment of pipeline unless it is operated in accordance with this subpart.

(b) Each operator shall establish a written operating and maintenance plan meeting the requirements of this part and keep records necessary to administer the plan.

§ 192.603 Elements of operating and maintenance plan.

Each operator shall include the following in its operating and maintenance plan:

(a) Instructions for employees covering operating and maintenance procedures during normal operations and repairs.

(b) Items required to be included by the provisions of Subpart M of this part.

(c) Specific programs relating to facilities presenting the greatest hazard to public safety either in an emergency or because of extraordinary construction or maintenance requirements.

(d) A program for conversion procedures, if conversion of a low-pressure distribution system to a higher pressure is contemplated.

(e) Provision for periodic inspections to ensure that operating pressures are appropriate for the class location.

§ 192.607 Initial determination of class location and confirmation or establishment of maximum allowable operating pressure.

(a) Before April 15, 1971, each operator shall complete a study to determine for each segment of pipeline with a maximum allowable operating pressure that will produce a hoop stress that is more than 40 percent of SMYS—

(1) The present class location of all such pipeline in its system; and

(2) Whether the hoop stress corresponding to the maximum allowable operating pressure for each segment of pipeline is commensurate with the present class location.

(b) If an operator finds that the hoop stress corresponding to the established maximum allowable operating pressure of a segment of pipeline is not commensurate with the present class location and the segment is in satisfactory physical condition, the operator shall confirm or revise the maximum allowable operating pressure of the affected segment of pipeline as required by § 192.611 in accordance with the following schedule:

(1) Before January 1, 1972, the operator shall complete the confirmation or revision of at least 50 percent of the affected pipelines.

(2) Before January 1, 1973, the operator shall complete the confirmation or revision of the remainder of the affected pipelines.

§ 192.609 Change in class location: required study.

Whenever an increase in population density indicates a change in class location for a segment of an existing steel pipeline operating at hoop stress that is more than 40 percent of SMYS, or indicates that the hoop stress corresponding to the established maximum allowable operating pressure for a segment of existing pipeline is not commensurate with the present class location, the operator shall immediately make a study to determine—

(a) The present class location for the segment involved.

(b) The design, construction, and testing procedures followed in the original construction, and a comparison of these procedures with those required for the present class location by the applicable provisions of this part.

(c) The physical condition of the segment to the extent it can be ascertained from available records;

(d) The operating and maintenance history of the segment;

(e) The maximum actual operating pressure and the corresponding operating hoop stress, taking pressure gradient into account, for the segment of pipeline involved; and

(f) The actual area affected by the population density increase, and physical barriers or other factors which may limit further expansion of the more densely populated area.

§ 192.611 Change in class location: confirmation or revision of maximum allowable operating pressure.

If the hoop stress corresponding to the established maximum allowable operating pressure of a segment of pipeline is not commensurate with the present class location, and the segment is in satisfactory physical condition, the maximum allowable operating pressure of that segment of pipeline must be confirmed or revised as follows:

(a) If the segment involved has been previously tested in place to at least 90 percent of its SMYS for a period of not less than 8 hours, the maximum allowable operating pressure must be confirmed or reduced so that the corresponding hoop stress will not exceed 72 percent of SMYS of the pipe in Class 2 locations, 60 percent of SMYS in Class 3 locations, or 50 percent of SMYS in Class 4 locations.

(b) If the segment involved has not been previously tested in place as described in paragraph (a) of this section, the maximum allowable operating pressure must be reduced so that the corresponding hoop stress is not more than that allowed by this part for new segments of pipelines in the existing class location.

(c) If the segment of pipeline involved has not been qualified for operation under paragraph (a) or (b) of this section, it must be tested in accordance with the applicable requirements of Subpart J of this part, and its maximum allowable operating pressure must then be

established so as to be equal to or less than the following:

(1) The maximum allowable operating pressure after the requalification test is 0.8 times the test pressure for Class 2 locations, 0.697 times the test pressure for Class 3 locations, and 0.593 times the test pressure for Class 4 locations.

(2) The maximum allowable operating pressure confirmed or revised in accordance with this section, may not exceed the maximum allowable operating pressure established before the confirmation or revision.

(3) The corresponding hoop stress may not exceed 72 percent of the SMYS of the pipe in Class 2 locations, 60 percent of SMYS in Class 3 locations, or 50 percent of the SMYS in Class 4 locations.

(d) Confirmation or revision of the maximum allowable operating pressure of a segment of pipeline in accordance with this section does not preclude the application of §§ 192.553 and 192.555.

(e) After completing the study required by § 192.609, the operator shall confirm or revise the maximum allowable operating pressure in each segment of pipeline in accordance with this section within 1 year of the date when a change in class location has occurred.

§ 192.613 Continuing surveillance.

(a) Each operator shall have a procedure for continuing surveillance of its facilities to determine and take appropriate action concerning changes in class location, failures, leakage history, corrosion, substantial changes in cathodic protection requirements, and other unusual operating and maintenance conditions.

(b) If a segment of pipeline is determined to be in unsatisfactory condition but no immediate hazard exists, the operator shall initiate a program to recondition or phase out the segment involved, or, if the segment cannot be reconditioned or phased out, reduce the maximum allowable operating pressure in accordance with § 192.619 (a) and (b).

§ 192.615 Emergency plans.

Each operator shall—

(a) Have written emergency procedures;

(b) Acquaint appropriate operating and maintenance employees with the procedures;

(c) Establish liaison with appropriate public officials, including fire and police officials, with respect to the procedures; and

(d) Establish an educational program to enable customers and the general public to recognize and report a gas emergency to the appropriate officials.

§ 192.617 Investigation of failures.

Each operator shall establish procedures for analyzing accidents and failures, including the selection of samples of the failed facility or equipment for laboratory examination, where appropriate, for the purpose of determining the causes of the failure and minimizing the possibility of a recurrence.

**§ 192.619 Maximum allowable operating pressure: steel or plastic pipelines.**

(a) Except as provided in paragraph (c) of this section, no person may operate a segment of steel or plastic pipeline at a pressure that exceeds the lowest of the following:

(1) The design pressure of the weakest element in the segment, determined in accordance with Subparts C and D of this part.

(2) The pressure obtained by dividing the pressure to which the segment was tested after construction as follows:

(i) For plastic pipe in all locations, the test pressure is divided by a factor of 1.5.

(ii) For steel pipe, the test pressure is divided by a factor determined in accordance with the following table:

Class location	Factor	
	Segment installed before (Nov. 12, 1970)	Segment installed after (Nov. 11, 1970)
1.....	L1	L1
2.....	L.25	L.25
3.....	L.4	L.5
4.....	L.4	L.5

(3) The highest actual operating pressure to which the segment was subjected during the 5 years preceding July 1, 1970, unless the segment was tested in accordance with paragraph (a)(2) of this section after July 1, 1970, or the segment was updated in accordance with Subpart K of this part.

(4) For furnace butt welded steel pipe, a pressure equal to 80 percent of the mill test pressure to which the pipe was subjected.

(5) For steel pipe other than furnace butt welded pipe, a pressure equal to 85 percent of the highest test pressure to which the pipe has been subjected, whether by mill test or by the post installation test.

(6) The pressure determined by the operator to be the maximum safe pressure after considering the history of the segment, particularly known corrosion and the actual operating pressure.

(b) No person may operate a segment to which paragraph (a)(5) of this section is applicable, unless over-pressure protective devices are installed on the segment in a manner that will prevent the maximum allowable operating pressure from being exceeded, in accordance with § 192.195.

(c) Notwithstanding the other requirements of this section, an operator may operate a segment of pipeline found to be in satisfactory condition, considering its operating and maintenance history, at the highest actual operating pressure to which the segment was subjected during the 5 years preceding July 1, 1970, subject to the requirements of § 192.811.

**§ 192.621 Maximum allowable operating pressure: high-pressure distribution systems.**

(a) No person may operate a segment of a high pressure distribution system at

a pressure that exceeds the lowest of the following pressures, as applicable:

(1) The design pressure of the weakest element in the segment, determined in accordance with Subparts C and D of this part.

(2) 60 p.s.i.g., for a segment of a distribution system otherwise designed to operate at over 60 p.s.i.g., unless the service lines in the segment are equipped with service regulators or other pressure limiting devices in series that meet the requirements of § 192.197(c).

(3) 25 p.s.i.g. in segments of cast iron pipe in which there are unreinforced bell and spigot joints.

(4) The pressure limits to which a joint could be subjected without the possibility of its parting.

(5) The pressure determined by the operator to be the maximum safe pressure after considering the history of the segment, particularly known corrosion and the actual operating pressures.

(b) No person may operate a segment of pipeline to which paragraph (a)(5) of this section applies, unless over-pressure protective devices are installed on the segment in a manner that will prevent the maximum allowable operating pressure from being exceeded, in accordance with § 192.195.

**§ 192.623 Maximum and minimum allowable operating pressure: low-pressure distribution systems.**

(a) No person may operate a low-pressure distribution system at a pressure high enough to make unsafe the operation of any connected and properly adjusted low-pressure gas burning equipment.

(b) No person may operate a low pressure distribution system at a pressure lower than the minimum pressure at which the safe and continuing operation of any connected and properly adjusted low-pressure gas burning equipment can be assured.

**§ 192.625 Odorization of gas.**

(a) Combustible gases in mains and service lines must be odorized as provided in this section.

(b) The intensity of the odor of combustible gases must be such as to be readily detectable at concentrations of one fifth of the lower explosive limit.

(c) In the concentrations in which it is used, the odorant in combustible gases must comply with the following:

(1) The odorant may not be deleterious to persons, materials, or pipe.

(2) The products of combustion from the odorant may not be toxic when breathed nor may they be corrosive or harmful to those materials to which the products of combustion will be exposed.

(d) The odorant may not be soluble in water to an extent greater than 2.5 parts to 100 parts by weight.

(e) Equipment for odorization must introduce the odorant without wide variations in the level of odorant.

(f) Each operator shall conduct periodic sampling of combustible gases to assure the proper concentration of odorant in accordance with this section.

**§ 192.627 Tapping pipelines at pressure.**

Each tap made on a pipeline under pressure must be performed by a crew qualified to make hot taps.

**§ 192.629 Purging of pipelines.**

(a) When a pipeline is being purged of air by use of gas, the gas must be released into one end of the line in a moderately rapid and continuous flow. If gas cannot be supplied in sufficient quantity to prevent the formation of a hazardous mixture of gas and air, a slug of inert gas must be released into the line before the gas.

(b) When a pipeline is being purged of gas by use of air, the air must be released into one end of the line in a moderately rapid and continuous flow. If air cannot be supplied in sufficient quantity to prevent the formation of a hazardous mixture of gas and air, a slug of inert gas must be released into the line before the air.

**Subpart M—Maintenance**

**§ 192.701 Scope.**

This subpart prescribes minimum requirements for maintenance of pipeline facilities.

**§ 192.703 General.**

(a) No person may operate a segment of pipeline, unless it is maintained in accordance with this subpart.

(b) Each segment of pipeline that becomes unsafe must be replaced, repaired, or removed from service.

(c) Hazardous leaks must be repaired promptly.

**§ 192.705 Transmission lines: patrolling.**

(a) Each operator shall have a patrol program to observe, at intervals not exceeding 1 year, surface conditions on and adjacent to the transmission line right-of-way for indications of leaks, construction activity, and other factors affecting safety and operation.

(b) The frequency of the patrol must be determined by the size of the line, the operating pressures, the class location, terrain, weather, and other relevant factors.

(c) Highway and railroad crossings must be patrolled more often and in greater detail than transmission lines in open country.

**§ 192.707 Transmission lines: markers.**

Each operator shall install signs or markers wherever necessary to identify the location of a transmission line in order to reduce the possibility of damage or interference.

**§ 192.709 Transmission lines: record-keeping.**

Each operator shall keep records covering each leak discovered, repair made, transmission line break, leakage survey, line patrol, and inspection, for as long as the segment of transmission line involved remains in service.

§ 192.711 Transmission lines: general requirements for repair procedures.

(a) Each operator shall take immediate and temporary measures to protect the public whenever—

(1) A leak, imperfection, or damage that impairs its serviceability is found in a segment of steel transmission line operating at or above 40 percent of the SMYS; and

(2) It is not feasible to make a permanent repair at the time of discovery. As soon as feasible, the operator shall make permanent repairs.

(b) Except as provided in § 192.717(c), no operator may use a welded patch as a means of repair.

§ 192.713 Transmission lines: permanent field repair of imperfections and damage.

Each imperfection or damage that impairs the serviceability of a segment of steel transmission line operating at or above 40 percent of SMYS must be repaired, as follows:

(a) If it is feasible to take the segment out of service, the imperfection or damage must be removed by cutting out a cylindrical piece of pipe and replacing it with pipe of similar or greater design strength.

(b) If it is not feasible to take the segment out of service, a full encirclement welded split sleeve of appropriate design must be applied over the imperfection or damage.

(c) If the segment is not taken out of service, the operating pressure must be reduced to a safe level during the repair operations.

§ 192.715 Transmission lines: permanent field repair of welds.

Each weld that is unacceptable under § 192.241(c) must be repaired as follows:

(a) If it is feasible to take the segment of transmission line out of service, the weld must be repaired in accordance with the applicable requirements of § 192.245.

(b) A weld may be repaired in accordance with § 192.245 while the segment of transmission line is in service if—

(1) The weld is not leaking;

(2) The pressure in the segment is reduced so that it does not produce a stress that is more than 30 percent of the SMYS of the pipe; and

(3) Grinding of the defective area can be limited so that at least 1/8-inch thickness in the pipe weld remains.

(c) A defective weld which cannot be repaired in accordance with paragraph (a) or (b) of this section must be repaired by installing a full encirclement welded split sleeve of appropriate design.

§ 192.717 Transmission lines: permanent field repair of leaks.

Each permanent field repair of a leak must be made as follows:

(a) If feasible, the segment of transmission line must be taken out of service and repaired by cutting out a cylindrical piece of pipe and replacing it with pipe of similar or greater design strength.

(b) If it is not feasible to take the segment of transmission line out of service,

it must be repaired by installing a full encirclement welded split sleeve of appropriate design.

(c) If the leak is due to a corrosion pit, the repair may be made by installing a properly designed bolt-on leak clamp; or, if the leak is due to a corrosion pit and on pipe of not more than 40,000 p.s.i. SMYS, the repair may be made by fillet welding over the pitted area a steel plate patch with rounded corners, of the same or greater thickness than the pipe, and not more than one-half the diameter of the pipe in size.

§ 192.719 Transmission lines: testing of repairs.

(a) Testing of replacement pipe. (1) If a segment of transmission line is repaired by cutting out the damaged portion of the pipe as a cylinder, the replacement pipe must be tested to the pressure required for a new line installed in the same location.

(2) The test required by subparagraph (1) of this paragraph may be made on the pipe before it is installed, but all field butt welds that are not strength tested must be tested after installation by nondestructive tests meeting the requirements of § 192.243.

(b) Testing of repairs made by welding. Each repair made by welding in accordance with §§ 192.713, 192.715, and 192.717 must be examined in accordance with § 192.241.

§ 192.721 Distribution systems: patrolling.

(a) The frequency of patrolling mains must be determined by the severity of the conditions which could cause failure or leakage, and the consequent hazards to public safety.

(b) Mains in places or on structures where anticipated physical movement or external loading could cause failure or leakage must be patrolled at intervals not exceeding 3 months.

§ 192.723 Distribution systems: leakage surveys and procedures.

(a) Each operator of a distribution system shall provide for periodic leakage surveys in its operating and maintenance plan.

(b) The type and scope of the leakage control program must be determined by the nature of the operations and the local conditions, but it must meet the following minimum requirements:

(1) A gas detector survey must be conducted in business districts, including tests of the atmosphere in gas, electric, telephone, sewer and water system manholes, at cracks in pavement and sidewalks, and at other locations providing an opportunity for finding gas leaks, at intervals not exceeding 1 year.

(2) Leakage surveys of the distribution system outside of the principal business areas must be made as frequently as necessary, but at intervals not exceeding 5 years.

§ 192.725 Test requirements for reticulating service lines.

(a) Except as provided in paragraph (b) of this section, each disconnected

service line must be tested in the same manner as a new service line, before being reinstalled.

(b) Each service line temporarily disconnected from the main must be tested from the point of disconnection to the service line valve in the same manner as a new service line, before reconnecting. However, if provisions are made to maintain continuous service, such as by installation of a bypass, any part of the original service line used to maintain continuous service need not be tested.

§ 192.727 Abandonment or inactivation of facilities.

Each operator shall provide for abandonment or inactivation of facilities in its operating and maintenance plan, including the following provisions:

(a) Each facility abandoned in place, or, except when undergoing maintenance, each line not subject to gas pressure, must be disconnected from all sources and supplies of gas, purged of gas, and the ends sealed; however, the line need not be purged when the volume of gas is so small that there is no potential hazard.

(b) If air is used for purging, the operator shall ensure that a combustible mixture is not present after purging.

(c) Each abandoned vault must be filled with a suitable compacted material.

§ 192.729 Compressor stations: procedures for gas compressor units.

Each operator shall establish starting, operating, and shutdown procedures for gas compressor units.

§ 192.731 Compressor stations: inspection and testing of relief devices.

(a) Except for rupture discs, each pressure relieving device in a compressor station must be inspected and tested in accordance with §§ 192.739 and 192.743, and must be inspected periodically to determine that it opens at the correct set pressure.

(b) Any defective or inadequate equipment found must be promptly repaired or replaced.

(c) Each remote control shutdown device must be inspected and tested, at intervals not to exceed 1 year, to determine that it functions properly.

§ 192.733 Compressor stations: isolation of equipment for maintenance or alterations.

Each operator shall establish procedures for maintaining compressor stations, including provisions for isolating units or sections of pipe and for purging before returning to service.

§ 192.735 Compressor stations: storage of combustible materials.

(a) Flammable or combustible materials in quantities beyond those required for everyday use, or other than those normally used in compressor buildings, must be stored a safe distance from the compressor building.

(b) Aboveground oil or gasoline storage tanks must be protected in accordance with National Fire Protection Association Standard No. 30.

**§ 192.737 Pipe-type and bottle-type holders: plan for inspection and testing.**

Each operator having a pipe-type or bottle-type holder shall establish a plan for the systematic, routine inspection and testing of these facilities, including the following:

(a) Provision must be made for detecting external corrosion before the strength of the container has been impaired.

(b) Periodic sampling and testing of gas in storage must be made to determine the dew point of vapors contained in the stored gas, that if condensed, might cause internal corrosion or interfere with the safe operation of the storage plant.

(c) The pressure control and pressure limiting equipment must be inspected and tested periodically to determine that it is in a safe operating condition and has adequate capacity.

**§ 192.739 Pressure limiting and regulating stations: inspection and testing.**

Each pressure limiting station, relief device (except rupture discs), and pressure regulating station and its equipment must be subjected, at intervals not exceeding 1 year, to inspections and tests to determine that it is—

(a) In good mechanical condition;

(b) Adequate from the standpoint of capacity and reliability of operation for the service in which it is employed;

(c) Set to function at the correct pressure; and

(d) Properly installed and protected from dirt, liquids, or other conditions that might prevent proper operation.

**§ 192.741 Pressure limiting and regulating stations: telemetering or recording gages.**

(a) Each distribution system supplied by more than one district pressure regulating station must be equipped with telemetering or recording pressure gages to indicate the gas pressure in the district.

(b) On distribution systems supplied by a single district pressure regulating station, the operator shall determine the necessity of installing telemetering or recording gages in the district, taking into consideration the number of customers supplied, the operating pressures, the capacity of the installation, and other operating conditions.

(c) If there are indications of abnormally high- or low-pressure, the regulator and the auxiliary equipment must be inspected and the necessary measures employed to correct any unsatisfactory operating conditions.

**§ 192.743 Pressure limiting and regulating stations: testing of relief devices.**

(a) If feasible, pressure relief devices (except rupture discs) must be tested in place, at intervals not exceeding 1 year, to determine that they have enough capacity to limit the pressure on the facilities to which they are connected to the desired maximum pressure.

(b) If a test is not feasible, review and calculation of the required capacity of the relieving device at each station must be made, at intervals not ex-

ceeding one year, and these required capacities compared with the rated or experimentally determined relieving capacity of the device for the operating conditions under which it works.

(c) If the relieving device is of insufficient capacity, a new or additional device must be installed to provide the additional capacity required.

**§ 192.745 Valve maintenance: transmission lines.**

Each transmission line valve that might be required during any emergency must be inspected and partially operated, at intervals not exceeding 1 year.

**§ 192.747 Valve maintenance: distribution systems.**

Each valve, the use of which may be necessary for the safe operation of a distribution system, must be checked and serviced, at intervals not exceeding 1 year.

**§ 192.749 Vault maintenance.**

(a) Each vault housing pressure regulating and pressure limiting equipment, and having a volumetric internal content of 200 cubic feet or more, must be inspected, at intervals not exceeding 1 year, to determine that it is in good physical condition and adequately ventilated.

(b) If gas is found in the vault, the equipment in the vault must be inspected for leaks, and any leaks found must be repaired.

(c) The ventilating equipment must also be inspected to determine that it is functioning properly.

(d) Each vault cover must be inspected to assure that it does not present a hazard to public safety.

**§ 192.751 Prevention of accidental ignition.**

Each operator shall take steps to minimize the danger of accidental ignition of gas in any structure or area where the presence of gas constitutes a hazard of fire or explosion, including the following:

(a) When a hazardous amount of gas is being vented into open air, each potential source of ignition must be removed from the area and a fire extinguisher must be provided.

(b) Gas or electric welding or cutting may not be performed on pipe or on pipe components that contain a combustible mixture of gas and air in the area of work.

(c) Post warning signs, where appropriate.

**§ 192.753 Caulked bell and spigot joints.**

(a) Each cast iron caulked bell and spigot joint that is subject to pressures of 25 p.s.i.g. or more must be sealed with mechanical leak clamps.

(b) Each cast iron caulked bell and spigot joint that is subject to pressures of less than 25 p.s.i.g. and is exposed for any reason, must be sealed by a means other than caulking.

**APPENDIX A—INCORPORATED BY REFERENCE**

I. List of organizations and addresses.  
 A. American National Standards Institute (ANSI), 1120 Broadway, New York, N.Y. 10018 (formerly the United States of Amer-

ican Standards Institute (USASI)). All current standards issued by USASI and ASA have been redesignated as American National Standards and continued in effect.

B. American Petroleum Institute (API), 1271 Avenue of the Americas, New York, N.Y. 10020 or 200 Corrugated Tower Building, Dallas, Tex. 75201.

C. The American Society of Mechanical Engineers (ASME) United Engineering Center, 345 East 47th Street, New York, N.Y. 10017.

D. American Society for Testing and Materials (ASTM), 1916 Race Street, Philadelphia, Pa. 19103.

E. Manufacturers Standardization Society of the Valve and Fittings Industry (MSV), 1815 North Fort Myer Drive, Room 913, Arlington, Va. 22209.

F. National Fire Protection Association (NFPA), 60 Batterymarch Street, Boston, Mass. 02110.

**II. Documents incorporated by reference.**

A. American Petroleum Institute:

1. API Standard 5L "API Specification for Line Pipe" (1973 edition).

2. API Standard 5LS "API Specification for Spiral-Weld Line Pipe" (1973 edition).

3. API Standard 5LX "API Specification for High-Tensile Line Pipe" (1970 edition).

4. API Recommended Practice 5LX entitled "API Recommended Practice for Railroad Transportation of Line Pipe" (1957 edition).

5. API Standard 5A "API Specification for Casing, Tubing, and Drill Pipe" (1963 edition).

6. API Standard 5D "Specification for Pipeline Valves" (1963 edition).

7. API Standard 116 "Standard for Welding Pipe Line and Related Facilities" (1968 edition).

B. The American Society for Testing and Materials:

1. ASTM Specification A53 "Standard Specification for Welded and Seamless Steel Pipe" (A53-69).

2. ASTM Specification A72 "Standard Specification for Wrought-Iron Pipe" (A72-68).

3. ASTM Specification A105 "Standard Specification for Seamless Carbon Steel Pipe for High-Temperature Service" (A105-68).

4. ASTM Specification A134 "Standard Specification for Electric-Fusion (ARC)-Welded Steel Pipe, Sizes 16 in. and Over" (A134-68).

5. ASTM Specification A135 "Standard Specification for Electric-Resistance-Welded Steel Pipe" (A135-69).

6. ASTM Specification A139 "Standard Specification for Electric-Fusion (ARC)-Welded Steel Pipe (Sizes 4 in. and Over)" (A139-69).

7. ASTM Specification A155 "Standard Specification for Electric-Fusion-Welded Steel Pipe for High-Pressure Service" (A155-63).

7a. ASTM Specification 211 "Standard Specification for Spiral Welded Steel or Iron Pipe" (A211-52).

8. ASTM Specification A333 "Standard Specification for Seamless and Welded Steel Pipe for Low-Temperature Service" (A333-67).

9. ASTM Specification A377 "Standard Specification for Cast Iron and Ductile Iron Pressure Pipe" (A377-65).

10. ASTM Specification A381 "Standard Specification for Metal-Arc-Welded Steel Pipe for High-Pressure Transmission Service" (A381-55).

10a. ASTM Specification A550 "Standard Specification for Electric-Resistance Welded Coiled Steel Tubing for Gas and Fuel Oil Lines" (A550-53).

11. ASTM Specification B12 "Standard Specification for Seamless Copper Pipe, Standard Sizes" (B12-53).

12. ASTM Specification B33 "Standard Specification for Seamless Copper Tubing, Bright Annealed" (B33-63).

13. ASTM Specification B75 "Standard Specification for Seamless Copper Tube" (75-69).
14. ASTM Specification B33 "Standard Specification for Seamless Copper Water Tube" (B33-66).
15. ASTM Specification B231 "Standard Specification for General Requirements for Wrought Seamless Copper and Copper-Alloy Tube" (B231-63).
16. ASTM Specification D2513 "Standard Specification for Thermoplastic Gas Pressure Pipe, Tubing, and Fittings" (D2513-68).
17. ASTM Specification D2517 "Standard Specification for Reinforced Thermosetting Plastic Gas Pressure Piping and Fittings" (D2517-67).
18. ASTM Specification A272 "Standard Specification for Carbon and Alloy Steel Forgings for Pressure Vessel Shells" (A272-67).
- C. The American National Standards Institute, Inc.:
1. ANSI A21.1 "Thickness Design of Cast-Iron Pipe" (A21.1-1977).
  2. ANSI A21.3 "Specifications for Cast Iron Pipe and Fittings" (A21.3-1953).
  3. ANSI A21.7 "Cast-Iron Pipe Centrifugally Cast in Metal Molds for Gas" (A21.7-1952).
  4. ANSI A21.9 is titled "Cast-Iron Pipe Centrifugally Cast in Sand-Lined Molds for Gas" (A21.9-1957).
  5. ANSI A21.11 "Rubber Gasket Joints for Cast-Iron Pressure Pipe and Fittings" (A21.11-1994).
  6. ANSI 21.50 "Thickness Design of Ductile-Iron Pipe" (A21.50-1955).
  - 6a. ANSI A21.52 "Ductile-Iron Pipe, Centrifugally Cast in Metal Molds or Sand-Lined Molds for Gas" (A21.52-1955).
  7. ANSI B16.1 "Cast Iron Pipe Flanges and Flanged Fittings" (B16.1-1977).
  8. ANSI B16.5 "Steel Pipe Flanges and Flanged Fittings" (B16.5-1952).
  9. ANSI B16.24 "Wrought Steel Flanges and Flanged Fittings" (B16.24-1952).
  10. ANSI B16.10 "Wrought-Steel and Wrought-Iron Pipe" (B16.10-1953).
  11. ANSI C1 "National Electrical Code, 1958" (C1-1953).
- D. The American Society of Mechanical Engineers:
1. ASME Boiler and Pressure Vessel Code, section VIII is titled "Pressure Vessels, Division 1" (1953 edition).
  2. ASME Boiler and Pressure Vessel Code, section IX is titled "Welding Qualifications" (1958 edition).
- E. Manufacturer's Standardization Society of the Valve and Fittings Industry:
1. MSS SP-25 "Standard Marking System for Valves, Fittings, Flanges, and Unions" (1964 edition).
  2. MSS SP-44 "Steel Pipe Line Flanges" (1955 edition).
  3. MSS SP-32 "Cast Iron Pipe Line Valves" (1957 edition).
- F. National Fire Protection Association:
1. NFPA Standard 30 "Flammable and Combustible Liquids Code" (1963 edition).
  2. NFPA Standard 53 "Storage and Handling, Liquefied Petroleum Gases" (1960 edition).
  3. NFPA Standard 55 "LP Gases at Utility Gas Plants" (1963 edition).

## APPENDIX D—QUALIFICATION OF PIPE

## I. Listed Pipe Specifications.

- API 5 L—Steel and iron pipe (1970).
- API 5 LS—Steel pipe (1970).
- API 5 LX—Steel pipe (1970).
- ASTM A 51—Steel pipe (1953).
- ASTM A 106—Steel pipe (1953).
- ASTM A 131—Steel pipe (1953).
- ASTM A 133—Steel pipe (1953).
- ASTM A 139—Steel pipe (1953).
- ASTM A 153—Steel pipe (1953).
- ASTM A 211—Steel and iron pipe (1953).
- ASTM A 333—Steel pipe (1957).
- ASTM A 377—Cast iron pipe (1955).
- ASTM A 381—Steel pipe (1953).
- ASTM A 390—Steel tubing (1953).
- ANSI A 21.3—Cast iron pipe (1953).
- ANSI A 21.7—Cast iron pipe (1953).
- ANSI A 21.9—Cast iron pipe (1953).
- ANSI A 21.52—Ductile iron pipe (1955).
- ASTM A 72—Wrought iron pipe (1958).
- ASTM B 42—Copper pipe (1955).
- ASTM B 63—Copper tubing (1959).
- ASTM B 75—Copper tubing (1957).
- ASTM B 38—Copper tubing (1959).
- ASTM B 251—Copper pipe and tubing (1953).
- ASTM D 2513—Thermoplastic pipe and tubing (1958).
- ASTM D 2517—Thermosetting plastic pipe and tubing (1957).
- II. Steel pipe of unknown or unlabeled specification.

A. *Bending Properties.* For pipe 2 inches or less in diameter, a length of pipe must be cold bent through at least 90 degrees around a cylindrical mandrel that has a diameter 12 times the diameter of the pipe, without developing cracks at any portion and without opening the longitudinal weld.

For pipe more than 2 inches in diameter, the pipe must meet the requirements of the denting tests set forth in ASTM A53, except that the number of tests must be at least equal to the minimum required in paragraph II-D of this appendix to determine yield strength.

B. *Weldability.* A girth weld must be made in the pipe by a welder who is qualified under Subpart E of this part. The weld must be made under the most severe conditions under which welding will be allowed in the field and by means of the same procedure that will be used in the field. On pipe more than 4 inches in diameter, at least one test weld must be made for each 100 lengths of pipe. On pipe 4 inches or less in diameter, at least one test weld must be made for each 400 lengths of pipe. The weld must be tested in accordance with API Standard 1104. If the requirements of API Standard 1104 cannot be met, weldability may be established by making chemical tests for carbon and manganese, and proceeding in accordance with section IX of the ASME Boiler and Pressure Vessel Code. The same number of chemical tests must be made as are required for testing a girth weld.

C. *Inspection.* The pipe must be clean enough to permit adequate inspection. It must be visually inspected to ensure that it is reasonably round and straight and there are no defects which might impair the strength or uniformity of the pipe.

D. *Tensile Properties.* If the tensile properties of the pipe are not known, the minimum yield strength may be taken as 24,000

p.s.i.g. or less, or the tensile properties may be established by performing tensile tests as set forth in API Standard 5LX. All test specimens shall be selected at random and the following number of tests must be performed:

NUMBER OF TENSILE TESTS—ALL SIZES	
10 lengths or less....	1 set of tests for each length.
11 to 100 lengths....	1 set of tests for each 5 lengths, but not less than 10 tests.
Over 100 lengths....	1 set of tests for each 10 lengths, but not less than 20 tests.

If the yield-tensile ratio, based on the properties determined by these tests, exceeds 0.55, the pipe may be used only as provided in § 192.55(c).

## APPENDIX C—QUALIFICATION FOR WELDERS OF LOW STRESS LEVEL PIPE

I. *Basic test.* The test is made on pipe 12 inches or less in diameter. The test weld must be made with the pipe in a horizontal fixed position so that the test weld includes at least one section of overhead position welding. The beveling, root opening, and other details must conform to the specifications of the procedure under which the welder is being qualified. Upon completion, the test weld is cut into four coupons and subjected to a root bend test. If, as a result of this test, two or more of the four coupons develop a crack in the weld material, or between the weld material and base metal, that is more than 1/8-inch long in any direction, the weld is unacceptable. Cracks that occur on the corner of the specimen during testing are not considered.

II. *Additional tests for welders of service line connections to mains.* A service line connection fitting is welded to a pipe section with the same diameter as a typical main. The weld is made in the same position as it is made in the field. The weld is unacceptable if it shows a serious undercutting or if it has rolled edges. The weld is tested by attempting to break the fitting off the run pipe. The weld is unacceptable if it breaks and shows incomplete fusion, overlap, or poor penetration at the junction of the fitting and run pipe.

III. *Periodic tests for welders of small service lines.* Two samples of the welder's work, each about 8 inches long with the weld located approximately in the center, are cut from steel service line and tested as follows:

- (1) One sample is centered in a guided bend testing machine and bent to the contour of the die for a distance of 2 inches on each side of the weld. If the sample shows any breaks or cracks after removal from the bending machine, it is unacceptable.

- (2) The ends of the second sample are flattened and the entire joint subjected to a tensile strength test. If failure occurs adjacent to or in the weld metal, the weld is unacceptable. If a tensile strength testing machine is not available, this sample must also pass the bending test prescribed in subparagraph (1) of this paragraph.

[F.R. Dec. 70-10570; Filed, Aug. 16, 1970; 2:43 a.m.]

Docket No. 91-100-U

In the Matter of Adoption of Rules and Regulations to conform to the Natural Gas Pipeline Safety Act of 1968 (49 USCA 1671 et seq.)

- Order No. 1 - 12/29/70 - Requiring all gas utilities to submit Manuals of Distribution and Transmission Procedures, Operation and Maintenance
- Order No. 1a- 12/27/72 - Requiring all gas utilities to submit Manuals of General Operating and Maintenance Procedures
- Order No. 2 - 12/29/70 - Establishing minimum safety standards for gas pipeline transportation facilities by adopting the standards adopted and published by the Office of Pipeline Safety of the U.S. Dept. of Transportation...
- Order No. 3 - 12/29/70 - Adopting rules pertaining to reporting leaks
- Order No. 4 - 12/29/70 - Adopting rules pertaining to reporting accidents by all gas utilities
- Order No. 5 - 12/21/71 - Adopting amendments
- Order No. 6 - 12/27/72 - Adopting amendments
- Order No. 7 - 12/27/73 - Adopting amendments
- Order No. 8 - 03/19/75 - Adopting amendments
- Order No. 9 - 12/11/75 - Adopting amendments
- Order No. 10- 01/05/77 - Adopting amendments
- Order No. 11- 01/06/78 - Adopting amendments
- Order No. 12- 01/04/79 - Adopting amendments
- Order No. 13- 12/23/80 - Adopting amendments
- Order No. 14- 06/01/82 - Adopting amendments
- Order No. 15- 02/12/85 - Adopting appropriate rules pertaining to the minimum safety standards to be applied to jurisdictional pipeline operators, and procedures and reporting requirements to be followed to insure compliance...



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| <p>Sec.</p> <p>1672. Federal safety standards.</p> <p>(a) Minimum standards; factors to be considered; State standards; reporting requirements.</p> <p>(b) Effective date of standards.</p> <p>(c) Administrative procedure.</p> <p>(d) Waiver of compliance with standards.</p> <p>1674. State certifications and agreements.</p> <p>(a) Report to Secretary by State agency; annual certification.</p> <p>(b) Agreements with State agencies; notification to Secretary of violations.</p> <p>(c) Monitoring requirements.</p> <p>(d) Grants to aid State enforcement; withholding funds from State agency.</p> <p>(e) Recertification.</p> <p>(f) Termination of agreement.</p> <p>1674a. Establishment of standards for LNG facilities.</p> <p>(a) Safety standards respecting location, design, installation, construction, and initial inspection and testing of LNG facilities.</p> <p>(b) Standards respecting operation and maintenance of LNG facilities.</p> <p>(c) Effect on existing LNG facilities.</p> <p>(d) Factors considered in prescribing general safety standards.</p> <p>(e) Amendment of standards.</p> <p>(f) Applicability of provisions of section 1672 of this title to standards prescribed under this section.</p> | <p>Sec.</p> <p>1674b. Financial responsibility for certain LNG facilities.</p> <p>(a) Study regarding risks associated with production, transportation, and storage of LNG and liquid petroleum gas; report to Congress.</p> <p>(b) Notice of inadequate financial responsibility; hearing; judicial review.</p> <p>(c) Methods acceptable for maintenance of financial responsibility.</p> <p>1679a. Penalties.</p> <p>(a) Civil penalties.</p> <p>(b) Action by Attorney General to recover subsec. (a) penalty.</p> <p>(c) Criminal penalties.</p> <p>(d) Violations based on same act.</p> <p>1679b. Specific relief.</p> <p>1682a. Pipeline safety user fees.</p> <p>(a) Establishment.</p> <p>(b) Time of assessment.</p> <p>(c) Use of funds.</p> <p>(d) Fee schedule.</p> <p>1683. Annual report to Congress.</p> <p>1684. Authorization of appropriations; Federal grants-in-aid.</p> <p>1685. Consumer education program.</p> <p>1686. Civil actions by citizens.</p> <p>(a) Mandatory or prohibitive injunctive relief against persons in violation of this chapter.</p> <p>(b) Restrictions.</p> <p>(c) Intervention by Attorney General.</p> <p>(d) Other statutory or common law rights.</p> <p>(e) Costs and attorney's fees.</p> <p>(f) Violation of State safety standards or practices.</p> |
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§ 1671. Definitions

As used in this chapter—

*[See main volume for text of (1) and (2)]*

(3) "Transportation of gas" means the gathering, transmission or distribution of gas by pipeline or its storage in interstate or foreign commerce; except that it shall not include the gathering of gas in those rural locations which lie outside the limits of any incorporated or unincorporated city, town, village, or any other designated residential or commercial area such as a subdivision, a business or shopping center, a community development, or any similar populated area which the Secretary may define as a nonrural area;

*[See main volume for text of (4) to (6)]*

(7) "National organization of State commissions" means the national organization of the State commissions referred to in subchapter III of chapter 103 of this title.

(8) "Interstate transmission facilities" means pipeline facilities used in the transportation of gas which are subject to the jurisdiction of the Federal Energy Regulatory Commission under the Natural Gas Act [15 U.S.C.A. § 717 et seq.], except that it shall not include any pipeline facilities within a State which transport gas from an interstate gas pipeline to a direct sales customer within such State purchasing gas for its own consumption;

(9) "Intrastate pipeline transportation" means pipeline facilities and transportation of gas within a State which are not subject to the jurisdiction of the Federal Energy Regulatory Commission under the Natural Gas Act [15 U.S.C.A. § 717 et seq.], except that it shall include pipeline facilities within a State which transport gas

from an interstate gas pipeline to a direct sales customer within such State purchasing gas for its own consumption;

(10) "Secretary" means the Secretary of Transportation.

(11) "LNG" means natural gas in a liquid or semisolid state;

(12) "LNG facility" means any pipeline facility used for the transportation or storage of LNG, or for LNG conversion, in interstate or foreign commerce, but does not include any structure or equipment (or portion thereof) located in navigable waters (as defined in section 796(8) of Title 16);

(13) "LNG conversion" means conversions of natural gas into LNG (liquefaction or solidification) or the conversion of LNG into natural gas (vaporization);

(14) "Existing LNG facility" means any LNG facility for which an application for the approval of the siting, construction, or operation of such facility was filed before March 1, 1978, with—

(A) the Department of Energy or any predecessor organization of the Department, or

(B) the appropriate State or local agency, in the case of any facility not subject to the jurisdiction of the Department of Energy under the Natural Gas Act [15 U.S.C.A. § 717 et seq.],

except that such term does not include any facility the construction of which commences on or after November 30, 1979, and such construction is not pursuant to such an approval;

(15) "New LNG facility" means any LNG facility other than an existing LNG facility;

(16) "LNG accident" means any release, burning, or explosion of LNG resulting from—

(A) a rupture or other failure of a storage tank, pipeline, or other LNG facility;

(B) natural hazards (including earthquakes, hurricanes, and high winds);

(C) sabotage; or

(D) any other cause;

other than any such release, burning, or explosion which, as determined in accordance with regulations prescribed by the Secretary, does not pose a threat to public health or safety, property, or the environment; and

(17) "Interstate or foreign commerce" means any trade, traffic, transportation, exchange, or other commerce—

(A) between any State and any place outside of such State, or

(B) which affects any trade, transportation, exchange, or other commerce described in subparagraph (A).

(As amended Pub.L. 94-477, § 3, Oct. 11, 1976, 90 Stat. 2073; Pub.L. 96-129, Title I, §§ 109(a), (b), 151, 152(b)(1), Nov. 30, 1979, 93 Stat. 996, 998, 1001.)

**References in Text.** The National organization of State commissions, referred to in par. (7), is referred to specifically in section 10344(f) of this title.

The Natural Gas Act, referred to in pars. (8) and (9), and (14)(B), is Act June 21, 1938, c. 556, 52 Stat. 821, which is classified to section 717 et seq. of Title 15, Commerce and Trade.

**Codification.** The Interstate Commerce Act, as amended, referred to in text, is Act Feb. 4, 1887, c. 104, 24 Stat. 379, as amended, which was classified to sections 1 et seq., 301 et seq., 901 et seq., 1001 et seq., and 1231 et seq. of this title. The Act was repealed by Pub.L. 95-473, § 4(b), Oct. 13, 1978, 92 Stat. 1467, the first section of which enacted subtitle IV of revised Title 49. For distribution of former sections of this title into the revised Title 49, see the tables preceding section 1 of this title.

**1979 Amendment.** Par. (3). Pub.L. 96-129, § 152(b)(1), struck out "or affecting" following "its storage in".

Par. (7). Pub.L. 96-129, § 109(a), substituted "subchapter III of chapter 103 of this title" for "part II of the Interstate Commerce Act".

Pars. (8), (9). Pub.L. 96-129, § 109(b), substituted "Federal Energy Regulatory Commission" for "Federal Power Commission".

Pars. (11) to (17). Pub.L. 96-129, § 151, added pars. (11) to (17).

**1976 Amendment.** Par. (8). Pub. 94-477, § 3(1), added exception that "Intrastate transmission facilities" not include any facilities within a State which transport gas from an interstate gas pipeline to a direct sales customer within such State purchasing gas for its own consumption.

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Secretary gives the Secretary written notice at least sixty days prior to the effective date of the waiver. If, before the effective date of a waiver to be granted by a State agency, the Secretary objects in writing to the granting of the waiver, any State agency action granting the waiver will be stayed. After notifying such State agency of his objection, the Secretary shall afford such agency a prompt opportunity to present its request for waiver, with opportunity for hearing, and the Secretary shall determine finally whether the requested waiver may be granted.

(As amended Pub.L. 94-477, § 4, Oct. 11, 1976, 90 Stat. 2073; Pub.L. 96-129, Title I, §§ 101(a), 104(a)(2), (c), (d), 109(c) to (f), 152(b)(2), Nov. 30, 1979, 93 Stat. 990, 992, 994, 996, 1001; Pub.L. 99-516, § 3(a)(1), Oct. 22, 1986, 100 Stat. 2965.)

1986 Amendment. Subsec. (a)(3). Pub.L. 99-516, § 3(a)(1), added par. (3).

1979 Amendment. Subsec. (a)(1). Pub.L. 96-129, §§ 101(a), 109(c) to (e), redesignated former subsec. (b) as (a)(1) and former pars. (1) to (4) thereof as subpars. (A) to (D) and, as so redesignated, substituted "The Secretary shall, by regulation" for "Not later than twenty-four months after August 12, 1968, and from time to time thereafter, the Secretary shall, by order," struck out provision requiring that Whenever the Secretary finds a particular facility to be hazardous to life or property, he shall be empowered to require the person operating such facility to take such steps necessary to remove such hazards, and inserted "or facility" following "pipeline transportation" in subpar. (A) as so redesignated and "safety" following "more stringent" in provisions following subpar. (D) as so redesignated. Former subsec. (a), relating to interim safety standards, was struck out.

Subsec. (a)(2). Pub.L. 96-129, §§ 101(a), 109(c), added subsec. (a)(2).

Subsec. (b). Pub.L. 96-129, § 109(c), (f), redesignated former subsec. (c) as (b) and, as so redesignated, inserted "and such date is specified in the regulation establishing or amending such standard" following "period reasonably necessary for compliance". Former subsec. (b) redesignated (a).

Subsec. (c). Pub.L. 96-129, §§ 104(a)(2), (c), 109(c), redesignated former subsec. (d) as (c) and, as so redesignated, substituted "all actions" for "all orders" and inserted "directing or" preceding "waiving compliance with". Former subsec. (c) redesignated (b).

Subsec. (d). Pub.L. 96-129, §§ 104(d), 109(c), 152(b)(2), redesignated former subsec. (e) as (d) and, as so redesignated, inserted ", by order" following "the Secretary may" and "and to the same extent" following "in the same manner". Former subsec. (d) redesignated (c).

Subsec. (e). Pub.L. 96-129, § 109(c), redesignated former subsec. (e) as (d).

1976 Amendment. Subsec. (b). Pub.L. 94-477 added "emergency plans and procedures," after "installation, inspection," in the provisions preceding par. (1) and substituted reference to intrastate pipeline transportation for reference to pipeline facilities and the transportation of gas not subject to the jurisdiction of the Federal Power Commission under the Natural Gas Act in the provisions following par. (4).

Effective Date of 1979 Amendment. Section 101(c) of Pub.L. 96-129 provided that: "Requirements under the amendments made by subsection (a) [adding subsec. (a)(2) of this section] shall not apply with respect to annual certifications under section 5 [section 1674 of this title] during the

2-year period which begins on the effective date of such requirements."

Amendment by Pub.L. 96-129 effective Nov. 30, 1979, see section 112 and 156 of Pub.L. 96-129, set out as notes under section 1671 of this title.

Transfer of Functions. The functions of the Federal Power Commission and of the members, officers, and components thereof were transferred to, and vested in, either the Secretary of Energy or, with regard to certain specific and enumerated functions relating to hydroelectric licenses and permits, electricity rates and charges, natural gas rates and charges, certificates of public convenience and necessity for natural gas, natural gas curtailments, and mergers and securities acquisitions under the Federal Power Act and the Natural Gas Act, to the Federal Energy Regulatory Commission within the Department of Energy, as part of the creation of the Department of Energy by Pub.L. 95-91, Aug. 4, 1977, 91 Stat. 565. See sections 7151 and 7172 of Title 42, The Public Health and Welfare.

Legislative History. For legislative history and purpose of Pub.L. 94-477, see 1976 U.S. Code Cong. and Adm. News, p. 4673. See, also, Pub.L. 96-129, 1979 U.S. Code Cong. and Adm. News, p. 1971; Pub.L. 99-516, 1986 U.S. Code Cong. and Adm. News, p. 4978.

#### Notes of Decisions

Gathering line pipeline definition 4  
Preemption 3

#### 1. State or local regulation and control

State was free to charge reasonable fee for performing safety inspections of gas pipelines authorized by federal law, under provisions of Iowa statute, notwithstanding preemption of balance of statute by Natural Gas Pipeline Safety Act. ANR Pipeline Co. v. Iowa State Commerce Com'n, C.A.8 (Iowa) 1987, 828 F.2d 465.

Texas Railroad Commission's regulation requiring persons or firms involved in the gathering, processing, or transportation of natural gas to provide specified safeguards to protect the general public against the accidental release of hydrogen sulfide from their facilities was preempted with respect to the facilities of an operator of an interstate natural gas pipeline system by provisions of this chapter. Natural Gas Pipeline Co. of America v. Railroad Com'n of Texas, C.A.Tex.1982, 679 F.2d 51.

In light of Minnesota statute providing that interstate gas pipelines subject to safety regulations under this chapter are exempt from state and

local regulation, county had no authority under its zoning powers to require pipeline company to bury pipe deeper than required by federal standards; to the extent of conflict, such later and more specific Minnesota statute controlled over more general statutes giving county planning and zoning authority, and authority to regulate pipelines, and permitting county to set reasonable standards and conditions for line construction if necessary for protection and restoration of cultivated agricultural land. Northern Border Pipeline Co. v. Jackson County, Minn., D.C.Minn. 1981, 512 F.Supp. 1261.

Where State Corporation Commission standards for welding in connection with laying of natural gas pipelines were minimum standards, it was mandatory that welding meet such standards and thus Commission's finding, in connection with complaint that pipeline company had violated certain safety rules and regulations in laying natural gas pipeline, that welding substantially complied with welding code was insufficient adju-

dication of issues presented. Barnes v. Transok Pipeline Co., Okl.1976, 549 P.2d 819.

#### 3. Preemption

Natural Gas Pipeline Safety Act preempted state law on substantive safety regulation of interstate gas pipelines, regardless of whether local regulation was more restrictive, less restrictive, or identical to federal standards. ANR Pipeline Co. v. Iowa State Commerce Com'n, C.A.8 (Iowa) 1987, 828 F.2d 465.

This chapter has preempted the entire field of gas pipeline safety. Northern Border Pipeline Co. v. Jackson County, Minn., D.C.Minn.1981, 512 F.Supp. 1261.

#### 4. Gathering line pipeline definition

To constitute a "gathering line," pipeline must transport gas from "current production facility," which appears to mean "gas well." Hamman v. Southwestern Gas Pipeline, Inc., C.A.Tex.1983, 721 F.2d 140.

### § 1673. Technical Pipeline Safety Standards Committee

#### (a) Creation; membership; qualifications

The Secretary shall establish a Technical Pipeline Safety Standards Committee. The Committee shall be appointed by the Secretary, after consultation with public and private agencies concerned with the technical aspect of the transportation of gas or the operation of pipeline facilities, and shall be composed of fifteen members each of whom shall be experienced in the safety regulation of the transportation of gas and of pipeline facilities or technically qualified by training, experience, or knowledge in one or more fields of engineering applied in the transportation of gas or the operation of pipeline facilities to evaluate gas pipeline safety standards, as follows:

[See main volume for text of (1) to (3)]

#### (b) Report of proposed standards; publication; record of Committee proceedings

The Secretary shall submit to the Committee any proposed standard under this chapter, or any proposed amendment to a standard under this chapter, for its consideration. Within 90 days after receipt by the Committee of any proposed standard or amendment, the Committee shall prepare a report on the technical feasibility, reasonableness, and practicability of such standard or amendment. The Secretary may prescribe a final standard or final amendment to a standard any time after the 90th day after its submission to the Committee, whether or not the Committee has reported on such standard or amendment. Each report by the Committee, including any minority views, shall be published by the Secretary and, if timely made, form a part of the proceedings for the promulgation of standards. In the event that the Secretary rejects the conclusions of the majority of the Committee, he shall not be bound by such conclusions but shall publish his reasons for rejection thereof. The Committee may propose safety standards for pipeline facilities and the transportation of gas to the Secretary for his consideration. The Committee shall meet with the Secretary (or his designee) not less frequently than twice each calendar year. All proceedings of the Committee shall be recorded and the record of each such proceeding shall be available for public inspection.

#### (c) Compensation

Members of the Committee other than Federal employees may be compensated at a rate to be fixed by the Secretary not to exceed the daily equivalent of the maximum annual rate of basic pay then currently payable under the General Schedule under section 5332 of Title 5 for each day (including travel time) when engaged in the actual duties of the Committee. All members, while away from their homes or regular places of business, may be allowed travel expenses, including per diem in lieu of subsistence as authorized by section 5703 of Title 5 for persons in the Government service employed intermittently. Payments under this section shall not

A certification which is in effect under subsection (a) of this section shall not apply with respect to any new or amended Federal safety standard established for intrastate pipeline transportation pursuant to this chapter after the date of such certification. The provisions of this chapter shall apply to any such new or amended Federal safety standard until the State agency has adopted such standard and has submitted an appropriate certification in accordance with the provisions of subsection (a) of this section.

#### (D) Termination of agreement

Any agreement under this section may be terminated by the Secretary if, after notice and opportunity for a hearing, he finds that the State agency has failed to comply with any provision of such agreement. Such finding and termination shall be published in the Federal Register and shall become effective no sooner than fifteen days after the date of publication.

(As amended Pub.L. 94-477, § 5, Oct. 11, 1976, 90 Stat. 2074; Pub.L. 96-129, Title I, §§ 101(b), 103, 109(g), (h)(1) to (3), Nov. 30, 1979, 93 Stat. 990, 991, 996; Pub.L. 97-468, Title I, § 104, Jan. 14, 1983, 96 Stat. 2548; Pub.L. 99-272, Title VII, § 7002(b)(1), Apr. 7, 1986, 100 Stat. 139.)

**1986 Amendment.** Subsec. (d)(2). Pub.L. 99-272, § 7002(b)(1)(A), substituted "appropriated for carrying out the Federal grants-in-aid provisions of this subsection" for "authorized to be appropriated by section 1684(b) of this title".

Pub.L. 99-272, § 7002(b)(1)(B), substituted "paragraph (1) of this subsection" for "paragraph (1) of this section". Such phrase had been previously translated editorially as "paragraph (1) of this subsection" as the probable intent of Congress; accordingly, amendment by section 7002(b)(1)(B) of Pub.L. 99-272 resulted in no change in text.

**1983 Amendment.** Subsec. (a). Pub.L. 97-468 substituted "(other than subsection (a)(2) thereof)" for "(other than subsection (a)(3) thereof)".

**1979 Amendment.** Subsec. (a). Pub.L. 96-129, §§ 101(b), 103(a), (b)(3), 109(g), (h)(1), substituted "Except for section 1686 of this title, and except as otherwise provided in this section, the authority of the Secretary under this chapter to prescribe safety standards and enforce compliance with such standards" for "Except for the fourth sentence of section 1672(b) of this title, section 1681(b) of this title, and except as otherwise provided in this section, "demolition, excavation, tunneling, or construction" for "excavation" "sections 1679a and 1679b of this title" for "sections 1678 and 1679 of this title; except that a State agency may file a certification under this subsection without regard to the requirement of injunctive and monetary sanctions under State law for a period not to exceed five years after August 12, 1968", and "\$5,000 (whether or not sustained by a person subject to the safety jurisdiction of the State agency) and any other accident which the State agency considers significant" for "\$1,000" and made conforming amendments to the basic law to accommodate changes in section numbering.

Subsec. (b). Pub.L. 96-129, §§ 103(b)(1), 109(h)(2), struck out par. (3), relating to an agreement with a State agency to implement a compliance program acceptable to the Secretary including a provision for inspection of pipeline facilities used in such transportation of gas and par. (4), relating to an agreement with a State agency to cooperate fully in a system of Federal monitoring of such compliance program and reporting under

regulations prescribed by the Secretary and made conforming amendments to the basic law to accommodate changes in section numbering.

Subsec. (c). Pub.L. 96-129, § 103(b)(2)(C), added subsec. (c). Former subsec. (c) redesignated (d).

Subsec. (d). Pub.L. 96-129, §§ 103(b)(2)(B), 109(h)(3), redesignated former subsec. (c) as (d) and, as so redesignated, made conforming amendments to the basic law to accommodate changes in section numbering. Former subsec. (d) redesignated (e).

Subsec. (e). Pub.L. 96-129, § 103(b)(2)(B), redesignated former subsec. (d) as (e). Former subsec. (e) redesignated (f).

Subsec. (f). Pub.L. 96-129, § 103(b)(2)(A), (B), redesignated former subsec. (e) as (f). Former subsec. (f), relating to natural gas pipeline safety inspectors, was struck out.

**1976 Amendment.** Subsec. (a). Pub.L. 94-477, § 5(a), substituted "intrastate pipeline transportation" for "pipeline facilities and the transportation of gas (not subject to the jurisdiction of the Federal Power Commission under the Natural Gas Act) within a State" in the provisions preceding cl. (1), "transportation" for "pipeline facilities and transportation of gas" in cl. (1), and provision permitting State agency certification where State agency seeks to adopt Federal safety standards established within one hundred and twenty days before certification for provision limiting certification to instances where State agency has adopted each Federal safety standard established as of the date of certification in cl. (2), added cl. (4), and redesignated former cl. (4) as (5).

Subsec. (b). Pub.L. 94-477, § 5(b), substituted reference to intrastate pipeline transportation for reference to pipeline facilities and transportation of gas not subject to the jurisdiction of the Federal Power Commission under the Natural Gas Act in two places, and "the Secretary may, by agreement with a State agency (including a municipality) authorize" for "the Secretary is authorized by agreement with a State agency (including a municipality) to authorize" in the provisions preceding cl. (1).

Subsec. (d). Pub.L. 94-477, § 5(c), substituted "safety standard established for intrastate pipe-

line transportation pursuant to this chapter" for "safety standard for pipeline facilities or the transportation of gas, not subject to the jurisdiction of the Federal Power Commission under the Natural Gas Act, established pursuant to this chapter".

Subsec. (f). Pub.L. 94-477, § 5(d), added subsec. (f).

**Effective Date of 1979 Amendment.** Amendment by Pub.L. 96-129 effective Nov. 30, 1979, see section 112 of Pub.L. 96-129, set out as a note under section 1671 of this title.

**Transfer of Functions.** The functions of the Federal Power Commission and of the members, officers, and components thereof were transferred to, and vested in, either the Secretary of Energy or, with regard to certain specific and enumerated functions relating to hydroelectric licenses and permits, electricity rates and charges, natural gas

rates and charges, certificates of public convenience and necessity for natural gas, natural gas curtailments, and mergers and securities acquisitions under the Federal Power Act and the Natural Gas Act, to the Federal Energy Regulatory Commission within the Department of Energy as part of the creation of the Department of Energy by Pub.L. 95-91, Aug. 4, 1977, 91 Stat. 565. See sections 7151 and 7172 of Title 42, The Public Health and Welfare.

**Legislative History.** For legislative history and purpose of Pub.L. 94-477, see 1976 U.S. Code Cong. and Adm. News, p. 4763. See, also, Pub.L. 96-129, 1979 U.S. Code Cong. and Adm. News, p. 1971; Pub.L. 97-468, 1982 U.S. Code Cong. and Adm. News, p. 4480; Pub.L. 99-272, 1986 U.S. Code Cong. and Adm. News, p. 42.

#### § 1674a. Establishment of standards for LNG facilities

(a) Safety standards respecting location, design, installation, construction, and initial inspection and testing of LNG facilities

(1) Not later than 180 days after November 30, 1979, the Secretary shall establish, by regulation—

(A) minimum safety standards for determining the location of any new LNG facility, and

(B) minimum safety standards for the design, installation, construction, initial inspection, and initial testing of any new LNG facility.

(2) After the date standards first take effect under this section, no new LNG facility may be constructed other than in accordance with the applicable standards prescribed under this section. The Secretary shall ensure that the facility is constructed and operated in compliance with such standards.

(3) No new LNG facility may be operated unless the person operating such facility has previously submitted a contingency plan which sets forth those steps which are to be taken in the event of an LNG accident and which is determined to be adequate by the Department of Energy or the appropriate State agency, in the case of any facility not subject to the jurisdiction of the Department under the Natural Gas Act [15 U.S.C.A. § 717 et seq.].

(b) Standards respecting operation and maintenance of LNG facilities

Not later than 270 days after November 30, 1979, the Secretary shall establish minimum standards to be maintained with respect to the operation and maintenance of any LNG facility.

(c) Effect on existing LNG facilities

(1)(A) Except to the extent provided under subparagraph (B), any standard issued under this chapter after March 1, 1978, affecting the design, location, installation, construction, initial inspection, or initial testing shall not apply to an existing LNG facility either—

(i) under the authority of this chapter; or

(ii) under the authority of any other Federal law if such standard was not issued at the time such authority was exercised.

(B) Any such standard (other than one affecting location) may be made applicable under the provisions of such standard to any replacement component or part thereof of an LNG facility if that component or part is placed in service after the date of the issuance of that standard, but only if such applicability—

(i) would not render such component or part incompatible with other components or parts of the facility involved; or

(ii) would not otherwise be impracticable.

No standard issued under this chapter after March 1, 1978, affecting location shall apply to any replacement component or part thereof of an existing LNG facility.

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(c) Methods acceptable for maintenance of financial responsibility

For purposes of subsection (b) of this section, financial responsibility may be maintained by any one of, or a combination of, the following methods acceptable to the Secretary:

- (1) evidence of insurance,
- (2) surety bonds,
- (3) qualification as a self-insurer, or
- (4) other evidence of financial responsibility.

(Pub.L. 90-481, § 7, as added Pub.L. 96-129, Title I, § 153, Nov. 30, 1979, 93 Stat. 1001.)

**Prior Provisions.** A prior section 7 of Pub. L. 90-481 was renumbered 9 by Pub. L. 96-129, Title I, § 152(a), Nov. 30, 1979, 93 Stat. 999, and is classified to section 1676 of this title.

**Effective Date.** Section effective Nov. 30, 1979, see section 156 of Pub.L. 96-129, set out as a note under section 1671 of this title.

**Legislative History.** For legislative history and purpose of Pub.L. 96-129, see 1979 U.S. Code Cong. and Adm. News, p. 1971.

**West's Federal Forms**

Enforcement and review of decisions and orders of administrative agencies; see § 851 et seq. Supreme Court, jurisdiction on writ of certiorari, see § 221 et seq.

§ 1675. Judicial review

(a) Person aggrieved; venue

Any person who is or will be adversely affected or aggrieved by any regulation issued under this chapter or any order with respect to an application for a waiver under section 1672(d) of this title may at any time prior to the 90th day after such regulation or order is issued file a petition for a judicial review with the United States Court of Appeals for the District of Columbia or for the circuit wherein such petitioner is located or has his principal place of business. A copy of the petition shall be forthwith transmitted by the clerk of the court to the Secretary or other officer designated by him for that purpose.

(b) Jurisdiction

Upon the filing of the petition referred to in subsection (a) of this section, the court shall have jurisdiction to review the regulation or order in accordance with chapter 7 of Title 5 and to grant appropriate relief as provided in such chapter.

(c) Appeal

The judgment of the court affirming or setting aside, in whole or in part, any such regulation or order of the Secretary shall be final, subject to review by the Supreme Court of the United States upon certiorari or certification as provided in section 1254 of Title 28.

(d) Successors in office

Any action instituted under this section shall survive, notwithstanding any change in the person occupying the office of Secretary or any vacancy in such office.

(e) Remedies

The remedies provided for in this section shall be in addition to and not in substitution for any other remedies provided by law.

(Pub.L. 90-481, § 8, formerly § 6, Aug. 12, 1968, 82 Stat. 724, renumbered and amended Pub.L. 96-129, Title I, §§ 104(e)(2), (3), 152(a), Nov. 30, 1979, 93 Stat. 994, 999; Pub.L. 97-468, Title I, § 102, Jan. 14, 1983, 96 Stat. 2543.)

**Prior Provisions.** A prior section § of Pub. L. 90-481 was renumbered 10 by Pub. L. 96-129, Title I, § 152(a), Nov. 30, 1979, 93 Stat. 999, and is classified to section 1677 of this title.

**1983 Amendment.** Subsec. (a). Pub.L. 97-468 substituted "90th day" for "sixtieth day" after "any time prior to the".

**1979 Amendment.** Subsec. (a). Pub.L. 96-129, § 104(e)(2), substituted "any regulation issued under this chapter or any order with respect to an application for a waiver under section 1672(d) of this title" for "any order issued under this chapter" and "such regulation or order is issued" for "such order is issued".

Subsec. (b). Pub.L. 96-129, § 104(e)(3), substituted "regulation or order" for "order".

Subsec. (c). Pub.L. 96-129, § 104(e)(3), substituted "regulation or order" for "order".

**Effective Date of 1979 Amendment.** Amendment by Pub.L. 96-129 effective Nov. 30, 1979, see section 112 of Pub.L. 96-129, set out as a note under section 1671 of this title.

**Legislative History.** For legislative history and purpose of Pub.L. 96-129, see 1979 U.S. Code Cong. and Adm. News, p. 1971. See Pub.L. 97-468, 1982 U.S. Code Cong. and Adm. News, p. 4480.

**Federal Practice & Procedure**  
Review of administrative decisions in courts of appeals, see Wright, Miller, Cooper & Grossman: Jurisdiction § 3941.

§ 1676. Cooperation with Federal Energy Regulatory Commission and State commissions

Whenever the establishment of a standard or action upon application for waiver under the provisions of this chapter, would affect continuity of any gas services, the Secretary shall consult with and advise the Federal Energy Regulatory Commission or State commission having jurisdiction over the affected pipeline facility before establishing the standard or acting on the waiver application and shall defer the effective date until the Federal Energy Regulatory Commission or any such commission has had reasonable opportunity to grant the authorizations it deems necessary. In any proceedings under section 717b or section 717f of Title 15 for authority to import natural gas or to establish, construct, operate, or extend pipeline facilities which are or will be subject to Federal or other applicable safety standards, any applicant shall certify that it will design, install, inspect, test, construct, operate, replace, and maintain the pipeline facilities in accordance with Federal and other applicable safety standards and plans for maintenance and inspection. Such certification shall be binding and conclusive upon the Department of Energy and the Commission unless the relevant enforcement agency has timely advised the Commission in writing that the applicant has violated safety standards established pursuant to this chapter.

(Pub.L. 90-481, § 9, formerly § 7, Aug. 12, 1968, 82 Stat. 725, renumbered and amended Pub.L. 96-129, Title I, §§ 109(i), 152(a), (b)(3), Nov. 30, 1979, 93 Stat. 997, 999, 1001.)

**Prior Provisions.** A prior section 9 of Pub. L. 90-481 was classified to section 1678 of this title, and was repealed by Pub. L. 96-129, Title I, § 104(b), Nov. 30, 1979, 93 Stat. 992.

**1979 Amendment.** Pub.L. 96-129, §§ 109(i), 152(b)(3), substituted "Federal Energy Regulatory Commission" for "Federal Power Commission" wherever appearing and "pipeline facilities which are" for "a gas pipeline which is" and inserted "section 1672 of this title" following "proceedings under", "to import natural gas or" following "authority", and "the Department of Energy and" preceding "the Commission unless".

**Transfer of Functions.** The functions of the Federal Power Commission and of the members, officers, and components thereof were transferred to, and vested in, either the Secretary of Energy or, with regard to certain specific and enumerated functions relating to hydroelectric licenses and

permits, electricity rates and charges, natural gas rates and charges, certificates of public convenience and necessity for natural gas, natural gas curtailments, and mergers and securities acquisitions under the Federal Power Act and the Natural Gas Act, to the Federal Energy Regulatory Commission within the Department of Energy, as part of the creation of the Department of Energy by Pub.L. 95-91, Aug. 4, 1977, 91 Stat. 984. See sections 7151 and 7172 of Title 42, Public Health and Welfare.

**Effective Date of 1979 Amendment.** Amendment by Pub.L. 96-129 effective Nov. 30, 1979, see section 112 and 156 of Pub.L. 96-129, set out as notes under section 1671 of this title.

**Legislative History.** For legislative history and purpose of Pub.L. 96-129, see 1979 U.S. Code Cong. and Adm. News, p. 1971.

§ 1677. Compliance

(a) Requirements regarding standards and inspection and maintenance

Each person who engages in the transportation of gas or who owns or operates pipeline facilities shall—

(1) at all times after the date any applicable safety standard established under this chapter takes effect comply with the requirements of such standard; and

(2) prepare and maintain a plan of inspection and maintenance and comply with such plan; and

(3) permit access to or copying of records, and make reports or provide information, and permit entry or inspection, as required under section 1681 of this title.

(A) if under the facts and circumstances he determines the particular facility is hazardous to life or property, or

(B) if the pipeline facility or a component thereof has been constructed or operated with any equipment, material, or technique which he determines hazardous to life or property, unless the operator involved demonstrates to the satisfaction of the Secretary that under the particular facts and circumstances involved such equipment, material, or technique is not hazardous to life or property.

(3) In making a determination under paragraph (2), the Secretary shall consider, relevant—

(A) the characteristics of the pipe and other equipment used in the pipeline facility involved, including its age, manufacturer, physical properties (including its resistance to corrosion and deterioration), and the method of its manufacture, construction, or assembly;

(B) the nature of the materials transported by such facility (including their corrosive and deteriorative qualities), the sequence in which such materials are transported, and the pressure required for such transportation;

(C) the aspects of the areas in which the pipeline facility is located, in particular the climatic and geologic conditions (including soil characteristics) associated with such areas, and the population density and population and growth patterns of such areas;

(D) any recommendation of the National Transportation Safety Board issued in connection with any investigation conducted by the Board under other provisions of law; and

(E) such other factors as the Secretary may consider appropriate.

(4) The district courts of the United States shall have jurisdiction, upon petition by the Attorney General, to enforce orders issued under this subsection by appropriate means.

(5) The Secretary may waive the requirements for notice and hearing under this subsection and provide for expeditious issuance of an order under this subsection in any case in which he determines that the failure to do so would result in the likelihood of serious harm to life or property. However, the Secretary shall include in such an order an opportunity for hearing as soon as practicable after issuance of an order.

(Pub.L. 90-481, § 12, as added Pub.L. 96-129, Title I, § 104(b), Nov. 30, 1979, 93 Stat. 993.)

**References in Text.** The Federal Rules of Criminal Procedure, referred to in subsec. (a)(2), are set out in the Appendix to Title 18, Crimes and Criminal Procedure.

**Prior Provisions.** A prior section 12 of Pub. L. 90-481 was renumbered 14 by Pub. L. 96-129, Title I, § 104(b), Nov. 30, 1979, 93 Stat. 992, and is classified to section 1681 of this title.

### § 1680. Inspection and maintenance plans

Each person who engages in the transportation of gas or who owns or operates intrastate pipeline transportation facilities shall prepare, maintain at such office or offices of that person as the Secretary determines appropriate, and carry out a written current plan for inspection and maintenance of each facility used in such transportation and owned or operated by such person, and any changes in such plan, in accordance with regulations prescribed by the Secretary of appropriate State agency. The Secretary may, by regulation, also require persons who engage in the transportation of gas or who own or operate pipeline facilities subject to the provisions of this chapter to file such plans for approval. If at any time the agency with responsibility for enforcement of compliance with the standards established under this chapter finds that such plan is inadequate to achieve safe operation, such agency shall, after notice and opportunity for a hearing, require such plan to be revised. The plan required by the agency shall be practicable and designed to meet the need for pipeline safety. Such plan shall include terms designed to enhance the ability to discover safety-related conditions described in section 1672(a)(3) of this title. Such plans shall be made available to the Secretary or the appropriate State

agency upon request pursuant to section 1681 of this title. In determining the adequacy of any such plan, such agency shall consider—

- (1) relevant available pipeline safety data;
- (2) whether the plan is appropriate for the particular type of pipeline transportation;
- (3) the reasonableness of the plan; and
- (4) the extent to which such plan will contribute to public safety.

(Pub.L. 90-481, § 13, formerly § 11, Aug. 12, 1968, 82 Stat. 726; Pub.L. 94-477, § 6, Oct. 11, 1976, 90 Stat. 2076, renumbered and amended Pub.L. 96-129, Title I, §§ 104(b), 105(a), Nov. 30, 1979, 93 Stat. 992, 994; Pub.L. 99-516, § 3(a)(2), Oct. 22, 1986, 100 Stat. 2966.)

**Prior Provisions.** A prior section 13 of Pub. L. 90-481 was renumbered 15 by Pub. L. 96-129, Title I, § 104(b), Nov. 30, 1979, 93 Stat. 992, and is classified to section 1682 of this title.

**1986 Amendment.** Pub.L. 99-516, § 3(a)(2), inserted provision that plans under this section shall include terms designed to enhance the ability to discover safety-related conditions described in section 1672(a)(3) of this title.

**1979 Amendment.** Pub.L. 96-129, § 105(a), substituted "shall prepare, maintain at such office or offices of that person as the Secretary determines appropriate, and carry out a written current plan for inspection and maintenance" for "shall file with the Secretary or, if a certification or an agreement pursuant to section 1674 of this title is in effect, with the appropriate State agency, a plan for inspection and maintenance" and added provision requiring that such plan be made available to the Secretary or the appropriate State agency upon request pursuant to section 1681 of this title.

**1976 Amendment.** Pub.L. 94-477 substituted "intrastate pipeline transportation facilities" for "pipeline facilities not subject to the jurisdiction of the Federal Power Commission under the Natural Gas Act", "if a certification" for "where a certification", "the appropriate State agency" for "the State agency", and "each facility used in such

transportation and owned" for "each such pipeline facility owned".

**Effective Date of 1979 Amendment.** Amendment by Pub.L. 96-129 effective Nov. 30, 1979, see section 112 of Pub.L. 96-129, set out as a note under section 1671 of this title.

**Transfer of Functions.** The functions of the Federal Power Commission and of the members, officers, and components thereof were transferred to, and vested in, either the Secretary or, with regard to certain specific and enumerated functions relating to hydroelectric licenses and permits, electricity rates and charges, natural gas rates and charges, certificates of public convenience and necessity for natural gas, natural gas curtailments, and mergers and securities acquisitions under the Federal Power Act and the Natural Gas Act, to the Federal Energy Regulatory Commission within the Department of Energy, as part of the creation of the Department of Energy by Pub.L. 95-91, Aug. 4, 1977, 91 Stat. 565. See sections 7151 and 7172 of Title 42. The Public Health and Welfare.

**Legislative History.** For legislative history and purpose of Pub.L. 94-477, see 1976 U.S. Code Cong. and Adm. News, p. 4673. See, also, Pub.L. 96-129, 1979 U.S. Code Cong. and Adm. News, p. 1971; Pub.L. 99-516, 1986 U.S. Code Cong. and Adm. News, p. 4978.

## § 1681. Powers and duties of Secretary

### (a) General authority

The Secretary may, to the extent necessary to carry out his responsibilities under this chapter, conduct investigations, make reports, issue subpoenas, conduct hearings, require the production of relevant documents and records, take depositions, and conduct, directly or, by contract, or otherwise, research, testing, development, demonstration, and training activities; however, before the Secretary may exercise authority under this section to require testing of portions of pipeline facilities subject to the provisions of this chapter which have been involved in or affected by an accident, he shall make every effort to negotiate a mutually acceptable plan with the owner of such facilities and, where appropriate, the National Transportation Safety Board for performing such testing. In conducting training activities for State or local government personnel in the enforcement of regulations issued under this chapter, the Secretary may not assess any charge or fee in the nature of tuition.

### (b) Records and reports of persons engaged in transportation of gas or who own or operate pipeline facilities

Each person who engages in the transportation of gas or who owns or operates pipeline facilities shall establish and maintain such records, make such reports, and provide such information as the Secretary may reasonably require, and shall submit such reports and shall make such records and information available as the Secretary may request, to enable him to determine whether such person has acted or is acting in compliance with this chapter and the standards or orders issued under this chapter.

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"(I) whether pipeline safety could be significantly enhanced in a cost-effective manner by regulations requiring pipeline facility operators to prepare and maintain a general description of their pipeline facilities, including—

"(A) the location of the pipeline and the pipeline facilities;

"(B) the type, age, manufacturer, and method of construction of such pipeline and facilities;

"(C) the nature of the materials transported, the sequence in which they are transported, and the pressure at which they are transported; and

"(D) the climatic, geologic, seismic, and conditions (including soil characteristics) associated with the areas in which the pipeline facilities are located, and the existing and projected population and demographic characteristics associated with such areas;

"(2) the cost-effectiveness, feasibility, and potential benefits of establishing in the Department of Transportation a program for use in an electronic data-processing system, which would be used to process and maintain pipeline-safety information obtained under existing and future Federal laws and regulations;

"(3) whether it is necessary and cost-effective to amend existing Federal law and regulations on the reporting of pipeline leaks to require the reporting of any such future leak which—

"(A) the person owning or operating the pipeline facility knew or reasonably should have known existed;

## § 1682a. Pipeline safety user fees

### (a) Establishment

#### (1) Schedule

The Secretary of Transportation (hereafter in this section referred to as the "Secretary") shall establish a schedule of fees based on the usage, in reasonable relationship to volume-miles, miles, revenues, or an appropriate combination thereof, of natural gas and hazardous liquid pipelines. In establishing such schedule, the Secretary shall take into consideration the allocation of departmental resources.

#### (2) Collection

The Secretary shall establish procedures for the collection of such fees. The Secretary may use the services of any Federal, State, or local agency or instrumentality to collect such fees, and may reimburse such agency or instrumentality a reasonable amount for such services.

#### (3) Liability

Fees established under this section shall be assessed to the persons operating—

(A) all pipeline facilities subject to the Hazardous Liquid Pipeline Safety Act of 1979 (49 U.S.C. App. 2001 et seq.) [49 U.S.C.A. § 2001 et seq.]; and

(B) all pipeline transmission facilities and all liquefied natural gas facilities subject to the jurisdiction of the Natural Gas Pipeline Safety Act of 1968 (49 U.S.C. App. 1671 et seq.) [49 U.S.C.A. § 1671 et seq.].

### (b) Time of assessment

The Secretary shall assess and collect fees described in subsection (a) of this section with respect to each fiscal year before the end of such fiscal year.

"(B) whether pipeline safety could be significantly enhanced in a cost-effective manner by regulations requiring pipeline facility operators to prepare and maintain a general description of their pipeline facilities, including—

"(A) the location of the pipeline and the pipeline facilities;

"(B) the type, age, manufacturer, and method of construction of such pipeline and facilities;

"(C) the nature of the materials transported, the sequence in which they are transported, and the pressure at which they are transported; and

"(D) the climatic, geologic, seismic, and conditions (including soil characteristics) associated with the areas in which the pipeline facilities are located, and the existing and projected population and demographic characteristics associated with such areas;

"(2) the cost-effectiveness, feasibility, and potential benefits of establishing in the Department of Transportation a program for use in an electronic data-processing system, which would be used to process and maintain pipeline-safety information obtained under existing and future Federal laws and regulations;

"(3) whether it is necessary and cost-effective to amend existing Federal law and regulations on the reporting of pipeline leaks to require the reporting of any such future leak which—

"(A) the person owning or operating the pipeline facility knew or reasonably should have known existed;

### (a) Establishment

#### (1) Schedule

The Secretary of Transportation (hereafter in this section referred to as the "Secretary") shall establish a schedule of fees based on the usage, in reasonable relationship to volume-miles, miles, revenues, or an appropriate combination thereof, of natural gas and hazardous liquid pipelines. In establishing such schedule, the Secretary shall take into consideration the allocation of departmental resources.

#### (2) Collection

The Secretary shall establish procedures for the collection of such fees. The Secretary may use the services of any Federal, State, or local agency or instrumentality to collect such fees, and may reimburse such agency or instrumentality a reasonable amount for such services.

#### (3) Liability

Fees established under this section shall be assessed to the persons operating—

(A) all pipeline facilities subject to the Hazardous Liquid Pipeline Safety Act of 1979 (49 U.S.C. App. 2001 et seq.) [49 U.S.C.A. § 2001 et seq.]; and

(B) all pipeline transmission facilities and all liquefied natural gas facilities subject to the jurisdiction of the Natural Gas Pipeline Safety Act of 1968 (49 U.S.C. App. 1671 et seq.) [49 U.S.C.A. § 1671 et seq.].

### (b) Time of assessment

The Secretary shall assess and collect fees described in subsection (a) of this section with respect to each fiscal year before the end of such fiscal year.

## Use of funds

Funds received under subsection (a) of this section shall be used, to the extent provided for in advance in appropriation Acts, only—

(1) in the case of natural gas pipeline safety fees, for activities authorized under the Natural Gas Pipeline Safety Act of 1968 (49 U.S.C. App. 1671 et seq.); and

(2) in the case of hazardous liquid pipeline safety fees, for activities authorized under the Hazardous Liquid Pipeline Safety Act of 1979 (49 U.S.C. App. 2001 et seq.) [49 U.S.C.A. § 2001 et seq.].

## Fee schedule

Fees established by the Secretary under subsection (a) of this section shall be assessed against all natural gas and hazardous liquids transported by pipelines subject to the Natural Gas Pipeline Safety Act of 1968 [49 U.S.C.A. § 1671 et seq.] and the Hazardous Liquid Pipeline Safety Act of 1979 [49 U.S.C.A. § 2001 et seq.] after September 30, 1985, and shall be sufficient to meet the costs of activities described in subsection (c) of this section, beginning on October 1, 1985, but at no time shall the aggregate of fees received for any fiscal year under this section exceed 105 percent of the aggregate of appropriations made for such fiscal year for activities to be funded by such fees.

Pub.L. 99-272, Title VII, § 7005, Apr. 7, 1986, 100 Stat. 140.)

**References in Text.** The Hazardous Liquid Pipeline Safety Act of 1979, referred to in subsections (a)(3)(A), (c)(2), and (d), is title II of Pub.L. 96-129, Nov. 30, 1979, 93 Stat. 1003, as amended, which is classified principally to chapter 29 (section 2001 et seq.) of this title. For complete classification of this Act to the Code, see Short Title note set out under section 2001 of this title and Tables volume.

The Natural Gas Pipeline Safety Act of 1968, referred to in subsections (a)(3)(B), (c)(1), and (d), is Pub.L. 90-481, Aug. 12, 1968, 82 Stat. 720, as amended, which is classified generally to chapter

24 (section 1671 et seq.) of this title. For complete classification of this Act to the Code, see Short Title note set out under section 1671 of this title and Tables volume.

**Codification.** Section was enacted as part of the Consolidated Omnibus Budget Reconciliation Act of 1985 and not as part of the Natural Gas Pipeline Safety Act of 1968, which comprises this chapter.

**Legislative History.** For legislative history and purpose of Pub.L. 99-272, see 1986 U.S. Code Cong. and Adm. News, p. 42.

## § 1683. Annual report to Congress

(a) The Secretary shall prepare and submit to the Congress on April 15 of each year a comprehensive report on the administration of this chapter for the preceding calendar year. Such report shall include—

(1) a thorough compilation of the leak repairs, accidents, and casualties occurring in such year with a statement of cause whenever investigated and determined by the National Transportation Safety Board;

(2) a list of Federal gas pipeline safety standards established or in effect in such year with identification of standards newly established during such year;

(3) a summary of the reasons for each waiver granted under section 1672(d) of this title during such year;

[See main volume for text of (4) to (8)]

### (9) a compilation of—

(A) certifications filed by State agencies (including municipalities) under section 1674(a) of this title which were in effect during the preceding calendar year, and

(B) certifications filed under section 1674(a) of this title which were rejected by the Secretary during the preceding calendar year, together with a summary of the reasons for each such rejection;

### (10) a compilation of—

(A) agreements entered into with State agencies (including municipalities) under section 1674(b) of this title which were in effect during the preceding calendar year, and

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(1) prior to the expiration of 60 days after the plaintiff has given notice of such alleged violation to the Secretary (or to the applicable State agency in the case of a State which has been certified under section 1674(a) of this title and in which the violation is alleged to have occurred), and to any person who is alleged to have committed such violation; or

(2) if the Secretary (or such State agency) has commenced and is diligently pursuing administrative proceedings or the Attorney General of the United States (or the chief law enforcement officer of such State) has commenced and is diligently pursuing judicial proceedings with respect to such alleged violation.

Notice under this subsection shall be given in such manner as the Secretary shall prescribe by regulation.

**(c) Intervention by Attorney General**

In any action under subsection (a) of this section, the Secretary (with the concurrence of the Attorney General) or the Attorney General may intervene as a matter of right.

**(d) Other statutory or common law rights**

Nothing in this section shall restrict any right which any person (or class of persons) may have under any statute or at common law to seek enforcement of this chapter or any order or regulation under this chapter or to seek any other relief.

**(e) Costs and attorney's fees**

In any action under this section the court may, in the interest of justice, award the costs of suit, including reasonable attorney's fees and reasonable expert witness fees, to a prevailing plaintiff. Such court may, in the interest of justice award such costs to a prevailing defendant whenever such action is unreasonable, frivolous, or meritless. For purposes of this subsection a reasonable attorney's fee is a fee (1) which is based upon (A) the actual time expended by an attorney in providing advice and other legal services in connection with representing a person in an action brought under this section, and (B) such reasonable expenses as may be incurred by the attorney in the provision of such services, and (2) which is computed at the rate prevailing for the provision of similar services with respect to actions brought in the court which is awarding such fee.

**(f) Violation of State safety standards or practices**

For purposes of this section, a violation of any safety standard or practice of any State shall be deemed to be a violation of this chapter or of any order or regulation under this chapter only to the extent that such standard or practice is not more stringent than the comparable Federal minimum safety standard.

(Pub.L. 90-481, § 19, formerly § 17, as added Pub.L. 94-477, § 8, Oct. 11, 1976, 90 Stat. 2075, and renumbered Pub.L. 96-129, Title I, § 104(b), Nov. 80, 1979, 93 Stat. 992.)

**Legislative History.** For legislative history and purpose of Pub.L. 94-477, see 1976 U.S. Code Cong. and Adm. News, p. 4673.

**West's Federal Practice Manual**  
Intervention of right, see § 8839.

**Library References**

Gas § 14.5(2).

C.J.S. Gas § 34.

**CHAPTER 25—AVIATION FACILITIES EXPANSION AND IMPROVEMENT**

**SUBCHAPTER I—GENERAL PROVISIONS**

- Sec.  
1701. Repealed.  
1702. Repealed.  
1703. Repealed.  
1704. Reduction of nonessential expenditures.

**SUBCHAPTER II—AIRPORT AND AIRWAY DEVELOPMENT**

1711 to 1730.  
Repealed.

- Sec.  
1731. Approval of general aviation airport located astride line separating two counties in one State.

**SUBCHAPTER III—MISCELLANEOUS PROVISIONS**

1741. Maximum charges for certain overtime services.  
(a) to (d) [See main volume for text]

- Sec.  
1741. Maximum charges for certain overtime services.  
(e) Limitation on charges for Government inspection or quarantine.

- Sec.  
1742. Repealed.  
1743. Interstate compacts for airport facilities.

**SUBCHAPTER I—GENERAL PROVISIONS**

- § 1701. Repealed. Pub.L. 97-248, Title V, § 523(a), Sept. 3, 1982, 96 Stat. 695

Section, Pub.L. 91-258, Title I, § 2, May 21, 1970, 84 Stat. 219; Pub.L. 94-353, Title I, § 2, July 12, 1976, 90 Stat. 871, related to Congressional declaration of policy. See section 2201 of this title.

**Effective Date of Repeal.** Section 523(a) of Pub.L. 97-248 provided in part that repeal of this section is effective Sept. 3, 1982.

**Short Title.** Pub.L. 91-258, Title I, § 1, May 21, 1970, 84 Stat. 219, which provided that Title I of Pub.L. 91-258 be cited as the "Airport and Airway Development Act of 1970", was repealed by Pub.L. 97-248, Title V, § 523(a), Sept. 3, 1982, 96 Stat. 695.

**Savings Provisions.** All orders, determinations, rules, regulations, permits, contracts, certificates, licenses, grants, rights, and privileges which have been issued, made, granted, or allowed to become effective by the President, the Secretary, or any court of competent jurisdiction or any provision of the Airport and Airway Development Act of 1970 [this chapter] or the Federal Airport Act [chapter 14 (§ 1101 et seq.) of this title], which are in effect on Sept. 3, 1982, to continue in effect according to their terms until modified, terminated, superseded, set aside, or repealed by the Secretary or by any court of competent jurisdiction, or by operation of law, see Pub.L. 97-248, Title V, § 523(c)(1), Sept. 3, 1982, 96 Stat. 695, set out as a note under section 2201 of this title.

Separability Provisions. Pub.L. 91-258, Title I, § 52(d), May 21, 1970, 84 Stat. 219, provided that: "If any provision of this title [which enacted sections 1701 to 1703, 1711 to 1713, 1714 to 1731, and 1741 of this title, amended sections 1344, 1354, 1430, 1432, and 1509 of this title, and 7a of Title 16, Conservation, section 214 of Appendix to Title 40, Public Buildings, Property, and Works, sections 3188a and 3338 of Title 42, The Public Health and Welfare, section 1622 of the Appendix to Title 50, War and National Defense, and Reorg. Plan No. 14 of 1950, eff. May 24, 1950, 15 F.R. 3176, 64 Stat. 1267, set out in the Appendix to Title 5, Government Organization and Employees, repealed section 1101 to 1103, 1104 to 1106, and 1107a to 1120 of this title, and enacted provisions set out as notes under this section and section 1430 of this title] or the application thereof to any person or circumstances is held invalid, the remainder of the title and the application of the provision to other persons or circumstances is not affected thereby."

- § 1702. Repealed. Pub.L. 97-248, Title V, § 523(a), Sept. 3, 1982, 96 Stat. 695

Section, Pub.L. 91-258, Title I, § 3, May 21, 1970, 84 Stat. 219; Pub.L. 96-470, Title I, § 112(a), Oct. 19, 1980, 94 Stat. 2239, directed the Secretary of Transportation to formulate and recommend to Congress a national transportation policy and to report annually to Congress on implementation of this policy.

**Effective Date of Repeal.** Section 523(a) of Pub.L. 97-248 provided in part that repeal of this section is effective Sept. 3, 1982.

**Special Studies Relating to Airports and Environs; Consultations; Reports to Congress.** Pub. L. 94-353, Title I, § 26, July 12, 1976, 90 Stat. 885, provided that the Secretary of Transportation, in consultation with planning agencies, air-

port sponsors, other public agencies, airport users, and other interested persons or groups, conduct studies with respect to the feasibility, practicability, and cost of land bank planning and development for future and existing airports to be carried out through Federal, State and local government action, the establishment of new major airports, including identification and evaluation of locations and investigation of alternative methods of financing land acquisition, and the feasibility, practicability, and cost of soundproofing schools, hospitals and public health facilities located near airports, and submit the results of these studies to Congress, including legislative recommendations, within 1 year from July 12, 1976.

- § 1703. Repealed. Pub.L. 97-248, Title V, § 523(a), Sept. 3, 1982, 96 Stat. 695

Section, Pub.L. 91-258, Title I, § 4, May 21, 1970, 84 Stat. 220, required the Secretary of Transportation to submit to Congress within two years from May 21, 1970, a cost allocation study respecting appropriate method for allocating the

cost of the airport and airway system among various users.

**Effective Date of Repeal.** Section 523(a) of Pub.L. 97-248 provided in part that repeal of this section is effective Sept. 3, 1982.

- § 1704. Reduction of nonessential expenditures

The Secretary of Transportation shall, in accordance with this section, attempt to reduce, to the maximum extent practicable consistent with the highest degree of aviation safety, the capital, operating, maintenance, and administrative costs of the

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## 49 § 1671

## GAS PIPELINE SAFETY

Ch. 24

Sec.

1682. Administration.
- (a) Research and development contracts.
  - (b) Information furnished to Federal Power Commission.
  - (c) Cooperation with other agencies.
  - (d) Consultation with other agencies.
1683. Annual report to President and Congress.
1684. Authorization of appropriations.

## § 1671. Definitions

As used in this chapter—

- ① "Person" means any individual, firm, joint venture, partnership, corporation, association, State, municipality, cooperative association, or joint stock association, and includes any trustee, receiver, assignee, or personal representative thereof;
- ② "Gas" means natural gas, flammable gas, or gas which is toxic or corrosive;
- ③ "Transportation of gas" means the gathering, transmission or distribution of gas by pipeline or its storage in or affecting interstate or foreign commerce; except that it shall not include the gathering of gas in those rural locations which lie outside the limits of any incorporated or unincorporated city, town, village, or any other designated residential or commercial area such as a subdivision, a business or shopping center, a community development, or any similar populated area which the Secretary may define as a nonrural area;
- ④ "Pipeline facilities" includes, without limitation, new and existing pipe rights-of-way and any equipment facility, or building used in the transportation of gas or the treatment of gas during the course of transportation but "rights-of-way" as used in this chapter does not authorize the Secretary to prescribe the location or routing of any pipeline facility;
- ⑤ "State" includes each of the several States, the District of Columbia, and the Commonwealth of Puerto Rico;
- ⑥ "Municipality" means a city, county, or any other political subdivision of a State;
- ⑦ "National organization of State commissions" means the national organization of the State commissions referred to in part II of the Interstate Commerce Act;
- ⑧ "Interstate transmission facilities" means pipeline facilities used in the transportation of gas which are subject to the jurisdiction of the Federal Power Commission under the Natural Gas Act; and
- ⑨ "Secretary" means the Secretary of Transportation.

Pub.L. 90-481, § 2, Aug. 12, 1968, 82 Stat. 720.



v. Terrebonne Parish Police Jury, C.A. La.1971, 445 F.2d 301.

2. Rules and regulations

The regulations promulgated by Secretary under authority of this section while

not laws in sense that they are not Acts of Congress or statutes, have the force and effect of law. Baker v. Central & South West Corp., D.C.Okla.1971, 334 F. Supp. 752.

§ 1673. Technical Pipeline Safety Standards Committee

Creation; membership; qualifications

(a) The Secretary shall establish a Technical Pipeline Safety Standards Committee. The Committee shall be appointed by the Secretary, after consultation with public and private agencies concerned with the technical aspect of the transportation of gas or the operation of pipeline facilities, and shall be composed of fifteen members each of whom shall be experienced in the safety regulation of the transportation of gas and of pipeline facilities or technically qualified by training and experience in one or more fields of engineering applied in the transportation of gas or the operation of pipeline facilities to evaluate gas pipeline safety standards, as follows:

- (1) Five members shall be selected from governmental agencies, including State and Federal Governments, two of whom, after consultation with representatives of the national organization of State commissions, shall be State commissioners;
- (2) Four members shall be selected from the natural gas industry after consultation with industry representatives, not less than three of whom shall be currently engaged in the active operation of natural gas pipelines; and
- (3) Six members shall be selected from the general public.

Report of proposed standards; publication; record of Committee proceedings

(b) The Secretary shall submit to the Committee all proposed standards and amendments to such standards and afford such Committee a reasonable opportunity, not to exceed ninety days, unless extended by the Secretary, to prepare a report on the technical feasibility, reasonableness, and practicability of each such proposal. Each report by the Committee, including any minority views, shall be published by the Secretary and form a part of the proceedings for the promulgation of standards. In the event that the Secretary rejects the conclusions of the majority of the Committee, he shall not be bound by such conclusions but shall publish his reasons for rejection thereof. The Committee may propose safety standards for pipeline facilities and the transportation of gas to the Secretary for his consideration. All proceedings of the Committee shall be recorded and the record of each such proceeding shall be available for public inspection.

(c) Members of be compensated at \$100 per diem (inclusive of the Committee regular places of per diem in lieu of for persons in the ements under this employees or official Pub.L. 90-481, § 4,

Legislative History. history and purpose of

§ 1674. Stat

Report to S

(a) Except for t section 1681(b) of section, the provisio ties and the transp the Federal Power State when the sa regulated by a Sta to the Secretary an regulatory jurisdic pipeline facilities Federal safety st transportation of g the certification; the authority to re substantially the s and the filing for scribed in section makes provision fo State agency by wa ly the same as are except that a Sta tion without rega sanctions under St August 12, 1968. such form as the name and address the State agency; preceding twelve r

**Historical Note**

**Legislative History.** For legislative history and purpose of Pub.L. 90-481, see 1968 U.S.Code Cong. and Adm.News. p. 3223.

**§ 1682. Administration**

**Research and development contracts**

(a) The Secretary shall conduct research, testing, development, and training necessary to carry out the provisions of this chapter. The Secretary is authorized to carry out the provisions of this section by contract, or by grants to individuals, States, and nonprofit institutions.

**Information furnished to Federal Power Commission**

(b) Upon request, the Secretary shall furnish to the Federal Power Commission any information he has concerning the safety of any materials, operations, devices, or processes relating to the transportation of gas or the operation of pipeline facilities.

**Cooperation with other agencies**

(c) The Secretary is authorized to advise, assist, and cooperate with other Federal departments and agencies and State and other interested public and private agencies and persons, in the planning and development of (1) Federal safety standards, and (2) methods for inspecting and testing to determine compliance with Federal safety standards.

**Consultation with other agencies**

(d) The Secretary is authorized to consult with, and make recommendations to, other Federal departments and agencies, State and local governments, and other public and private agencies or persons, for the purpose of developing and encouraging activities, including the enactment of legislation, to assist in the implementation of this chapter and to improve State and local pipeline safety programs.

Pub.L. 90-481, § 13, Aug. 12, 1968, 82 Stat. 727; Pub.L. 92-401, § 3, Aug. 22, 1972, 86 Stat. 616.

**Historical Note**

**1972 Amendment.** Subsec. (d). Pub.L. 92-401 added subsec. (d). 1968 U.S.Code Cong. and Adm.News. p. 3223. See, also, Pub.L. 92-401, 1972 U.S. Code Cong. and Adm.News. p. 3049.

**Legislative History.** For legislative history and purpose of Pub.L. 90-481, see

**§ 1683. Annual report to President and Congress**

(a) The Secretary shall prepare and submit to the President for transmittal to the Congress on March 17 of each year a comprehensive report on the administration of this chapter for the preceding calendar year. Such report shall include—

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(1) a thorough compilation of the accidents and casualties occurring in such year with a statement of cause whenever investigated and determined by the National Transportation Safety Board;

(2) a list of Federal gas pipeline safety standards established or in effect in such year with identification of standards newly established during such year;

(3) a summary of the reasons for each waiver granted under section 1672(e) of this title during such year;

(4) an evaluation of the degree of observance of applicable safety standards for the transportation of gas and pipeline facilities including a list of enforcement actions, and compromises of alleged violations by location and company name;

(5) a summary of outstanding problems confronting the administration of this chapter in order of priority;

(6) an analysis and evaluation of research activities, including the policy implications thereof, completed as a result of Government and private sponsorship and technological progress for safety achieved during such year;

(7) a list, with a brief statement of the issues, of completed or pending judicial actions under this chapter;

(8) the extent to which technical information was disseminated to the scientific community and consumer-oriented information was made available to the public;

(9) a compilation of—

(A) certifications filed by State agencies (including municipalities) under section 1674(a) of this title which were in effect during the preceding calendar year, and

(B) certifications filed under section 1674(a) of this title which were rejected by the Secretary during the preceding calendar year, together with a summary of the reasons for each such rejection; and

(10) a compilation of—

(A) agreements entered into with State agencies (including municipalities) under section 1674(b) of this title which were in effect during the preceding calendar year, and

(B) agreements entered into under section 1674(b) of this title which were terminated by the Secretary during the preceding calendar year, together with a summary of the reasons for each such termination.

(b) The report required by subsection (a) of this section shall contain such recommendations for additional legislation as the Secretary deems necessary to promote cooperation among the several States in

the improvement of gas pipeline safety programs.  
Pub.L. 90-481, § 14, Aug.

**Legislative History.** For history and purpose of Pub.L.

United States ⇨41.

## § 1684. Authoriz

(a) There are authorized for the fiscal year ending June 30, 1976, and for each fiscal year ending June 30, 1977, for this chapter, except that subsection shall not be used

(b) For the purpose of section 1674(c) of this title, there are authorized general grants-in-aid, \$1,800,000 and \$2,500,000 for the fiscal years ending June 30, 1976, 1977, 1978, 1979, 1980, 1981, 1982, 1983, 1984, 1985, 1986, 1987, 1988, 1989, 1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 2205, 2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2218, 2219, 2220, 2221, 2222, 2223, 2224, 2225, 2226, 2227, 2228, 2229, 2230, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2238, 2239, 2240, 2241, 2242, 2243, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2259, 2260, 2261, 2262, 2263, 2264, 2265, 2266, 2267, 2268, 2269, 2270, 2271, 2272, 2273, 2274, 2275, 2276, 2277, 2278, 2279, 2280, 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STATE CORPORATION COMMISSION  
OF THE STATE OF KANSAS  
Proposed Permanent Regulations  
K.A.R. 82-11-1 through K.A.R. 82-11-9

Economic Impact Statement

- I. 1988 Kan. Sess. Laws, Ch. 366, Sec. 29(b)(1) Description of Proposed Rules and Regulations K.A.R. 82-11-1 through 82-11-9 (Gas Pipeline Safety)

The State Corporation Commission of the State of Kansas is authorized by K.S.A. 66-1,150 to adopt such rules and regulations as may be necessary to be in conformance with the Natural Gas Pipeline Safety Act of 1968 (49 U.S.C. 1671 et seq.). These proposed regulations detail minimum safety standards to be applied to jurisdictional pipeline operators and procedures and reporting requirements to be followed to ensure compliance with these standards.

- II. 1988 Kan. Sess. Laws, Ch. 366, Sec. 29(b)(2) Federal Mandate (K.A.R. 82-11-1 through 82-11-9)

The Natural Gas Pipeline Safety Act (NGPSA) provides federal grant monies to states that meet federal criteria. The authority of the Secretary of Transportation to prescribe standards and enforce compliance with such standards, under the NGPSA, does not apply to intrastate pipeline transportation when the safety standards and practices applicable to same are regulated by a state agency. The state agency must submit to the Secretary an annual certification that the state agency (1) has regulatory jurisdiction over the safety standards and practices of such transportation; (2) has adopted, as of the date of the certification, each federal safety standard established under the NGPSA, which is applicable to such transportation or, with respect to each such federal safety standard established within one hundred and twenty days before the date of the certification, is taking steps pursuant to state law to adopt such standard; (3) is enforcing each such standard; (4) is encouraging and promoting programs designed to prevent damage to pipeline facilities as a consequence of demolition, excavation, tunneling, or construction activity; and (5) has the authority to require record maintenance, reporting and inspection substantially the same as are provided under Section 14 of the NGPSA; and the filing for approval of plans of inspection and maintenance described in Section 13 of the NGPSA; and that the law of the state makes provision for the enforcement of the safety standards of such state agency by way of injunctive and monetary sanctions substantially the same as are provided under Sections 11 and 12 of the NGPSA.

The NGPSA provides that the Secretary of Transportation shall pay up to 50 percent of the cost of the personnel, equipment

and activities of a state agency reasonably required during the following calendar year to carry out a safety program under the annual certification provided to the Secretary by the state agency. During the calendar year 1987, Kansas was reimbursed \$91,561.98 by the Secretary of Transportation.

III. 1988 Kan. Sess. Laws, Ch. 366, Sec. 29(b)(3) Description of Persons subject to or Affected by K.A.R. 82-11-1 through 82-11-9

The State Corporation Commission of the State of Kansas currently enforces the minimum pipeline safety standards established by the U.S. Department of Transportation's Office of Pipeline Safety through the Commission's Pipeline Safety Section. The Commission has in the past entered such orders adopting such rules as were found necessary to remain in conformance with the NGPSA. The Commission issued such orders pursuant to the authorization of K.S.A. 66-1,150. Currently 68 municipal gas systems and 35 investor-owned gas systems are regulated by the Commission, pursuant to such orders.

K.S.A. 66-1,153 and 66-1,154 provides for a fee to be paid by the jurisdictional pipeline operators to the Commission according to the number of active gas meters in service within the service area of each gas pipeline system as follows:

For 2,000 meters or less	20¢ per meter
For 2,001 meters to 10,000 meters	15¢ per meter
For 10,001 meters to 50,000 meters	10¢ per meter
For 50,001 meters or more	7 1/2¢ per meter

However, if any public utility is required to pay the fee provided for pursuant to K.S.A. 66-1503 it shall not be liable for the fee imposed under K.S.A. 66-1,153.

K.S.A. 66-1503 allows the Commission, on a quarterly basis, to assess against the public utilities and common carriers subject to its jurisdiction the total amount of its expenditures, subject to adjustments, in proportion to the public utilities and common carriers respective gross operating revenue, during the last assessment period. However, the assessment shall not exceed 2 percent of such gross operating revenues.

Any fee paid by the jurisdictional pipeline operators or assessments made against the same by the Commission can be included in the operating expenses of the pipeline operator. These expenses would ultimately be paid by the ratepayers of the pipeline operators through their rates.

Since the Commission has enforced the NGPSA through various orders, the costs associated with the regulation of the

pipeline operators has also been assessed pursuant to the above-referenced statutes. As such, the costs associated with the proposed permanent regulations would be a continuation of the Commission's prior enforcement of the minimum safety standards and procedures and reporting requirements required by the NGPSA. There should be no change in the fees paid by the jurisdictional pipeline operators or assessments made against the same by the Commission solely because of the adoption of the permanent rules and regulations.

However, the proposed regulations in some instances provide for more stringent requirements than the minimum safety standards of the NGPSA. In these instances there may be an increase in the cost borne by the operators in complying with these more stringent standards. Since these expenses would ultimately be paid by the ratepayers of the pipeline operators, utility rates could also be affected.

The following is a brief summary of the proposed permanent regulations and the costs associated with these regulations:

82-11-1(a) through (l) Definitions: This regulation defines various terms as they are used throughout the NGPSA and the proposed permanent regulations. There is no economic impact due to this regulation.

82-11-2 Enforcement Procedures: This provision states that regulations adopted by the Commission pursuant to statutory authority shall be enforced by the Commission's Pipeline Safety Section. There is no additional cost which will accrue to the state agency, the affected utilities or the general public due to the adoption of this regulation.

82-11-3 Transportation of Natural and Other Gas by Pipelines: Annual Reports and Incident Reports: This regulation adopts Part 191 of the NGPSA as in effect on October 1, 1988. There is no additional cost which will accrue to the state agency, the affected utilities or the general public due to the adoption of this regulation.

82-11-3(a) through (q): These regulations detail when reports are to be made, to whom the reports are to be made and how the reports are to be performed. The regulations further detail the type of forms to be used. There is no additional cost which will accrue to the state agency, the affected utilities or the general public due to the adoption of this regulation.

82-11-4 Transportation of Natural and Other Gas by Pipeline: Minimum Federal Safety Standards: This regulation adopts Part 192 of the NGPSA, including Appendices A, B, C and D as they were in effect on October 1, 1988. There is no additional cost which will accrue to the state agency, the affected

utilities or the general public due to the adoption of this regulation.

82-11-4(a) Incorporation by Reference: This regulation states that all documents incorporated by reference in Part 192 are available for inspection at the Gas Pipeline Safety Section in Topeka, Kansas. The cost to the Gas Pipeline Safety Division is approximately \$1,000 for obtaining these documents. There is no appreciable cost to the affected utilities or the general public.

82-11-4(b) Distribution Line Valves: After an incident has occurred, it is imperative that the operator act expeditiously to eliminate the possibility of the incident spreading to involve other structures or segments of the general public. Isolation of the problem area can be accomplished by either the operation of pre-designated emergency distribution valves or the expeditious use of the squeeze-off technique. This regulation provides more stringent requirements than the current NGPSA for the protection of the public. First, all operators need to review their distribution systems to determine if consistent written criteria are being utilized to determine when emergency valves need to be installed. Second, at a minimum, all new residential subdivisions should have emergency valves incorporated into their design.

Economic Impact: The cost of the valves will represent an extremely small percentage of the total cost to install mains up to and throughout a subdivision. The cost of this regulation on utility rates will be a fraction of one cent per thousand cubic feet of gas sold.

82-11-4(c) Requirements for Design of Pressure Relief and Limiting Devices: Pressure relief and limiting devices are the safety equipment which directly protects the general public in the event that normally-operated equipment fails. In this proposed regulation, §192.199 of the NGPSA is to be made retroactive. This would mean that pressure relief and limiting devices installed before and after 1971 would have to meet the requirements of §192.199 as adopted and further amended by the proposed regulations.

Economic Impact: A significant number of utility facilities could be affected, however, the impact on rates should seldom exceed one cent per thousand cubic feet of gas sold.

82-11-4(d) Requirements for Design of Pressure Relief and Limiting Devices: Many pressure relief and limiting devices in Kansas are located near vehicular traffic where sparks from passing traffic or other sources pose the risk of igniting gas which is being intentionally vented. This proposed regulation would ensure that when natural gas is vented by a pressure

relief or limiting device it will be discharged at a height where it is less likely that the general public will be exposed to it and there is less risk of an ignition source being near the vented gas.

Economic Impact: Many locations have already had changes made to comply with this proposed language. The cost to bring the remaining facilities into compliance is expected to be negligible.

82-11-4(e) Requirements for Design of Pressure Relief and Limiting Devices: A critical concern for pressure relief devices is that they are capable of providing the protection for which they were designed. Vandals must not be capable of bypassing this equipment. In order to assist their maintenance responsibilities, operators often install valves in the vicinity of the pressure relief and limiting devices. The NGPSA section is interpreted only to apply to valves upstream of the relief device. However, there are other valves which, if operated by vandals, could also pose a risk to the general public and partially or completely negate the effectiveness of the company's overpressure protection system. This proposed regulation identifies these other valves which the operator must ensure that vandals cannot operate and thereby jeopardize the general public's safety.

Economic Impact: The cost to comply with this regulation should be negligible because compliance can be achieved by installing a padlock or similar equipment to protect unauthorized operation.

82-11-4(f) Inspection of Materials: A critical step at the time of construction, to ensure a long service life for new buried natural gas pipelines, is to verify that the pipe coating has no defects immediately prior to its lowering into the ditch. Defects in the coating will ultimately become a point of corrosion and a natural gas leak if the company's electrical surveys do not identify the presence of active corrosion. If leaks from defective coating become significant in populated areas, the safety of the public is at risk. This proposed regulation would mandate an accepted practice of the natural gas industry to use instruments to detect pipeline coating defects.

Economic Impact: The cost to conduct the inspection required by this regulation will represent a negligible portion of the total construction project and can be accomplished in a matter of minutes. It will appear on utility rates as a fraction of one cent per thousand cubic feet of gas sold.

82-11-4(g) Repair of Plastic Pipe: The use of plastic pipe is a well accepted material in the natural gas industry and



has become the dominant material installed across the country for 60 p.s.i.g. and less systems. Since its use has become so dominant, it is important that plastic pipe not be placed in service or continue to be used if it has imperfections or damage. Although patching saddles are being used by a utility in at least one state (Wisconsin), it is believed to be in the best interest of the public's safety for a utility to operate its plastic piping system without patching of imperfections or damage. This regulation would provide a more stringent standard in that all imperfections or damage to plastic pipe be removed.

Economic Impact: The practice of using patching saddles in Kansas is minimal. Therefore eliminating this option will have minimal or no cost impact.

82-11-4(h) Protection from Hazards: The proposed regulation deletes the term "either" from the NGPSA and would allow this section to be more easily understood.

Economic Impact: This revision is editorial and has no cost impact.

82-11-4(i) Protection from Hazards: The general public must be protected from the safety risk of aboveground pipelines, particularly since aboveground pipelines are now becoming very old. It has become a standard practice today for all new steel natural gas pipelines to be buried even though the minimum standards of the NGPSA still give the operator the option to place such piping aboveground. The proposed regulation addresses the public safety concern and necessitates that all Kansas operators begin a phase-in effort to place all aboveground pipelines underground, with a few exceptions, over the next seven year period.

Economic Impact: The total dollar amount required to be spent to be in compliance with this proposed regulation will be significant on a statewide basis. The total quantity of pipe affected will be several hundred miles although there will be extremely wide fluctuations on a company-by-company basis. Operators will be able to comply with this regulation by installing new pipe or lowering the existing pipe. The cost of installing new pipe will be significantly higher than simply lowering the existing pipe. The structural integrity of the existing pipe on a case-by-case basis will determine whether lowering is a viable option for the utility. Gas utilities have traditionally filed for rate increases at two to three year intervals. This would mean that the utilities will have two or possibly three rate cases in which to address the impact of this regulation. The cost of this regulation on utility rates will generally not exceed a few cents per thousand cubic feet of gas sold.

82-11-4(j) Installation of Pipe in a Ditch: The present NGPSA allows operators the option of placing new steel natural gas pipeline aboveground or underground. Aboveground pipelines present unacceptable safety risks and have a negative aesthetic impact on the general public. Further it is now an accepted practice in the U.S. natural gas industry that new natural gas pipeline should be buried. The proposed regulation eliminates the option which operators now have to place new pipelines aboveground.

Economic Impact: This regulation formalizes a practice which is already a standard in the industry. Its adoption should have a minimal, if any, cost increase for utilities.

82-11-4(k) General: This proposed regulation contains two changes which would make it more stringent than the present code.

(1) The existence of a well-designed and maintained corrosion control program is a critical aspect of maintaining a safe natural gas distribution system. Inspectors for the Gas Pipeline Safety Section need to be able to thoroughly review the corrosion procedures which all operators are utilizing to comply with the minimum safety standards of the NGPSA as adopted and amended by these regulations. This regulation necessitates that the procedures be in writing.

Economic Impact: The cost of this regulation will be minimal. A few operators will have to engage the services of an outside consultant to explain in writing the procedures being utilized by the consultant. However, many operators will be able to complete this work in-house and not incur significant costs.

(2) The NGPSA extends the operator's responsibility to the outlet of the meter or customer-owned piping, whichever is furthest downstream. Thus when utilities locate the meter at the property line or in the easement, it becomes the customer's responsibility to safely maintain the buried piping between the meter and the house. On the other hand, customers who live in service territories where the operator places the meter near the residence are having this same safety maintenance responsibility performed by the operator. The proposed regulation will eliminate this unequal level of protection between operators. Specifically, electrical surveys to detect the presence of active corrosion would be conducted on all customer-owned bare steel piping between the main and house, regardless of the meter location. Many customers with meters at the property line or in the easement are unaware of the importance of conducting electrical surveys on buried bare steel pipelines. Because the condition of these buried customer-owned pipelines is uncertain, the

proposed regulation requires that initial electrical surveys be completed on all buried steel customer-owned piping within the next two years. This regulation is intended to detect and prevent corrosion which, if unattended, would lead to natural gas leaks.

Economic Impact: Large sums are already being spent by operators to comply with the electrical survey requirements of the current NGPSA. The total additional dollars on a statewide basis to comply with this proposed regulation will be significant. However, it will generally only represent a moderate increase in the electrical survey budgets of utilities and the impact on utility rates generally will be less than one cent per thousand cubic of gas sold.

82-11-4(1) External Corrosion Control: Buried or Submerged Pipelines Installed after July 31, 1971: There are a number of locations in Kansas where pipelines have had their earth cover fully or partially removed because of erosion, county road maintenance practices and other causes. Public safety necessitates that these exposed pipelines be provided with a cathodic protection system equivalent to fully buried pipelines. This will minimize the onset of corrosion in the areas in contact with the soil and also areas experiencing atmospheric corrosion. The insertion of the term "exposed" eliminates the ability of certain operators from avoiding the safety intent of this regulation.

Economic Impact: Additional costs to maintain an external protective coating and a cathodic protection on exposed pipelines installed after July 31, 1971, will be minimal. The impact on utility rates is expected to be less than one cent per thousand cubic feet of gas sold.

82-11-4(m) External Corrosion Control: Buried or Submerged Pipelines Installed after July 31, 1971: The present NGPSA provides operators with an option of which the external protective coating and cathodic protection system used to protect the entire pipeline does not need to be provided. This option has led to confusion in its application. Maximizing public safety as well as utilizing the best means to ensure that the integrity of a pipeline necessitates that an external protection system be utilized in all new pipelines in Kansas. This proposed regulation would eliminate the availability of this option since it is not in the best interest of public safety.

Economic Impact: The deletion of this option is not expected to have a significant cost impact. Most operators in Kansas do not rely upon this option to avoid applying an external protective coating and installing a cathodic protection system.

82-11-4(n) External Corrosion Control: Buried or Submerged Pipelines Installed before August 1, 1971: This proposed regulation contains four changes which would make it more stringent than the present code.

(1) There are numerous locations in Kansas where pipelines have had their earth cover fully or partially removed because of erosion, county road maintenance practices and other causes. Public safety necessitates that the exposed pipelines be provided with a cathodic protection system equivalent to fully buried pipelines. This will minimize the onset of both corrosion in the areas which are in contact with the soil and also areas experiencing atmospheric corrosion.

Economic Impact: The cost of this regulation should be minimal especially in terms of its impact on utility rates.

(2) In the proposed regulation, subsection (b) has been amended to make it clear that this subsection applies to all three of the listed situations.

Economic Impact: There should be no cost impact from this change.

(3) The NGPSA currently provides alternative surveying methods for areas where it is practical to conduct electrical surveys. However the Act does not explicitly define what criteria these options must meet. The proposed regulation would specify both the leak survey instrumentation to be used and the interval at which such leak surveys should be conducted in areas where it is impractical to perform electrical surveys. The three year interval for leak surveys in impractical areas was selected to be consistent with proposed changes in the NGPSA.

Economic Impact: The cost of conducting flame ionization leakage surveys in impractical areas will be negligible. The overall impact on utility rates would be less than one cent per thousand cubic feet of gas sold.

(4) The NGPSA provides alternatives where it is impractical to conduct electrical surveys, but does not define "impractical areas." The proposed regulation establishes four criteria to satisfy this problem: (a) where the pipe lies under wall-to-wall pavement; (b) where the pipe is in a common trench with other utilities; (c) in areas with stray current; and (d) in areas where the pipeline is more than two feet under pavement.

Economic Impact: The proposed regulation will result in a significant increase in the total costs of conducting electrical surveys in Kansas, but the impact on utility rates

will generally not exceed one cent per thousand cubic feet of gas sold.

82-11-4(o) External Corrosion Control: Monitoring: The purpose of monitoring cathodic protection systems is to ensure that corrosion has been inhibited and to ensure that a change in circumstances has not occurred since the last monitoring period which might allow corrosion to occur. The monitoring frequency currently provided for separately protected service lines and separately protected short sections of mains or transmission lines is too infrequent to be in the best interest of public safety. The proposed regulation establishes a three-year interval which is more appropriate and reasonable and coincides with the three-year electrical survey interval required for re-evaluation of bare unprotected steel pipelines.

Economic Impact: The proposed regulation will result in a significant increase in the total costs of conducting electrical surveys in Kansas, but the impact on utility rates will generally not exceed one cent per thousand cubic feet of gas sold.

82-11-4(p) External Corrosion Control: Monitoring: This proposed regulation contains specific language that an operator must begin corrective measures within thirty (30) days or more promptly if necessary on any deficiencies indicated by the monitoring.

Economic Impact: This proposed regulation will have negligible or no additional cost impact because the existing pipeline safety regulations already mandate that corrective action should be taken.

82-11-4(q) External Corrosion Control: Monitoring: This proposed regulation specifies the leak survey instrumentation to be used and the interval at which the leak surveys should be performed in areas where it is impractical to do electrical surveys.

Economic Impact: The cost of conducting flame ionization leakage surveys in "impractical" areas will be negligible.

82-11-4(r) External Corrosion Control: Monitoring: The NGPSA currently provides alternatives where it is impractical to conduct electrical surveys, but does not define "impractical areas." The regulation establishes four criteria which will satisfy this problem, which are the same criteria as in 82-11-4(n).

Economic Impact: The proposed regulation will result in a significant increase in total cost of conducting electrical

surveys in Kansas, but the impact on utility rates will generally not exceed one cent per thousand cubic feet of gas sold.

82-11-4(s) Corrosion Control: Records: The NGPSA allows an operator the option of maintaining either records or maps to show the location of cathodically protected piping. The proposed regulation requires both records and maps because inspectors for the Gas Pipeline Safety Section need to be able to review both in order to conduct thorough inspections. The proposed regulation will create more uniformity between companies on information they are maintaining and could lead to more efficient operation by the utility.

Economic Impact: The total additional cost for utilities to maintain both records and maps of their cathodically protected piping will be negligible. Most utilities, if not all, already maintain maps of their pipeline system. Utilizing the same maps to depict cathodically protected piping will represent an insignificant expense for most utilities. The impact on utility rates will be well below one cent per thousand cubic feet of gas sold.

82-11-4(t) Corrosion Control: Records: In a number of circumstances utilities have encountered high readings or confusing information from their electrical surveys. When the operators uncovered the area, they realized they were getting readings from an anode. The proposed regulation requires galvanic anode locations be shown on the maps which will assist the operator in avoiding such wasteful efforts. It will also improve public safety because the operators will be able to easily identify where remedial actions have previously been performed along a pipeline.

Economic Impact: The cost of showing galvanic anodes on the operator's maps will require improved recordkeeping by field personnel, but there will be no significant impact on costs or utility rates.

82-11-4(u) Test Requirements for Pipelines to Operate at or below 100 p.s.i.g.: The NGPSA allows for mains to be operated at or below 100 p.s.i.g. even though they only need to be tested to at least 90 p.s.i.g. The ability to operate pipelines above the pressure to which they have been tested is not consistent with the safety principles utilized elsewhere in the NGPSA. The proposed regulation, which raises the required test pressure to at least 100 p.s.i.g., will eliminate this inconsistency.

Economic Impact: There will be no cost impact associated with this proposed regulation.

82-11-4(v) Records: The NGPSA only requires that records be kept for pressure tests on mains and transmission lines. Although the NGPSA requires that test also be performed on service lines, the code does not require that records be kept for such pressure tests. This proposed regulation would require that records also be kept for service line tests.

Economic Impact: The cost of this proposed regulation will be negligible because the existing code already requires that the tests be conducted. Requiring that the operator maintain records on all pressure tests represents an extremely small percentage of the cost of conducting such tests.

82-11-4(w & x) Records: The proposed regulations would require that the test date and the description of the facilities being tested also be recorded by the operator during the test to assist the inspector's review of the records.

Economic Impact: The proposed regulation would have no cost impact since the operator is only being required to record information which would normally be needed to differentiate various pressure tests.

82-11-4(y) General Requirements: The NGPSA requires that leak surveys be conducted at the end of each incremental increase of an uprating, but does not provide any further criteria or when specifically to conduct this leak survey. The proposed regulation provides there be a maximum time of eight hours after pressure stabilization when the leak survey must be conducted. Operators may conduct the leak survey sooner if the pressure in the pipe has stabilized.

Economic Impact: The proposed regulation would have a minimal incremental cost impact since the existing code already requires that leak surveys be conducted. The only circumstance which this regulation may increase the cost of the uprating is when an increment must be repeated. However, this cost factor is also within the operator's control when the uprating procedure is established. The impact on utility rates will be a fraction of one cent per thousand cubic feet of gas sold.

82-11-4(z) General Provisions: The NGPSA requires that operators develop written operating and maintenance plans, but there is no requirement that the operator submit the plans and all future revisions to the Gas Pipeline Safety Section. The ability of the Gas Pipeline Safety Section to effectively enforce the proposed regulations necessitates that it have a current set of these plans for each company in its possession to facilitate its annual inspection of the operators.

Economic Impact: The cost of this regulation will be limited to the cost which the company incurs in reproducing the manuals. This will be a negligible cost.

82-11-4(aa) General Provisions: Town border stations (TBS) provide pressure relieving and pressure limiting protection for communities. In many circumstances around Kansas the TBS is owned by a company other than the city which is receiving the gas supply. Often the municipality has been relying on the owner of the TBS to provide and set the pressure reducing and limiting devices. However, the municipalities often make no attempt to verify that the set level of the pressure relieving devices at the TBS will not exceed the safe maximum allowable operating pressure (MAOP) of its own pipeline. This is an unsatisfactory safety condition. The municipality must be formally verifying that the pressure relieving devices in the TBS are being set so that they do not exceed the MAOP of their pipeline, to ensure that the public safety is met. This proposed regulation would clearly establish that it is the responsibility of the operator downstream of the TBS to regularly receive, review and have in its possession documentation from the owner of the TBS to verify that the municipality's MAOP will not be exceeded.

Economic Impact: The cost to comply with this regulation will be minimal because it will require only a few hours of monitoring each year.

Various operators, especially municipalities, rely heavily upon consultants in order to meet the annual maintenance requirements of the NGPSA. The dependency on outside consultants by municipalities and others can lead to the opinion by operators that it is the responsibility of the consultant to keep them in compliance with the code. This concern is magnified by incidents where the municipality received bills for services that it was unable to verify had been performed. In these circumstances, the consultant made no contact with the municipal officials to advise the municipality as to when they would be performing the work. This proposed regulation makes it clear that the operator cannot, in any circumstance, delegate its ultimate responsibility to comply with all pipeline safety code requirements to a consultant. A municipality needs to be proficient in the pipeline safety regulations and oversee the work of the consultant.

Economic Impact: There will be no costs associated with this regulation beyond what is already expected of operators by the existing NGPSA.

82-11-4(bb) Emergency Plans: This proposed regulation specifies that operators should be required to formally review



all areas of their service territories to determine how gas supplies will be shut off in all emergencies within thirty (30) minutes of company personnel arriving on the scene. Such action is needed to ensure that an emergency will be confined to only the structure which originally activated the emergency response. Public safety necessitates that the proposed criteria be in place.

Economic Impact: The cost of this proposed regulation can be broken down into two separate parts. However the cost in both cases will be minimal. First, the time which each operator must spend to evaluate their entire system using the thirty (30) minute criteria will generally would be completed in-house and will not represent a significant cost item for the company. Second, the ability of the utility to comply with the thirty (30) minute criteria may require that a backhoe immediately be dispatched to the scene upon notification of an incident. This may require that a company incur the costs of purchasing additional backhoes. However such costs will only represent, in utility rates, a fraction of one cent per thousand cubic feet of gas sold.

82-11-4(cc) Investigation of Failures: The NGPSA requires that operators establish procedures to analyze accidents and failures. However, there is no requirement that the operator actually implement such procedures. The analysis of accidents is a key factor in minimizing the possibility of any reoccurrence. The proposed regulation has two requirements. First, operators will be required to investigate every accident and failure and to implement changes that would minimize the possibility of a reoccurrence. Second, for those incidents which must be reported under the NGPSA, a written report must be submitted within ninety (90) days of the incident detailing the cause and the steps which can be taken to minimize the possibility of future reoccurrence. The safety of the general public necessitates operators be required to conduct such investigations.

Economic Impact: The cost of investigating each accident and failure will be a minimal total dollar amount on a statewide basis because of the low frequency with which such accidents and failures occur. Most of these accidents and failures will be capable of being analyzed on the scene although a few will require laboratory analysis. Most of such failures, which are not required to be reported, will occur during pressure tests of new pipelines. Analysis of these failures will represent a small percentage of the total construction costs for the project. The requirement that operators submit a written report on reportable incidents, describing the cause of the incident, may result in a total report cost of \$5,000 to \$25,000 if laboratory analysis is required. The impact of

such a cost on utility rates would generally be well below one cent per thousand cubic feet of gas sold.

82-11-4(dd) Odorization of Gas: The detection of an odorant is an early warning mechanism of the presence of natural gas since natural gas itself is odorless. The NGPSA requires periodic sampling to ensure that proper odorant concentration exists in the operator's distribution system. However, the Act does not define the term "periodic." The proposed regulation establishes sampling requirements which will benefit the general public safety, in that it will ensure the operator's that odorant is reaching all parts of the distribution system.

Economic Impact: The proposed regulation will result in no cost impact if the operator is able to satisfy the code through routine service calls. If the operator has no service calls in a given month, then the operator will incur some additional costs making the contact to check the odorant. These costs would be minimal and generally represent in utility rates only a fraction of one cent per thousand cubic feet of gas sold.

82-11-4(ee) General: Four changes are made to the existing NGPSA by this proposed regulation.

(1) The NGPSA requires unsafe pipe to be replaced, repaired or removed but does not specify a time frame. This proposed regulation specifies that each segment of pipeline that becomes unsafe must be replaced, repaired or removed from service within five (5) days. This will ensure that unsafe conditions will be eliminated expeditiously once identified.

Economic Impact: This proposed regulation will have no additional cost impact beyond what is required by the NGPSA.

(2) The NGPSA does not specify the time frame in which operators must respond to leak complaints. Public safety will be increased with the requirement that all leaks are to be classified within one hour of the utility being notified of such leak.

Economic Impact: The cost of this regulation may require additional leak survey crews to respond to leak complaints. This incremental increase in leak survey crews and equipment will generally result in less than a one cent per thousand cubic feet increase in utility rates.

(3) The NGPSA is silent on setting a prioritization for classifying leaks. The proposed regulation establishes a uniform classification system for operators throughout the state to ensure equivalent levels of safety across the state.

Economic Impact: The cost of this regulation, if any, will only occur if the utility does not already classify leaks according to the proposed criteria. Conversion to the new criteria will represent a negligible cost for the utility.

(4) The NGPSA requires that hazardous leaks be repaired promptly but does not define the time frame in which such work must be performed. The proposed regulation specifies a time frame to repair leaks, according to class, in order to ensure that leaks are being eliminated in a uniform time frame across the state.

Economic Impact: The proposed regulation may entail a moderate cost increase due to repairs being required to be performed more quickly than the schedule and prioritization now utilized by the operator. The cost impact on utility rates will generally be less than one cent per thousand cubic feet of gas sold.

82-11-4(ff) Line Markers for Mains and Transmission Lines: Third party damage is a leading cause of natural gas incidents in Kansas and across the United States. The presence of line markers is an attempt to alert the general public to the presence of such pipelines. The proposed regulation provides line markers need to be placed on both sides of a public road and railroad crossings to be sure the general public is aware of the location of these pipelines in the event road construction and/or maintenance is taking place. These line markers include a telephone number of the operator so the general public can also report unusual conditions.

Economic Impact: The incremental costs of this regulation will be negligible since the current code already requires line markers on one side of public roads and railroad crossings. The additional cost of identifying the location needing line markers will be negligible. The cost of the line markers and their installation will be minimal and represent only a small fraction of one cent per thousand cubic feet of gas sold.

82-11-4(gg) Line Markers for Mains and Transmission Lines: The NGPSA only requires line markers on aboveground pipelines in areas accessible to the general public. It is the opinion of the Gas Pipeline Safety staff that this has resulted in fewer line markers being placed on aboveground pipelines than what is currently needed for public safety. The proposed regulation will require that all aboveground pipelines have line markers.

Economic Impact: The total cost of this regulation on a statewide basis will be moderate because of the large number

of markers which will need to be installed. However the impact on utility rates will be less than one cent per thousand cubic feet of gas sold.

82-11-4(hh) Distribution Systems: Patrolling: The NGPSA requires that patrols be made on both transmission and distribution systems. Although specific intervals are provided for the patrol of transmission lines, vague performance language is provided for the patrolling of distribution systems. The vagueness in the distribution patrols is of particular concern because distribution systems operate in higher densely populated areas. The proposed regulation would ensure that the same interval of patrols required on transmission lines will also be utilized in distribution systems. Implementation of this regulation will better ensure the safety of the general public and provide uniform statewide patrolling.

Economic Impact: The proposed regulation is expected to have negligible cost impact on utility operators across the state. The impact on utility rates will generally be only a fraction of one cent per thousand cubic feet of gas sold.

82-11-4(ii) Distribution Systems: Leakage Surveys and Procedures: Two changes in the NGPSA are made in the proposed regulation.

(1) The NGPSA requires that leakage surveys be conducted on all pipelines in areas outside principal business areas at intervals not exceeding five (5) years. However, the Act does not specify the leakage survey methodology which will satisfy this particular code requirement. Leak surveys in residential areas need to be conducted more frequently than once every five years if the public safety needs are to be met. The proposed regulation would require that the leak surveys be conducted at least once every three (3) years. Further the leak survey requirement would only be satisfied by the use of flame ionization equipment. Vegetation surveys would still be required as a supplement to the flame ionization surveys to attempt to detect changes which may occur between flame ionization tests. The proposed regulation specifies that the vegetation leakage surveys shall be conducted at least the months of April, May, June, September and October for each residence on an annual basis.

Economic Impact: The proposed regulation will have a significant cost impact on a statewide basis. However, the actual impact on utility rates will generally not exceed one cent per thousand cubic feet of gas sold. Additional leak survey crews and flame ionization equipment may be needed to satisfy the proposed regulation requirements. The vegetation leak survey is expected to have negligible cost impact because

it can be incorporated into the existing work responsibilities of meter readers.

(2) The current NGPSA does not extend the operator's pipeline safety responsibilities beyond the outlet of the meter or customer-owned piping, whichever is furthest downstream. Thus, the operator can limit its maintenance and safety responsibilities by placing the meter at the property line or in the easement. The customer would then have the responsibility to safely maintain the buried piping between the meter and the house. Customers with such meter locations do not understand that it is their responsibility to regularly conduct leak surveys and provide cathodic protection on these pipelines if they are steel. Such actions by the customer are the only means in which that customer will have the same level of protection as customers with the meters at the house. In addition, it has been discovered that there are a number of customer-owned service lines even in circumstances where the meter is located at the house. The proposed regulation would require that all buried customer-owned piping in Kansas be leak surveyed by flame ionization within twelve (12) months of the effective date of these regulations and then again at three (3) year intervals.

Economic Impact: The total cost of the proposed regulation on a statewide basis will be significant, especially in the first 12 months when the initial leak survey must be performed. Some utilities may be required to utilize outside consultants because of the time frame and the availability of equipment. The additional fact that all utilities statewide need to conduct this leakage survey within the same 12 months may result in higher consultant costs. However the impact on utility rates will generally be less than one cent per thousand cubic feet of gas sold.

82-11-4(jj) Valve Maintenance: Distribution Systems: Two changes are proposed to the existing NGPSA.

(1) The emergency valve maintenance section of the Act provides different requirements for transmission valves and distribution valves. Transmission valves need to be inspected and partially operated whereas distribution valves are only to be checked in service. Since both valves are important for public safety it is important that their maintenance requirements be the same. The proposed regulation requires distribution valves to also periodically be inspected and partially operated but at different intervals, because of the critical function which these valves fulfill and their proximity to higher density populations.

Economic Impact: The cost impact of this proposed regulation will be minimal. The impact on utility rates will generally be a fraction of one cent per thousand cubic feet of gas sold.

(2) This proposed regulation is to ensure that all valves are being maintained, even though less frequently, than those valves which have been designated as emergency valves. This requirement will more adequately address the safety needs of the public than the present NGPSA.

Economic Impact: The proposed regulation results in moderate cost impact on state-wide basis because these valves are not currently required to be inspected and partially operated. In some cases, operators will need to incur the cost of reviewing maps to find all these valves and make sure they are accessible. However, the impact on utility rates would generally be less than one cent per thousand feet of cubic feet sold.

82-11-5 Addressee for Written Reports: This proposed regulation provides the necessary address in which to send all the reports required by this article.

Economic Impact: There is no cost impact because of this proposed regulation.

82-11-6 Procedure to Ensure Compliance with Minimum Safety Standards: This proposed regulation provides for an annual audit inspection and follow-up inspections by inspectors from the Gas Pipeline Safety Section, to ensure compliance with the minimum safety standards provided for by the proposed regulations. The proposed regulation further provides for a show cause hearing, when all other reasonable measures have failed to produce operator compliance or when noncompliance presents an eminent danger to persons or property. The proposed regulations further establishes that the Commission may waive requirements of this regulation and issue an interim order if any instance of noncompliance with the safety standards of the proposed regulation presents any probable danger to persons or property.

Economic Impact: There will be no additional cost impact because of this proposed regulation since the requirements of this proposed regulation were previously provided for through Commission orders.

82-11-7 Reporting Requirements: This proposed regulation provides for the filing of an annual report by all operators on forms as prescribed in the NGPSA. The proposed regulation further requires each operator to notify the Gas Pipeline Safety Section upon the discovery of an incident within their certificated or operating areas. The proposed regulation

further details the requirements that each municipal operator shall meet and the information which needs to be provided to the Gas Pipeline Safety Section when the municipal gas operator has contracted with a consultant to perform a survey or inspection in order to comply with the minimum safety standards. In addition, each municipal gas operator must maintain complete records relating to the gas system for the life of the system for purposes of ensuring compliance with the minimum safety standard. The proposed regulation further requires construction notices to be submitted to the Gas Pipeline Safety Section in advance of actual construction activities.

Economic Impact: There will be no additional cost impact due to this proposed regulation since these requirements had previously been mandated by Commission order.

82-11-8 Customer Installations: Locations and Monitoring Responsibilities: The present NGPSA does not address the responsibilities of operators beyond the outlet of the meter or customer-owned piping, whichever is furthest downstream. Some operators were able to limit their safety responsibilities by placing the meter at either the property line or in the easement. This practice leads to unequal levels of protection across Kansas, depending on the gas company which is serving the customer. When the meter was located at the property line or in the easement, it became the responsibility of the customer to safely maintain the buried pipe between the meter and the house. Few customers in such circumstances realize the importance of regularly conducting leak surveys on such piping and also conducting electrical surveys if the piping should consist of steel. The proposed regulation will eventually eliminate all buried customer-owned piping, since all operators in Kansas will be assuming full ownership and maintenance responsibilities once repairs on the buried customer-owned piping are completed. The proposed regulation ensures that public safety is of paramount concern on this matter.

Economic Impact: The cost of this proposed regulation may be significant on a state-wide basis due to the fact that certain operators will be assuming significantly increased safety responsibilities. However, the impact on utility rates will seldom exceed two cents per thousand cubic feet of gas sold.

82-11-9 Waiver Provisions: This proposed regulation provides the means by which an operator may apply for a waiver of the requirements of the proposed regulations.

Economic Impact: There is no cost impact due to this proposed regulation.

IV. 1988 Kan. Sess. Laws, Ch. 366, Sec. 29(b)(4) Alternatives considered to Adopting K.A.R. 82-11-1 through 82-11-9

There are no other less costly or less intrusive methods of adopting the NGPSA by the State of Kansas. If the Secretary of Transportation were to determine that the Commission were not satisfactorily carrying out a safety program as required by the certification given by the state agency, the Secretary could withhold all or part of the federal funds the Commission would have been entitled to receive. In addition, the Commission could be prevented from enforcing the NGPSA through its own rules and regulations.



ATTACHMENT 6

PIPELINE SAFETY EXPENDITURES  
STATE FISCAL YEAR/GRANT YEAR

	<u>Public Service Regulation Fund</u>	<u>Gas Pipeline Inspection Fee Fund</u>	<u>Federal</u>	<u>Total</u>
St. FY 89 only 1-31-89	\$ 101,173.53	\$ 0	\$ 25,894.34	\$ 127,067.87
St. FY 88	144,472.96	13,186.44	79,581.46	237,240.86
St. FY 87	84,543.74	19,475.07	81,069.34	185,088.15
St. FY 86	104,562.42	0	67,757.84	172,320.26
St. FY 85	117,562.42	9,184.60	57,506.47	184,253.49

	<u>Total Expenditures</u>	<u>Federal Reimbursement</u>	<u>State Expenditures</u>
Gt. Yr. End. 12-31-88	\$ 262,606.00*	\$ 94,730.00	\$ 167,876.00*
Gt. Yr. End. 12-31-87	183,123.97	91,561.98	91,561.99
Gt. Yr. End. 12-31-86	180,362.75	90,181.37	90,181.38
Gt. Yr. End. 12-31-85	183,337.49	91,668.74	91,668.75
Gt. Yr. End. 12-31-84	177,984.34	75,461.22	102,523.12

\* Estimate

89-66tbl

TESTIMONY  
OF  
KAREN ARNOLD-BURGER, FIRST ASSISTANT CITY ATTORNEY  
CITY OF OVERLAND PARK, KANSAS  
BEFORE SUB-COMMITTEE OF THE HOUSE ENERGY AND NATURAL  
RESOURCES COMMITTEE  
TOPEKA, KANSAS

Good afternoon, my name Karen Arnold-Burger, First Assistant City Attorney, Overland Park, Kansas. Thank you for inviting me to speak today on the very important topic of natural gas pipeline safety.

As I am sure you are aware, Overland Park had two natural gas explosions in a 10-month period that leveled two single-family dwellings and damaged several others, one in December 1987 and another in September 1988. The first explosion resulted from a faulty t-connection, where the service line meets the main. To make this connection, the welder must insert one plastic pipe two inches into another plastic pipe and then melt them together with heat. In this case, the welder did not insert the pipe the full two inches, but only a fraction of an inch. The weld did not hold and gas leaked from the line and migrated into the house. It was a Union Gas line. The Federal Pipeline Safety Act requires a gas company not only make the weld properly, but also inspect to make sure it is done properly. A proper inspection would have revealed the faulty connection. Another t-connection uncovered at the same time also revealed a faulty weld. Upon further investigation, we discovered that Union had been cited in the past by K.C.C. staff for improper t-connection procedures. Our city fire department personnel also observed large rocks being removed from the top of the t-connection. Rocks are not considered by the federal code to be proper backfill material. It was discovered that Union had been overpressuring the lines as well and had not established verifiable maximum allowable operating pressures on the Overland Park line, or any of its lines, for that matter. Once the gas crews arrived, it took them an hour and a half to shut off gas to the area which continued to burn and create a hazard. No emergency shut-off valves had been located in the subdivision. The K.C.C. launched an investigation against Union and its operations statewide. This had been the second explosion in Union's system in three

months, the first being in September 1987 in Independence, Kansas, where a whole city block was destroyed due to a leak in corroded bare steel pipe that was being overpressured.

In July 1988 K.C.C. staff issued their 108-page report, listing 32 violations of federal and state regulations. And this from a company that dubbed itself throughout the ensuing process as the "safest utility in the state." A show cause hearing was set for September 1988. The City of Overland Park intervened in the case. On September 15 Union officials and the K.C.C. staff presented a Settlement Agreement and Plan to the City of Overland Park and asked for our approval. It called for a \$100,000 fine and an additional \$300,000 suspended on the condition that Union's system was brought into compliance over the next three years. We objected and asked for time to respond but were told that the Commission would not agree to a continuance. The Agreement and Plan were to be accepted by the Commission the next day. The following day the Commission accepted the Settlement Agreement and Plan. When asked whether or not Overland Park had reviewed it, K.C.C. Staff responded that we had. Since this was an ex parte order, a 30-day comment period was allowed after entry of the order. On October 5, 1988, Union officials and K.C.C. Staff members agreed to come to the City of Overland Park and answer questions about the Agreement and Plan. After the meeting, the City Council was not at all satisfied that it was in the best interest of public safety and filed written comments accordingly. The K.C.C. then ordered both a public and a technical hearing to be held in December in Overland Park. In the meantime, in September 1988 another house exploded, this time on a KPL line. Although the investigation is still not complete, corroded bare steel pipe is again suspected.

Just last week the Commission entered its final order on the Settlement Agreement and Plan with Union. It modified the Agreement and Plan pursuant to our suggestions to require compliance by October 31, 1989, on the majority of Union's system. They also increased the fine to \$200,000 with an additional \$200,000 due if Union does not comply. Union has until next Monday to accept or reject the Agreement and Plan as modified.

In the course of investigating the issue of natural gas pipeline safety several problems became apparent that should be addressed by this committee.

1. Union Gas has had a long history of noncompliance with the most basic code requirements. They have been cited repeatedly for failing to do certain things that have been required since 1971. They offered no explanation for their failure to comply. They were fined \$45,000 in 1985 for intentionally overpressuring a line in Overland Park. K.C.C. Staff was willing to give them three more years to bring their system into compliance. We have to ask why? Why was their noncompliance allowed to continue? We still do not know the answer to this question but perhaps this committee can find one.

2. The K.C.C. is understaffed. Currently, there are only six gas safety inspectors for the entire state (up from five a year ago). It is impossible for them to thoroughly audit each operator and to do more than randomly inspect installations and repairs. When any building is erected or remodeled in this state, it is subject to numerous inspections. Water lines and sewer lines are inspected when installed. Yet natural gas lines, clearly the most dangerous of all, are not inspected. This must change. The citizens of this state have been comfortably believing that the K.C.C. has been the watchdog of our safety. They had no idea that, due to lack of staff, the utilities were watching themselves. There must

be an adequate number of pipeline safety inspectors to inspect every installation and repair. Only then can we be assured compliance with safety regulations.

3. The K.C.C. inspection staff is inexperienced and lacks adequate training. Although moves have been made internally to correct this problem, the state legislature should adopt mandatory minimum education and training standards before any inspectors will be allowed to inspect. To get qualified individuals, the salary will have to be sufficient to attract persons with the necessary educational background.

4. The K.C.C. Staff as a whole generally suffers from high turnover and, therefore, a lack of consistency and expertise. Employment with the Commission is seen as a stepping stone for more lucrative employment elsewhere. It should be noted that this is a common problem nationwide with regulatory agencies. However, there should be key upper level jobs that mandate high levels of experience and expertise.

5. The legislature needs to carefully outline the enforcement powers it gives to the K.C.C. in the area of gas pipeline safety. This means an update and expansion of K.S.A. 66-1,150 et seq. so that there will be no confusion as to its authority.

6. Replacement by utilities of all bare steel pipe service lines regardless of meter location needs to be considered. It has become obvious that these lines have been allowed to corrode perhaps to a point beyond repair. Throughout the last year both Union and KPL have been checking their lines and the number of leaks found has been astounding. Many of them have been considered hazardous and require immediate attention. The utilities had not been conducting the surveys of the

lines as required but had instead been relying on customer reporting of leaks. As has become all too painfully obvious in the last few months, it is difficult for the average citizen to detect the odorant in time when sleeping and equally as difficult during all hours for the elderly and those with various breathing difficulties. In addition, if the leak is traveling through the ground as has been the case in all the explosions we have read about in recent months, including the two in Overland Park, much of the odorant is absorbed into the soil and lost.

If the pipe is corroded to the point of leaking, in the area of service lines, it should be replaced with the safer more durable plastic. The K.C.C. is considering this issue as indicated in their meeting on the topic this morning. This committee should monitor the problem closely.

7. Finally, the City of Overland Park is well aware of the financial and manpower restrictions that plague municipally-owned utilities. However, rather than try to overlook the safety problems that exist in such systems, the state needs to examine areas in which it can assist these small communities in upgrading and maintaining their systems in compliance with state regulations.

In conjunction with these comments, I am also submitting copies of Mayor Ed Eilert's testimony at both the technical and public hearings in Overland Park, which outline dramatically the problems with Union. As stated earlier, as to KPL, we know they have also had an unwillingness in the past to comply with certain regulations and no enforcement action has been taken. We will be anxiously awaiting the investigative report that K.C.C. Staff should be submitting shortly.

I will be happy to answer any questions you might have and again thank you for inviting me to speak on behalf of the City of Overland Park.

MAYOR ED EILERT

BEING FIRST DULY SWORN TO TESTIFY THE TRUTH, THE WHOLE TRUTH,  
AND NOTHING BUT THE TRUTH, TESTIFIED ON HIS OATH AS FOLLOWS:

MAYOR EILERT: COMMISSIONERS. MY NAME IS  
ED EILERT AND I AM THE MAYOR OF THE CITY OF OVERLAND  
PARK. I WOULD LIKE TO FIRST TAKE THIS OPPORTUNITY ON  
BEHALF OF THE GOVERNING BODY OF THE CITY OF OVERLAND  
PARK TO THANK YOU FOR ORDERING A PUBLIC HEARING IN THIS  
MATTER AND FOR TAKING TIME OUT OF YOUR BUSY SCHEDULES  
TO CONDUCT THE HEARING IN OUR CITY.

AS WE STATED AT THE TIME THE SETTLEMENT AGREEMENT  
AND PLAN WERE ENTERED INTO BETWEEN THE COMMISSION STAFF  
AND UNION, WE BELIEVE THAT, GIVEN THE SEVERITY OF THE  
VIOLATIONS OUTLINED IN THE JUNE 1 COMMISSION REPORT  
AND THE QUESTIONS IT RAISES CONCERNING THE SAFETY OF  
UNION'S SYSTEM AND PRACTICES, IT WAS ESSENTIAL THAT  
THE PUBLIC BE GIVEN AN OPPORTUNITY TO HEAR UNION'S  
RESPONSES TO THE VIOLATIONS AND COMMENT ON ANY  
SETTLEMENT THAT MIGHT BE PROPOSED.

INCIDENTALLY, MY UNDERSTANDING OF THE SETTLEMENT  
THAT WAS SIGNED WAS THAT IT WAS, IN FACT, SUBJECT TO  
ADDITIONAL DELIBERATIONS AND PUBLIC COMMENT PERIOD.  
SO THAT, IN FACT, NOTHING HAS BEEN FINALIZED BY ANY-  
BODY UNTIL THOSE PERIODS HAVE ELAPSED AND ADDITIONAL  
DECISIONS HAVE BEEN MADE.

*H Energy and NR  
2522-89  
Attachment 2a*



WE BELIEVE THE PUBLIC HAS A RIGHT TO KNOW WHY IT IS APPROPRIATE TO ALLOW, AS OUTLINED IN THE PLAN, THREE YEARS TO COMPLY WITH CODE REQUIREMENTS THAT HAVE EXISTED FOR YEARS AND THAT UNION HAS BEEN CITED FOR VIOLATING IN THE PAST.

WE BELIEVE THE PUBLIC HAS A RIGHT TO KNOW BY WAY OF A MANAGEMENT AUDIT WHETHER UNION IS CAPABLE OF COMPLYING WITH FEDERAL AND STATE REGULATIONS GIVEN THEIR CURRENT STAFFING LEVELS AND TRAINING.

AND FINALLY, WE BELIEVE THE PUBLIC HAS A RIGHT TO KNOW WHETHER THE GAS LINES SURROUNDING THEIR HOMES ARE FREE OF LEAKS AND CORROSION.

NOW I WANT TO MAKE CLEAR MY COMMENTS THIS EVENING PERTAIN TO THE ORIGINAL PLAN THAT WAS SUBMITTED. I SPOKE THIS AFTERNOON AT THE TECHNICAL HEARING OF SUPPORT FOR THE AMENDMENTS OFFERED BY KCC STAFF MEMBER, BOB ELLIOTT, AND AS I STATED THEN, WE DO NOT OPPOSE THE CONCEPT OF A SETTLEMENT.

THIS AFTERNOON WE DID TAKE PART IN A TECHNICAL HEARING THAT WAS ORDERED AND FOR THE FIRST TIME SINCE THE OCCURRENCES OF THE EXPLOSION AT OVERLAND PARK OCCURRED, UNION PUBLICLY PRESENTED TESTIMONY REGARDING THEIR PRACTICES, PROCEDURES AND EXPLANATIONS THEREFOR. WE BELIEVE THAT WOULD HAVE NEVER OCCURRED IN THE ABSENCE OF A HEARING. DURING THE HEARING, I TESTIFIED BEFORE YOU REGARDING THE CITY'S POSITION ON WHAT WE

BELIEVE ARE SEVERAL INADEQUACIES IN THE AGREEMENT AND THE PLAN THAT WAS SUBMITTED TO YOU.

I SUBMITTED TO YOU THIS AFTERNOON DOCUMENTATION WITH REGARDS TO REPEAT VIOLATIONS BY UNION OVER THE LAST FIVE YEARS.

IN THE JUNE 1, 1988 REPORT PREPARED BY THE COMMISSION, UNION WAS CITED FOR FAILURE TO ADEQUATELY PROTECT AGAINST THE OVERPRESSURING OF ITS LINES. BOTH THE INDEPENDENCE AND THE OVERLAND PARK INCIDENTS, ACCORDING TO REPORTS RECEIVED BY THE KCC, DONE BY THEIR OWN STAFF AND OTHER PARTIES, THOSE INCIDENTS INVOLVED LINES THAT WERE BEING OVERPRESSURED. THE AUDIT CONDUCTED BY THE KCC STAFF REVEALED MORE EXAMPLES OF FAILURE TO ADEQUATELY PROTECT AGAINST OVERPRESSURING. PRIOR TO SENDING NATURAL GAS INTO A PERSON'S HOME, REGULATOR STATIONS REDUCED THE NATURAL GAS FROM POUNDS TO OUNCES. COMMISSION STAFF IN TESTIMONY ALREADY FILED IN THIS MATTER HAS INDICATED THAT OVERPRESSURE PROTECTION DEVICES, WHICH ARE REQUIRED BY THE FEDERAL CODE, ARE THE "COMPANY'S PROTECTION OF LAST RESORT FOR THE GENERAL PUBLIC." COPIES OF THE COMMISSION'S RECORDS SHOW THAT DURING A THREE-AND-A-HALF YEAR PERIOD PRIOR TO THE EXPLOSIONS UNION HAD BEEN CITED ON AT LEAST SEVEN OCCASIONS WITH VARIOUS VIOLATIONS CONCERNING THE INSTALLATION, TESTING, AND USE OF OVERPRESSURE PROTECTION DEVICES.

IN 1984 INTENTIONAL OVERPRESSURIZATION OF A LINE, IN OUR CITY, RESULTED IN A \$45,000 FINE.

AS EARLY AS SEPTEMBER 1983 COMMISSION STAFF NOTED IN THEIR REPORTS, "UNION GAS HAS SEVERAL DISTRICT REGULATOR STATIONS THAT ARE REDUCING POUNDS TO OUNCES. THERE IS NO RELIEF DEVICE TO PROTECT THE OVERPRESSURE CONDITION AND MAKES FOR A HAZARDOUS CONDITION." THAT WAS IN 1983, SEPTEMBER. PARAGRAPH FIVE OF THE PLAN, BEFORE YOU, REQUIRES REGULATOR STATIONS BE COMPLETED BY JULY 31, 1991, ALLOWING THREE MORE YEARS TO PUT IN DEVICES THAT COMMISSION STAFF SAID ALMOST FIVE YEARS AGO WERE PRESENTING A HAZARDOUS CONDITION BY THEIR ABSENCE. THIS TIME FRAME IS, IN OUR OPINION, UNACCEPTABLE AND NOT IN THE BEST INTEREST OF PUBLIC SAFETY.

ALSO IN THE JUNE 1 REPORT, UNION WAS CITED FOR A VARIETY OF CORROSION CONTROL PROBLEMS. THE COMMISSION STAFF FOUND THAT BADLY CORRODED AND LEAKING STEEL PIPE CAUSED THE INDEPENDENCE, KANSAS EXPLOSION. THE COMPANY-WIDE AUDIT CONDUCTED BY KCC STAFF ALSO CITED CORROSION CONTROL PROBLEMS.

COPIES OF COMMISSION RECORDS SHOW THAT ON AT LEAST EIGHT OCCASIONS IN A THREE-AND-A-HALF-YEAR PERIOD PRIOR TO THE EXPLOSIONS, UNION WAS CITED WITH VIOLATIONS CONCERNING CORROSION CONTROL ON ITS LINES OR RISERS.

IN A REPORT FROM COMMISSION STAFF ATTACHED TO THE COMMISSION'S ORDER FINING UNION \$45,000 IN JANUARY 1985 STAFF WROTE:

UNION HAS NOT ADDRESSED THE AREA OF CORROSION CONTROL AND DO NOT HAVE QUALIFIED PERSONNEL. IT IS RECOMMENDED THAT A CIVIL PENALTY OF \$15,000 BE PLACED ON THE OPERATOR AND A 2-YEAR PROGRAM BE ESTABLISHED AND COMPLETED IN THIS TIME FRAME AND EVERY SIX MONTHS A PROGRESS INSPECTION BE PERFORMED TO MONITOR THE PROGRAM.

THAT WAS STAFF'S COMMENT WRITTEN ALMOST FOUR YEARS AGO.

PARAGRAPH 6 OF THE PROPOSED PLAN ALLOWS UNION UNTIL OCTOBER 31, 1991 TO SURVEY AND INSTALL CORROSION PROTECTION DEVICES ON ITS BARE STEEL PIPE AND UNTIL OCTOBER 31 OF NEXT YEAR TO PROTECT ALL THE COATED STEEL RISERS ATTACHED TO PLASTIC SYSTEMS. THIS TIME FRAME IS, IN OUR OPINION, NOT IN THE BEST INTEREST OF THE PUBLIC SAFETY.

THE JUNE 1, 1988 REPORT CITES UNION WITH FAILURE TO ESTABLISH MAXIMUM ALLOWABLE OPERATING PRESSURES ON THEIR LINES. THE REPORT STATES THAT THE ESTABLISHMENT OF CORRECT MAXIMUM ALLOWABLE OPERATING PRESSURES FOR A NATURAL GAS PIPELINE SYSTEM IS EXTREMELY CRITICAL AND SHOULD HAVE BEEN DONE WHEN THE REGULATIONS WERE PUBLISHED IN 1971. WITHOUT VERIFIABLE MAOPs, SAFE OPERATING PRESSURES ON A NATURAL GAS

PIPELINE CANNOT BE ASSURED. I SUBMITTED COPIES OF COMMISSION RECORDS TO YOU THIS AFTERNOON THAT INDICATE ON AT LEAST FIVE OCCASIONS IN A 3-YEAR PERIOD PRIOR TO THE EXPLOSIONS, UNION WAS CITED WITH FAILURE TO ESTABLISH MAXIMUM ALLOWABLE OPERATING PRESSURES. IN ONE OF THOSE DOCUMENTS, UNION OFFICIALS WROTE TO THE COMMISSION IN DECEMBER 1986 STATING THAT "ALTHOUGH THIS NON-COMPLIANCE IS RELATIVELY VOLUMINOUS . . . , WE WOULD ESTIMATE A TOTAL COMPLETION WITHIN SIX TO NINE MONTHS." THAT WAS DECEMBER 1986.

PARAGRAPH 8 OF THE PLAN ALLOWS UNION THREE YEARS TO COMPLETE THIS EXTREMELY CRITICAL ITEM. THIS TIME FRAME IS, IN OUR OPINION, UNACCEPTABLE AND NOT IN THE BEST PUBLIC INTEREST.

THE JUNE 1 REPORT CITES UNION WITH FAILING TO PROPERLY INSTALL AND INSPECT A PLASTIC T-JOINT THAT RESULTED IN THE EXPLOSION IN OVERLAND PARK ONE YEAR AGO.

COMMISSION RECORDS THAT I PRESENTED THIS AFTERNOON IN THE TECHNICAL HEARING SHOW THAT ON AT LEAST TWO OCCASIONS PRIOR TO THE DECEMBER 1987 EXPLOSION AT KENSINGTON MANOR, UNION WAS CITED FOR VIOLATIONS OF THE CODE PROVISIONS REGARDING PIPE JOINING PROCEDURES. IN 1983 THE COMMISSION STAFF ORDERED UNION TO CEASE INSTALLING PLASTIC PIPE UNTIL THE NON-COMPLIANCES WERE CORRECTED. THEY WENT ON TO STATE THAT ANY

PLASTIC PIPE INSTALLED AND COVERED WOULD HAVE TO BE UNCOVERED AND ITS JOINTS REMOVED. IT SHOULD ALSO BE BROUGHT TO THE ATTENTION OF THE COMMISSION THAT, INCLUDING THE DECEMBER 1987 VIOLATION, ALL THREE OF THESE VIOLATIONS OCCURRED IN THE CITY OF OVERLAND PARK, WITHIN A ONE-MILE AREA.

IN ITS PREFILED TESTIMONY PRESENTED THIS AFTERNOON, IN MY OPINION, UNION OFFICIALS ATTEMPTED TO TRIVIALIZE RESPONSIBILITY FOR THE OVERLAND PARK EXPLOSION BY ATTRIBUTING IT TO "EMPLOYEE ERROR." IT ASSERTS THAT IMPLEMENTATION OF THE AGREEMENT AND PLAN WOULD NOT PREVENT SUCH EXPLOSIONS FROM OCCURRING IN THE FUTURE, BECAUSE IT DOES NOT ADDRESS THE SORT OF "EMPLOYEE ERROR" THAT CAUSED THE EXPLOSION. SUCH A FATALISTIC ATTEMPT TO DIMINISH ITS CULPABILITY FOR THE COMPLETE DESTRUCTION OF AN OVERLAND PARK SINGLE, FAMILY RESIDENCE AND THE DISTRESS INFLECTED UPON ITS OWNERS, I THINK, ONLY SERVES TO DEMONSTRATE WHAT I WOULD CALL A SOMEWHAT CAVALIER APPROACH TO THE QUESTION OF PUBLIC SAFETY. WHO IS RESPONSIBLE FOR INSURING THAT SUCH AN "EMPLOYEE ERROR" NEVER OCCURS AGAIN?

I WOULD ALSO ASK THE QUESTION THAT WAS STATED IN THE HEARING THIS AFTERNOON THAT THERE WAS A VISUAL INSPECTION OF THAT HOOKUP, BUT CITY RECORDS AND I THINK VIDEOTAPE INDICATE THAT ON TOP OF THAT "T" WAS

SITTING A RATHER LARGE ROCK, EIGHT INCHES IN DIAMETER, AS IT WAS DESCRIBED TO ME.

THE EXPLOSION TOOK PLACE, AS I RECALL, DECEMBER 19. ON JANUARY 4TH THE CITY ISSUED A TICKET TO A CONTRACTOR WHO HAD BEEN HIRED BY THE INSURANCE COMPANY OF THE GAS COMPANY WHO WAS IN THE PROCESS AND, IN FACT, HAD SUBSTANTIALLY COMPLETED REMOVAL OF ALL THE DEBRIS, INCLUDING THE FOUNDATIONS AT THAT HOME SITE WITHOUT A CITY PERMIT. BECAUSE OF THAT ACTION THE CITY CITED THE LACK OF A PERMIT AND THE CONTRACTOR WAS BROUGHT INTO MUNICIPAL COURT AND FINED A MAXIMUM AMOUNT OF \$500. THAT FINE IS REALLY BESIDE THE POINT. IN LESS THAN 30 DAYS THE ENTIRE AREA HAD BEEN EXCAVATED AND CERTAINLY THE CITY HAD LITTLE OPPORTUNITY TO MAKE ADDITIONAL INVESTIGATIONS OF THE PROPERTY AND/OR FOUNDATIONS.

IN ADDITION, THE CITY BELIEVES THAT THE ONLY WAY TO INSURE THE PUBLIC SAFETY, BOTH IN ACTUALITY AND IN PERCEPTION, IS TO REQUIRE IMMEDIATE AND COMPREHENSIVE FLAME IONIZATION SURVEYS OF ALL UNION LINES, INCLUDING THE LINE FROM THE MAIN TO THE HOUSE, REGARDLESS OF METER LOCATION, AND TO REQUIRE APPROPRIATE REPLACEMENT OR REPAIRS BASED UPON THE FINDINGS. WE FEEL THIS IS NOT ADEQUATELY ADDRESSED IN THE PLAN. AGAIN, WE BELIEVE SUCH ACTION IS NECESSARY IN LIGHT OF THE NUMEROUS

AND REPEATED VIOLATIONS BY UNION GAS. IN ADDITION, WE BELIEVE IT IS NECESSARY TO LIMIT THE ABILITY OF UNION TO "POLICE" ITSELF. BASED UPON ITS CURRENT AND PRIOR VIOLATIONS, IT HAS SHOWN, IN OUR OPINION, AND I HAVE TO SAY THIS, A LACK OF CONCERN FOR SAFETY OR AN INABILITY TO MANAGE A SAFE SYSTEM. THEREFORE, WE FEEL SUCH CONDUCT WARRANTS CLOSE SUPERVISION BY THE KANSAS CORPORATION COMMISSION STAFF AND IN SOME PLACES A COMPLETE DELEGATION TO A THIRD PARTY. IT IS FOR THAT REASON THAT WE BELIEVE THE LEAK SURVEY SHOULD BE CONDUCTED BY A THIRD PARTY APPROVED BY THE COMMISSION AS WAS FOUND BY THE COMMISSION TO BE NECESSARY EARLIER THIS YEAR IN THE OVERLAND PARK SUB-DIVISION.

THE BOTTOM LINE IS THIS. HOW LONG MUST THE CITIZENS OF KANSAS WAIT TO BE ASSURED THAT UNION'S SYSTEM IS BUILT AND MAINTAINED IN COMPLIANCE WITH STATE AND FEDERAL SAFETY STANDARDS? WE BELIEVE THREE YEARS TO BRING MUCH OF THEIR SYSTEM INTO COMPLIANCE IS UNACCEPTABLE. IN RESPONSE TO OUR CONCERNS, UNION HAS NOW EXPEDITED ITS COMPLIANCE TIMETABLE. THE COMMISSION STAFF TESTIFIED THIS AFTERNOON THAT IT FEELS THAT THE MAJORITY OF THE CITY'S RECOMMENDATIONS IN THIS REGARD CAN BE ACCOMPLISHED AND THAT UNION'S SYSTEM, STATEWIDE, WITH A FEW EXCEPTIONS, CAN BE BROUGHT INTO COMPLIANCE WITHIN THE NEXT SIX-AND-ONE-HALF MONTHS.



WE BELIEVE THAT THAT SHOULD BE THE COMMISSION'S ORDER.

FINALLY, THE CITY IS ENCOURAGED BY THE RECENT MANAGEMENT AUDIT REQUIRED OF UNION BY THE STAFF AND THE COMMISSION. IN JANUARY 1985 UNION WAS FORCED TO OVERPRESSURE ITS LINES IN OVERLAND PARK, BECAUSE ITS SYSTEM HAD NOT BEEN UPGRADED TO HANDLE THE GROWTH IN OUR CITY. IN APRIL 1985 COMMISSION STAFF WROTE: OBSERVING THE CURRENT STAFF IN THE NORTHERN DIVISION OF THE UNION GAS SYSTEM, INC., IT IS TRULY INADEQUATE TO MAINTAIN A NORMAL MAINTENANCE PROGRAM. THIS LEAVES THE HARD QUESTION AS TO HOW THE OPERATOR INTENDS TO BRING THIS SYSTEM INTO COMPLIANCE IN A REASONABLE TIME. THE PRESENT CONDITION OF THE SYSTEM IS CONSISTENTLY BORDERING A HAZARDOUS CONDITION. IT APPEARS TO SHOW THE MANAGEMENT HAS A MINIMUM RESPONSIBILITY CONCERN TO THE SAFETY OF THE SYSTEM, GENERAL PUBLIC, AND THE MINIMUM SAFETY REGULATIONS.

AGAIN, THIS WAS WRITTEN BY STAFF ON APRIL 1985.

WE FEEL A MANAGEMENT AUDIT IS A NECESSARY STEP IN INVESTIGATING THE ABILITY OF UNION TO OPERATE A SAFE AND EFFICIENT SYSTEM IN THE STATE OF KANSAS. WE URGE THE STAFF AND COMMISSION TO PROCEED QUICKLY WITH THE SELECTION OF A FIRM AND WOULD REQUEST THAT A COMPLETION DEADLINE BE SET FOR NOT LATER THAN JULY 1, 1989. WE ALSO REQUEST THAT THE COST OF THIS AUDIT BE ASSESSED

AGAINST THE COMPANY AND NOT INCLUDED IN THE RATE BASE.

THE CITY IS ENCOURAGED BY THE NEW REGULATIONS PROPOSED BY STAFF. WE FEEL THAT IN LINE OF THE NON-COMPLIANCES UNVEILED IN THIS INVESTIGATION AND THE CONFUSION SURROUNDING INTERPRETATION OF THE CURRENT REGULATIONS ARISING OUT OF THE KPL EXPLOSION IN OUR CITY IN SEPTEMBER OF THIS YEAR, THE PROPOSED CHANGES ARE NECESSARY TO INSURE PUBLIC SAFETY THROUGHOUT THE STATE OF KANSAS. WE ARE NOT AT ALL CONCERNED THAT, IF ADOPTED AS PROPOSED, THEY WILL BE AMONG THE TOUGHEST IN THE COUNTRY. WE WOULD BE PLEASED THAT KANSAS WILL HAVE THE OPPORTUNITY TO LEAD THE WAY IN GAS PIPELINE SAFETY FOR ITS CITIZENS.

WE ARE STILL CONCERNED ABOUT THE NUMBER OF GAS LINE PIPE SAFETY INSPECTORS STATEWIDE. ALTHOUGH WE FEEL THAT THE RECENT REORGANIZATION AND ADDITION TO STAFF IS A POSITIVE STEP, WE BELIEVE THAT STILL MORE INSPECTORS ARE NEEDED TO ADEQUATELY MONITOR FIELD ACTIVITY. WE BELIEVE THAT ALL INSTALLATIONS AND REPAIRS OF MAINS AND SERVICE LINES, INCLUDING THE LINE FROM THE MAIN TO THE HOME OR BUSINESS, SHOULD BE FIELD INSPECTED. ALTHOUGH OCCASIONAL RANDOM INSPECTIONS MAY HAVE BEEN AN EFFECTIVE METHOD OF ENFORCEMENT IN YEARS PAST, CURRENT EXPERIENCE WOULD SEEM TO INDICATE OTHERWISE. WITH SO FEW INSPECTORS AND SO MUCH CONSTRUCTION ACTIVITY IN THE STATE, AS WELL AS

CORROSION OF EXISTING STEEL LINES THAT REQUIRE REPAIR OR REPLACEMENT, THE UTILITIES HAVE COME, I BELIEVE, TO RECOGNIZE THE LOW PROBABILITY OF AN ON-SIGHT INSPECTION. THE STATE AND ITS MUNICIPALITIES REQUIRE MANY ON-SIGHT INSPECTIONS WHEN BUILDINGS ARE CONSTRUCTED, REPAIRED, OR DEMOLISHED. THE COUNTY REQUIRES ON-SIGHT INSPECTION OF ALL SANITARY SEWER LINES. THE WATER DISTRICTS INSPECT ALL WATER LINES. HOWEVER, WHEN IT COMES TO NATURAL GAS, WHICH COULD RESULT IN A MORE DISASTROUS CONSEQUENCES THAN ANY OF THE ITEMS LISTED, THE STATE RELIES ON RANDOM AND VERY OCCASIONAL INSPECTIONS.

WE ARE ENCOURAGED BY THE EMERGENCY ORDER ISSUED BY THE COMMISSION THE FIRST WEEK IN DECEMBER REQUIRING IMMEDIATE FLAME IONIZATION LEAK SURVEYS ON STEEL SERVICE LINES WHICH ARE NOT CATHODICALLY PROTECTED WHERE THE METER IS LOCATED AT THE BUILDING WALL. WE FEEL IT WAS A NECESSARY AND PRUDENT STEP BY THE COMMISSION AND ILLUSTRATES THE COMMISSION'S CONCERN FOR PUBLIC SAFETY.

IN CONCLUSION, I WOULD LIKE TO PRESENT THE COMMISSION WITH SEVERAL LETTERS FROM HOMEOWNERS IN OVERLAND PARK THAT I HAVE RECEIVED OVER THE LAST TWO MONTHS. A FEW OF THE LETTERS DEAL WITH SPECIFIC LEAK COMPLAINTS AND THOSE WERE FORWARDED TO UNION WHEN THEY WERE RECEIVED. AND TO UNION'S CREDIT BY

LETTER DATED NOVEMBER 28 FROM MIKE WOOLF. HE INDICATED TO ME THAT UNION HAS RESPONDED TO THOSE COMPLAINTS. I HAVE ATTACHED A COPY OF HIS LETTER.

I THINK, AS I LOOK BACK AT THE EVENTS OF THE EXPLOSION IN OVERLAND PARK AND AS CITY STAFF WORKED WITH KCC STAFF AND WE SHARED INFORMATION AND BECAME, AT THAT POINT, MUCH MORE AWARE OF THE HISTORY OF THE COMPANY THAT OPERATES IN OUR CITY, AND I THINK THAT I HAVE COME TO THE CONCLUSION, GENERALLY, THAT THE WAY THINGS HAVE BEEN DONE IN THE PAST ARE NOT ENOUGH TODAY. CHANGES HAVE TO BE MADE. PERHAPS NOT ONLY IN THIS SYSTEM BUT OTHER NATURAL GAS SYSTEMS AROUND THE STATE.

I HEARD THE COMMENT TODAY AT THE TECHNICAL HEARING, WHICH I HOPE, I DO NOT THINK, REPRESENTS THE COMPANY'S ATTITUDE, BUT SOMETHING TO THE EFFECT THAT WHERE THERE WAS A LEAK AND NO EXPLOSION, THERE REALLY WAS NO PROBLEM.

I APPRECIATED MR. ELLIOTT'S RESPONSE WHEN HE SAID THAT THE ROLE OF THE KCC AND THE STAFF WAS TO MAKE SURE CIRCUMSTANCES DO NOT OCCUR WHERE AN EXPLOSION CAN TAKE PLACE.

AGAIN, THANK YOU FOR CONVENIENG THIS HEARING, WE ARE CONFIDENT THAT YOU WILL CAREFULLY CONSIDER ALL THE EVIDENCE AND TESTIMONY IN THIS MATTER AND REACH A DECISION THAT IS IN THE BEST PUBLIC INTEREST.

THANK YOU.

In the Matter of the General Investigation )  
of Union Gas System, Inc., to determine )  
whether sanctions should be levied for )  
failure to comply with K.S.A. 66-1,150 et seq. )

Docket No.  
161,297-U  
88-UNIG-395-GI

TESTIMONY  
OF  
ED EILERT, MAYOR  
CITY OF OVERLAND PARK, KANSAS

H Energy and NR  
2-22-89  
Attachment 2b

1 Q. Please state your name and occupation.

2 A. My name is Ed Eilert and I am the Mayor of the City of Overland Park,  
3 Kansas.

4 Q. Will you be testifying on behalf of the Governing Body of the City of  
5 Overland Park?

6 A. Yes.

7 Q. Do you have any background in engineering or gas pipeline safety?

8 A. No.

9 Q. Do you have any independent knowledge of the explosion of the Meat Shop  
10 in Independence, Kansas, in September 1987?

11 A. No.

12 Q. Do you have any independent knowledge of the Kensington Manor gas  
13 explosion two months later in December 1987?

14 A. I have met with City staff including fire personnel and the City Code  
15 Administrator concerning their investigation of and findings in regard to  
16 the Kensington Manor explosion. In addition I have been briefed on  
17 several occasions throughout the past year by various members of City  
18 staff and Union officials concerning the reasons for the explosion and  
19 the status of the KCC investigation.

20 Q. Do you profess to have any expertise in the area of gas pipeline safety  
21 practice or regulations?

22 A. No.

23 Q. Have you read and reviewed the Settlement Agreement and Plan, hereinafter  
24 respectively referred to as the "Agreement" and the "Plan," approved by  
25 the Kansas Corporation Commission by Order dated October 5, 1988, with  
26 regards to the investigation of Union Gas System, Inc.?

27 A. Yes.

1 Q. Have you read and reviewed the Kansas Corporation Commission Pipeline  
2 Safety Investigation Report of Union Gas System, Inc. hereinafter  
3 referred to as the "Report" published on June 1, 1988, and filed with the  
4 Commission by KCC Staff on July 18, 1988 with regards to a show cause  
5 hearing?

6 A. Yes.

7 Q. Have you read and reviewed the prefiled testimony in the above-referenced  
8 matter of James Dober, Michael Rush, Barry Flohrschutz, and Kenneth  
9 Richardson which was filed with the Commission on July 18, 1988?

10 A. Yes.

11 Q. Have you been a party to conversations with officials from Union Gas  
12 System Inc. concerning the Agreement and Plan?

13 A. Yes.

14 Q. When did the aforementioned conversations take place?

15 A. Our first opportunity to discuss the Settlement Agreement and Plan with  
16 both Union officials and KCC Staff occurred at the October 5, 1988,  
17 Community Development Committee meeting in the Overland Park City Council  
18 Chambers at 8500 Santa Fe, Overland Park, Kansas.

19 Q. Were you present at that meeting?

20 A. Yes.

21 Q. Was a tape recording made of that meeting?

22 A. Yes.

23 Q. Did City staff prepare a verbatim transcript of that meeting?

24 A. Yes.

25 Q. Would you please look at the 48-page document attached hereto and labeled  
26 City Exhibit A and identify it.

- 1 A. Exhibit A is a true and accurate copy of the verbatim transcript that was  
2 prepared by City staff from the tape recording of the October 5, 1988,  
3 Community Development Committee meeting.
- 4 Q. Does the document identified as Exhibit A truly and accurately reflect  
5 the exact conversations that took place at the aforementioned meeting?
- 6 A. Yes.
- 7 Q. Is the tape recording of the meeting available for review in the office  
8 of the Overland Park City Clerk?
- 9 A. Yes.
- 10 Q. Were there any other conversations you were involved in with Union  
11 officials or KOC Staff concerning the Settlement Agreement and Plan?
- 12 A. Yes, on or about October 11, 1988, Mr. David Westbrook on behalf of Union  
13 Gas System, Inc. contacted our City Manager, Donald Pipes, to arrange a  
14 meeting to discuss the KOC's investigation of Union and the Settlement  
15 Agreement and Plan. That meeting was held on October 31, 1988, at City  
16 Hall.
- 17 Q. Who was present at the meeting?
- 18 A. Myself; Council President Wayne Byrd; Ailie Spear, Councilmember and  
19 Chairwoman of the Community Development Committee of the City Council;  
20 Donald Pipes, City Manager; Larry Flatt, Director of Community Develop-  
21 ment; Karen Arnold-Burger, Assistant City Attorney; Scott Lambers,  
22 Assistant City Manager; Union officials William Reeder, Executive Vice  
23 President and Chief Operating Officer; Ed Sack, Manager - Southern  
24 Division; Mike Wolf, Vice President Human Resources; Bill Bailie, Manager  
25 - Northern Division; Ann Cook; and David Westbrook.
- 26 Q. What was discussed at this meeting?
- 27



1 A. Union officials reviewed their procedures with us and outlined what  
2 action had already been taken with regards to compliance with the Plan.  
3 They presented us each with a black notebook which contained various  
4 sections, one of which listed each violation alleged in the Report, the  
5 paragraph of the Plan that addressed the violation, and what corrective  
6 action had been completed to date.

7 Q. Would you please examine the 24-page document attached hereto and labeled  
8 City's Exhibit B and identify it.

9 A. Exhibit B is a true and accurate copy of the section of the black  
10 notebook given to me by Union officials at the October 31, 1988, meeting  
11 which outlines the corrective action that Union had taken as of the date  
12 of the meeting.

13 Q. Have you reviewed any other Commission files with regards to Union Gas  
14 System, Inc.?

15 A. Yes.

16 Q. I am handing you what have been marked City's Exhibits C through O and  
17 would ask that you identify them.

18 A. Collectively, they consist of all the other Commission files with regards  
19 to Union Gas System, Inc. that I have reviewed. They were obtained by my  
20 staff from the Commission files and to the best of my knowledge and  
21 belief are true and accurate copies. Individually they are as follows:

22 Exhibit C is a 14-page document consisting of an order from the  
23 Commission in Docket No. 144-589U, a Settlement Agreement in the  
24 same matter, labeled Appendix A thereto, and a memorandum from James  
25 Dober regarding staff recommendations and labeled Appendix B.

26 Exhibit D is a 5-page document dated September 9, 1983, and is  
27 a letter from James Dober, Supervisor of Gas Pipeline Safety with

1 the KOC to Harrison Johnson, President, Union Gas, outlining  
2 noncompliances found during an inspection on August 9, 1983.

3 Exhibit E is a 10-page document and is a letter dated February  
4 27, 1984, from James Dober to Harrison Johnson outlining  
5 noncompliances that were found during inspections dating from  
6 September 27, 1983, through January 5, 1984.

7 Exhibit F is a 2-page document dated September 4, 1984, and is  
8 a letter from James Dober to Harrison Johnson outlining  
9 noncompliances found during inspections conducted on June 14 through  
10 July 26, 1984.

11 Exhibit G is an 8-page document dated October 31, 1984, and is  
12 a letter from James Dober to Harrison Johnson outlining  
13 noncompliances found during an inspection conducted on October 9,  
14 1984.

15 Exhibit H is a 10-page document and is a letter dated December  
16 19, 1984, from James Dober to Harrison Johnson outlining  
17 noncompliances found during inspections conducted beginning on  
18 December 6, 1984, through December 14, 1984.

19 Exhibit I is a 7-page document and is a letter dated March 20,  
20 1985, from James Dober to Harrison Johnson outlining noncompliances  
21 found during inspections on December 11, 1984, and January 24, 1985.

22 Exhibit J is a 5-page document and is a letter dated May 28,  
23 1985, from James Dober to Harrison Johnson outlining noncompliances  
24 found during inspections conducted on April 24 through April 26,  
25 1985.  
26  
27

1 Exhibit K is a 13-page document and is a letter dated May 25,  
2 1985, from James Dober to Harrison Johnson outlining noncompliances  
3 found during an inspection on April 9, 1985.

4 Exhibit L is a 9-page document and is a letter dated November  
5 6, 1985, from James Dober to Harrison Johnson outlining  
6 noncompliances found during an inspection on October 10, 1985.

7 Exhibit M is a 12-page document and is a letter dated October  
8 31, 1986, from James Dober to Harrison Johnson outlining  
9 noncompliances found during inspections on July 8 through July 11,  
10 1986.

11 Exhibit N is a 13-page document and is a letter dated November  
12 6, 1986, from James Dober to Harrison Johnson outlining  
13 noncompliances found during an inspection on July 22, 1986.

14 Exhibit O is a 6-page document dated December 5, 1986, and is a  
15 letter to James Dober from R.J. Saunders, Vice-President Gas  
16 Operations, Union Gas System, Inc. concerning noncompliances cited  
17 on October 31, 1986.

18 Q. Have you reviewed any other Commission files regarding Union Gas System,  
19 Inc.?

20 A. No.

21 Q. Does the City of Overland Park object to the concept of a Settlement  
22 Agreement with respect to the alleged violations by Union Gas?

23 A. No. We do feel it is unfortunate that the full facts of the explosions  
24 and audit will not be aired publicly and we object to not being involved  
25 in its drafting as an intervenor in the case; however, we recognize the  
26 importance of quick corrective action in the area of gas pipeline safety,  
27 and feel that the Plan certainly makes some strides in this regard.

1 Q. What parts of the Plan are the City supportive of and why?

2 A. The City is in agreement with and supportive of all elements of the Plan  
3 that require Union to exceed the current requirements of the Federal  
4 Natural Gas Pipeline Safety Act of 1968 (49 U.S.C.S. 1671 et seq.) and  
5 amendments thereto as well as Parts 191 and 192 of the United States  
6 Department of Transportation Regulations for Transportation of Natural  
7 Gas by Pipeline (49 CFR Parts 191 and 192) and Kansas Corporation  
8 Commission orders, rules and regulations. It is the City's position that  
9 inasmuch as Union has failed to comply with existing statutes, orders,  
10 rules and regulations by numerous and repeated violations over the last  
11 four years, it should be required to take immediate remedial action to  
12 insure the safety of persons in this state even if the action required to  
13 do so exceeds existing legal requirements.

14 In addition, we are in agreement with all reporting requirements of  
15 the Plan and believe that the same are necessary to insure compliance.

16 Q. What parts of the Plan are you not supportive of and why?

17 A. Although we feel each and every paragraph of the Plan is necessary, we do  
18 not feel that the time frames established for implementation are adequate  
19 to protect the public health, safety and welfare.

20 First, the City does not believe that the time limits set forth in  
21 paragraph 5 of the Plan are adequate to protect the public health, safety  
22 and welfare. The City believes that overpressure protection devices  
23 should be installed in all regulator stations by July 1, 1989, rather  
24 than the July 1991 deadline stated in the Plan.

25 Q. What evidence do you have to support the inadequacy of the timetable in  
26 paragraph 5?

1 A. Exhibit E shows that as early as February 27, 1984, Union was notified of  
- the necessity for overpressure protection devices in the interest of  
3 public safety. In his inspection report, James Dober states "Union has  
4 several district regulator stations that are reducing pounds to ounces.  
5 There is no relief device to protect an overpressure condition and makes  
6 for a hazardous condition."

7 Exhibit G shows that Union was again cited in October 1984 with  
8 failure to install relief devices and failure to provide records that  
9 relief devices in existence were adequate and tested.

10 Exhibit H indicates that in December 1984 Union was cited for  
11 shutting off an overpressure protection device in Overland Park, failing  
12 to calculate the capacity of an overpressure protection device and  
13 improperly setting an overpressure protection device.

14 Exhibit C indicates that on January 6, 1985, Union personnel were  
15 still overpressuring the same lines in Overland Park that it had been  
16 warned about a month earlier and the Commission fined Union \$45,000.

17 Exhibit J indicates that during an inspection in April 1985 Richard  
18 Saunders informed Dan McKee that Union was in the process of installing  
19 overpressure protection devices on all of its low pressure regulator  
20 stations.

21 Exhibit K indicates that inadequate overpressure protection devices  
22 were found on an inspection in April 1985.

23 Exhibit L indicates that Union was again cited in November 1985 for  
24 failing to complete installation of low pressure regulators and failure  
25 to inspect the ones in existence in a timely manner.

26 Exhibit M indicates a citation in October 1986 for failure to review  
27 relief capacities of overpressure protection devices in a timely manner.

Exhibit N indicates that in November 1986 Union was again notified of the need for overpressure protection devices "in the interest of public safety." It should be noted that this inspection was done by Ron Hallam, who is now an employee of Union.

The Report issued in June 1988 again cites noncompliances in the area of installation of overpressure protection devices, inspection, and testing.

Q. What do Exhibits C, E, G, H, J, K, L, M, N and the Report indicate to you with regards to the timetable set out in paragraph 5 of the Plan?

A. They indicate to me that it is too long. Union knew at least as early as February of 1984 that overpressure protection devices were necessary and have continued to be cited with various violations related thereto since that time. In the Overland Park situation in 1984 they apparently had a relief valve but elected to shut it off. If it would "reasonably" take three years to have these devices installed as contemplated in paragraph 5 of the Plan, then it should have been completed in February of 1987, three years after the first notice of a problem. We feel that July of 1989 is a generous extension and adequately considers weather conditions. In addition, according to our conversations with Union, and as shown on Exhibit B, Item No. 11, they have indicated that of their 518 regulator stations, only 84 remain unprotected as of October 1988. Therefore, it is not necessary to allow Union three more years to complete this project.

Q. What other timetables set out in the Plan do you feel are inadequate?

A. It is my understanding through reading the Report and testimony that has been filed in this matter that, "hot spot protection" is essential to guard against corrosion and pipeline leaks. The City believes that all

1 steel pipe in Union's system should be electrically surveyed no later  
2 than January 1, 1989, with all "hot spot protection" installed prior to  
3 July 1, 1989, rather than October 1991 as required by the Plan. In light  
4 of the corrosion problems discovered in Union's lines and its  
5 unwillingness to conduct the appropriate surveys or provide corrosion  
6 protection, it is our opinion that any time frame in excess thereof  
7 increases the risk to the citizens of Kansas of another gas explosion.

8 This is not a new provision of the code. It is unclear to us why  
9 Union has apparently ignored this provision. It appears that some sort  
10 of external corrosion control has always been required.

11 Q. What other timetables in the Plan do you feel are inappropriate, and why?

12 A. The City believes that July 1, 1989, is a more appropriate deadline for  
13 installation of cathodic protection on all coated steel risers attached  
14 to plastic systems rather than the October 31, 1989, deadline stated in  
15 paragraph 7 of the Plan. It is my understanding through reading the  
16 Report that Part 192.455(a)(2) requires that some type of corrosion  
17 control be applied to steel risers. According to the Report, Union has  
18 failed to comply with this regulation. As of the date of the Report,  
19 Union had failed to provide any protection in the Southern Division and  
20 had failed to protect 324 risers in the Northern Division. The City was  
21 informed at the October 31 meeting with Union officials that, as of that  
22 date, all Northern Division pipe has been protected, but 4,000 - 5,000  
23 anodes need to be installed on coated steel risers in the Southern  
24 Division. This appears as Item No. 14 of Exhibit B. Due to the  
25 possibility of leaks from corroded pipe, we feel this protection should  
26 be installed as soon as possible, even if contract or overtime work is  
27 required. It is my understanding that Union should not have allowed its

1 system to get to this point in the first place. The Report indicates  
2 that some sort of external corrosion control has always been required by  
3 the federal code.

4 Q. What evidence do you feel supports your allegation that the time frame  
5 established in paragraphs 6 and 7 are unnecessarily long?

6 A. These are both areas where Union has been cited in the past.

7 Exhibit E indicates that in February 1984 Union was notified of  
8 corrosion control problems. James Dober wrote: "The Staff requests Union  
9 Gas reevaluate its corrosion program. It appears it is not meeting code  
10 requirements..."

11 Exhibit F indicates that in September 1984 Union was cited for  
12 failing to provide cathodic protection at two construction projects.

13 Exhibit G indicates that in October 1984 cathodic protection on  
14 meter risers was cited by Staff.

15 Exhibit H indicates that in December 1984 Union was notified of  
16 noncompliance for inadequate corrosion control.

17 Exhibit J indicates that in May 1985 Union was cited for failure to  
18 cathodically protect steel risers.

19 Exhibit K indicates that in May 1985 Union was again cited for  
20 inadequate corrosion control.

21 Exhibit L indicates that in November 1985 corrosion control was  
22 still a concern of the Staff. Union was cited for failing to  
23 cathodically protect steel risers and failing to do any corrosion control  
24 work "in the highly populated areas in Olathe's and Wyandotte Districts."

25 Exhibit M indicates that one year later, Union was again cited for  
26 corrosion control problems in the Northern Division.



1 Exhibit N indicates that in November 1986 Union was again cited for  
2 corrosion control noncompliances in the Southern Division:

3 Exhibit O shows that in December 1986 Union officials indicated to  
4 the KCC that they had an ongoing corrosion control program and  
5 anticipated completing much of the work in the Northern Division by the  
6 end of 1986 with the exception of electrical surveys which would be  
7 completed by the end of 1987. They gave no time frames for the Southern  
8 Division.

9 The June 1988 Report again cites corrosion control violations.  
10 Nothing had yet been done in the Southern Division; and in the Northern  
11 Division more than half of the steel risers had not been protected; and  
12 although the electrical survey was completed, inaccurate results were  
13 obtained so it needed to be done again.

14 Union informed the City at its October 31, 1988, meeting that all  
15 anodeless risers in the Northern Division have now been protected and the  
16 electrical survey is complete. They anticipate installation of cathodic  
17 protection in the spring of 1989. They indicated that approximately  
18 4,000 - 5,000 anodes need to be installed on coated steel risers  
19 connected to plastic pipes in the Southern Division. Apparently no, or  
20 very little, work has yet been done in the Southern Division. This is  
21 set forth in Exhibit B, items 14 and 15.

22 Q. What other timetables in the Plan do you feel are inadequate and why?

23 A. The City believes that MAOPs for Union's entire system should be  
24 established no later than January 1, 1989, rather than by late 1991 as  
25 contemplated by paragraph 8 of the Plan. It is our understanding through  
26 conversations with Union officials on October 31, 1988, and set forth in  
27 Exhibit B, Item Nos. 10 and 11, that MAOPs have already been established

1 so this should not be unnecessarily burdensome. The prefiled testimony  
2 of James Dober, as well as the Report, indicates that establishment of  
3 MAOPs for a natural gas pipeline system is extremely critical and should  
4 have been done when the regulations were published in 1971. They stated  
5 that without verifiable MAOPs, safe operating pressures on a natural gas  
6 pipeline cannot be assured. In light of that, it seems unconscionable  
7 that Union has failed to establish said pressures to date and to allow it  
8 three years to comply could be, in our opinion, detrimental to public  
9 safety.

10 Q. What evidence do you feel supports your allegations that the deadline  
11 outlined in paragraph 8 is unnecessarily long?

12 A. Failure to establish MAOPs in accordance with the provisions of the  
13 federal regulations has apparently been a long-standing dispute between  
14 Union and the Staff.

15 Exhibits H, K, L, M, N, and the Report which span a four-year-time  
16 period all indicate a failure by Union to establish MAOPs as required by  
17 the federal regulation. Exhibit O indicates that although Union realized  
18 compliance would "require considerable time to fully accomplish," total  
19 completion was estimated to take six to nine months. The Plan  
20 contemplates three years. Union has indicated they are already  
21 completed. Therefore, three years was obviously unnecessarily long.

22 Q. Do you have any other thoughts on the timetables established in the Plan?

23 A. In summary, it is the City's position that Union's operations should be  
24 in complete and total compliance with the federal code and the Plan no  
25 later than July 1, 1989. We recognize that this deadline may impose some  
26 hardship on Union. It will certainly require contract and overtime work.  
27 However, we feel Union has imposed a tremendous hardship on the citizens

1 of Kansas by placing their safety in peril. A concern for safety and the  
2 well being of our citizens far outweighs any hardship that may be imposed  
3 or monies that may be expended by Union.

4 Q. Are there any other provisions of the Plan that you feel should be  
5 changed?

6 A. Yes. Paragraphs 2 and 3 of the Plan refer to Union enforcing compliance  
7 with "newly adopted" procedures. For clarity purposes and future  
8 enforcement, the City believes that the "newly adopted" material should  
9 be attached to and incorporated in the Plan?

10 Q. Are there any areas of public safety that you do not feel are adequately  
11 addressed in the Plan?

12 A. Yes. The City believes that the only way to insure the public safety  
13 both in actuality and in perception is to require immediate and  
14 comprehensive flame ionization surveys of all Union lines including the  
15 line from the main to the house, regardless of meter location, and to  
16 require appropriate replacement or repairs based upon the findings. We  
17 feel this is not adequately addressed in the Plan. Again, we believe  
18 such action is necessary in light of the numerous and repeated violations  
19 by Union. In addition, we believe it is necessary to limit the ability  
20 of Union to "police" itself. Based upon its current and prior viola-  
21 tions, it has shown, in our opinion, a complete lack of concern over  
22 safety and lack of initiative to correct problems. Therefore, we feel  
23 such conduct warrants close supervision by the Kansas Corporation  
24 Commission Staff and in some cases a complete delegation to a third  
25 party. It is for that reason that we believe the leak survey should be  
26 conducted by a third party approved by the Commission as was found by the  
27

Commission to be necessary earlier this year in the Kensington Manor subdivision.

2  
3 Q. Are there other areas of Union's operation that seem to have repeat  
4 violations of the code other than those already mentioned?

5 A. Yes. The Report cited Union with failure to properly install pipeline  
6 joints and failure to inspect the installations. Several improper  
7 specimens were found including the one that resulted in the Kensington  
8 Manor explosion. Exhibits D and I both indicate prior occasions in which  
9 Union has been cited for improper or inadequate plastic joining  
10 procedures that resulted in hazardous conditions.

11 Q. Moving now to the Settlement Agreement, are there any parts or portions  
12 of it that you feel are inadequate to protect the public health, safety  
13 and welfare?

14 A. Yes. First we feel the \$100,000 fine is inadequate. K.S.A. 66-1,152  
15 states that any civil penalty may be compromised by the state corporation  
16 commission. However, in determining the amount agreed in compromise the  
17 following shall be considered:

- 18 a. the appropriateness of the penalty to the size of the business;  
19 and  
20 b. the gravity of the violation; and  
21 c. the good faith of the person charged in attempting to achieve  
22 compliance.

23 The City believes that the \$100,000 fine proposed by the Agreement is  
24 inadequate given consideration of the above factors. It is irrelevant,  
25 in our opinion, how this fine may compare to other fines imposed and  
26 collected throughout the United States. The only issue to consider is

whether the fine is adequate in this factual situation. We believe it is not.

At the time the Report was issued, Staff recommended fines between \$100,000 and \$600,000 for "serious and repeated violations of pipeline safety regulations." Union violated 23 different regulations in committing 32 total violations, according to staff. According to Jim Dober's prefiled testimony, the \$600,000 proposed fine was arrived at by considering the number of days since inspection revealed the violation and the factors set out in K.S.A. 66-1,152. Although we understand that some reduction in the recommended fine is a result of assurances by Union that it will comply with the Plan, we believe an examination of the factors listed in K.S.A. 66-1,152 point to the necessity for a much a higher fine.

First, Union is the second largest gas supplier in the state of Kansas, serving 62,000 customers statewide.

Secondly, the violations resulted in two major gas explosions within three months of each other that destroyed hundreds of thousands of dollars worth of property. With the exception of the loss of lives, we are unclear as to how a violation could be any more serious.

Finally, Union has continued to violate the code over the last several years. A \$45,000 fine in 1985 proved to have absolutely no deterrent effect. We feel that the long-standing and repeated character of the violations alleged in the present case, graphically illustrates Union's complete lack of concern for compliance and public safety. In fact, we are apparently not alone in this belief. Exhibit K contains the following observation from James Dober in April of 1985:

In evaluating this inspection, some hard line comments are in order. First, many of these non compliances have shown up on past

inspections from the Commission's gas pipeline staff. Observing the current staff in the northern division of the Union Gas System, Inc. it is truly inadequate to maintain a normal maintenance program. This leaves the hard question as to how the operator intends to bring this system into compliance in a reasonable (?) time. The present condition of the system is consistently bordering a hazardous condition. It appears, to show the management has a minimum responsibility concern to the safety of the system, general public, and the minimum safety regulations.

This sentiment was repeated six months later by KCC Staff as reflected in Exhibit L:

There still seems to be a lack of personnel, in the Northern Division, to complete the every day maintenance and operations needed to operate a safe and reliable system.

We believe that considering all the circumstances, \$100,000 is a mere "slap on the wrist."

Second, the City believes that the Commission should be notified of any noncompliance with the Plan and it should be up to the Commission to determine whether or not such noncompliance is actionable. As currently written only "substantial" noncompliances will be reported to the Commission. We feel Union should be required to strictly comply with the Plan.

Third, paragraph 11(E) of the Settlement Agreement is also of some concern to the City. Regardless of the number or level of noncompliances with the Plan, the Agreement limits the amount that may be assessed against Union to \$150,000 in 1989, and \$75,000 in 1990 and 1991. We do not believe this is appropriate. We are confident that in the absence of this Plan, another noncompliance by Union in the area of overpressurization, corrosion control or failure to properly inspect pipe jointing in the next three years would result in the Commission assessing fines in excess of \$150,000, if the same were allowed under K.S.A. 66-1,151.

Therefore, we feel this provision could serve to "tie the Commission's

hands" in the case of repeated noncompliances with the Plan. In addition, we recommend that if the aforementioned provision is accepted, that the Commission require strict compliance with the Plan and assess the total amount for any violation regardless of whether said fee would be allowable under K.S.A. 66-1,151.

Finally, the City strongly objects to paragraph 12 of the Agreement. We agree that had Union maintained their operation in a conforming manner, it would have been allowed to include all its expenditures in its rate base. However, by delaying these necessary expenditures until now, Union will be forced to pay more by the mere fact of inflation than it would have if they had been done in a timely manner. In addition, the urgency of the work and the timetables imposed will certainly require overtime and perhaps contract work that would not otherwise have been required. Therefore, we do not believe that the rate payers of Kansas should be penalized for Union's sluggish compliance timetable.

Q. Do you have any additional comments to make with regard to events that have transpired since the Agreement and Plan were submitted to the Commission?

A. Yes.

First, the City is encouraged by the recent management audit required of Union by the Staff and the Commission. We feel this is a necessary step in investigating the ability of Union to operate a safe and efficient system in the state of Kansas. We urge the Staff and Commission to proceed quickly with the selection of a firm and would request that a completion deadline be set for not later than July 1, 1989. We also request that we be copied with the results of the audit as well as any Staff recommendations made pursuant thereto or hearings held

1 in association therewith. For the reasons already outlined, we do not  
2 feel it would be appropriate to allow Union to include the cost of said  
3 audit in its rate base.

4 Second, the City is encouraged by the new regulations proposed by  
5 Staff at the Commission meeting of October 24, 1988. We feel that in  
6 light of the noncompliances unveiled in this investigation and the  
7 confusion surrounding interpretation of the current regulations arising  
8 out of the KPL explosion in our city in September of this year, the  
9 proposed changes are necessary to insure public safety throughout the  
10 state of Kansas. We are not at all concerned that, if adopted as  
11 proposed, they will be among the toughest in the country. We are proud  
12 that Kansas will have the opportunity to lead the way in gas pipeline  
13 safety for its citizens.

14 Third, we are still concerned about the number of gas pipeline  
15 safety inspectors statewide. Although we feel that the recent  
16 reorganization and addition to Staff is a positive step, we believe that  
17 still more inspectors are needed to adequately monitor field activity.  
18 We believe that all installations and repairs of mains and service lines  
19 including the line from the main to the home or business should be field  
20 inspected. Although occasional random inspections may have been an  
21 effective method of enforcement in years passed, current experience would  
22 seem to indicate otherwise. With so few inspectors and so much  
23 construction activity in the state, as well as corrosion of existing  
24 steel lines that require repair or replacement, the utilities have come  
25 to recognize the low probability of an inspection. The state and its  
26 municipalities require many on-sight inspections when buildings are  
27 constructed, repaired, or demolished. The county requires on-sight



1 inspection of all sanitary sewer lines. The Water Districts inspect all  
2 water lines. However, when it comes to natural gas, which could result  
3 in more disastrous consequences than any of the items listed, the state  
4 relies on random and very occasional inspections.

5 Fourth, we are supportive of the emergency order issued by the  
6 Commission the first week in December requiring immediate flame  
7 ionization leak surveys on steel service lines which are not cathodically  
8 protected where the meter is located at the building wall. We feel it  
9 was a necessary and prudent step by the Commission and illustrates the  
10 Commission's concern for public safety.

11 Q. Does this conclude your testimony?

12 A. Yes.

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VERIFICATION

1 STATE OF KANSAS )  
2 ) ss  
3 COUNTY OF JOHNSON )

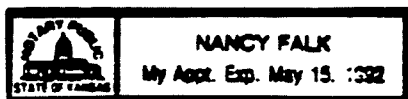
4 Ed Eilert, being first duly sworn, deposes and says that he is Mayor of  
5 the City of Overland Park, Kansas, and that he has participated in the  
6 preparation of the foregoing written testimony in question and answer form to  
7 be presented to the State Corporation Commission of the State of Kansas in  
8 Docket No. 161,297-U; that the answers therein contained were given by him;  
9 that he has knowledge of the matters set forth in said answers to the extent  
10 set forth in said answers; and that such matters are true to the best of his  
11 knowledge and belief.

12  
13   
14 Ed Eilert

15 Subscribed and sworn to before me this 8th day of December, 1988.

16  
17   
18 Nancy Falk  
19 Notary Public

20 My appointment expires:



MS. ARNOLD-BURGER: WE HAVE NO FURTHER  
DIRECT TESTIMONY.

COMMISSIONER KOWALEWSKI: MR. STOREY.

CROSS-EXAMINATION

BY MR. GRIER:

Q MAYOR EILERT, MY NAME IS MIKE GRIER. ON BEHALF OF  
UNION GAS, I HAVE A FEW BRIEF QUESTIONS FOR YOU REGARDING  
YOUR PREFILED TESTIMONY. FOR YOUR BENEFIT, I WILL  
ADVISE YOU I HAVE REVIEWED YOUR PREFILED TESTIMONY  
AND WILL ATTEMPT TO LIMIT MY QUESTION TO THE TESTIMONY  
THAT HAS BEEN PROVIDED TO US THROUGH COUNSEL REPRESENTING  
THE CITY.

FIRST, MAYOR EILERT, IT IS MY UNDERSTANDING THAT  
YOU DID NOT HAVE AN OBJECTION TO THE CONCEPT OF A  
SETTLEMENT AND A PLAN TO ADDRESS IMPROVEMENTS ON THE  
UNION SYSTEM WHICH WAS ENTERED INTO BY THE STAFF AND  
UNION GAS ON SEPTEMBER 16, 1988?

A I DO NOT OBJECT TO A CONCEPT. I DO OBJECT TO THAT  
PLAN THAT WAS FILED AND PREVIOUSLY REVIEWED BY THE  
KCC.

Q MAYOR EILERT, WOULD IT BE A FAIR STATEMENT IN LIGHT  
OF YOUR PREFILED TESTIMONY, YOUR MAIN CONCERN IS THE  
TIME FRAME IN WHICH UNION GAS AND THE STAFF PREVIOUSLY  
AGREED UPON FOR THE WORK TO BE COMPLETED?

A THE ELEMENTS OF THE ORIGINAL PROPOSAL I THINK THAT  
WE FIND DIFFICULT TO ACCEPT REVOLVE AROUND THE TIME

FRAMES. AS I HAVE REVIEWED THE PREFILED TESTIMONY, I THINK THE RECOMMENDED AMENDMENTS MADE BY CHIEF ENGINEER, ELLIOTT, ARE GOOD ONES TO THE PLAN AND I THINK, IN FACT, THOSE RECOMMENDATIONS CONTAINED MOST OF THE ELEMENTS OF THE CITY'S CONCERN. AND THAT HAS TO DO WITH TIME FRAMES AND PARTICULARLY SIX MONTHS VERSUS THREE YEARS.

Q ARE YOUR SUGGESTED CHANGES IN THE TIME FRAMES AS SET FORTH IN THE PLAN AND AGREEMENT THEN BASED UPON THE TESTIMONY FILED BY COMMISSION STAFF ON BEHALF OF MR. ROBERT ELLIOTT?

A I AM NOT SURE I AM UNDERSTANDING THE QUESTION YOU'RE ASKING. I VIEW MR. ELLIOTT'S PLEADINGS, TESTIMONY FILED BEFORE THIS BOARD AS ENCOMPASSING THE REQUESTS MADE BY THE CITY IN REVIEWING THE TIME FRAMES REQUIRING UNION GAS TO COME INTO COMPLIANCE.

Q WOULD IT BE REASONABLE STATEMENT THEN, THE FOUNDATION FOR THE CITY'S REQUESTED CHANGE IN THE AGREEMENT PLAN ARE BASED ON ROBERT ELLIOTT'S PREFILED TESTIMONY AND IF I COULD--(INTERRUPTED)

A ARE YOU ASKING ME IF THE CITY IS MAKING ITS STAND UPON MR. ELLIOTT'S TESTIMONY? THE ANSWER IS, "NO". THE ANSWER--IF YOU ARE ASKING ME, HAS THE CITY'S CONCERNS PREVIOUSLY MENTIONED AND RAISED BY THE CITY AT THE TIME OF THE ORIGINAL AGREEMENT, HAVE THEY BEEN SUBSTANTIALLY ADDRESSED BY MR. ELLIOTT'S TESTIMONY, THE ANSWER IS, "YES".

Q WHAT IS THE FACTUAL BASIS AND FOUNDATION FOR THE RECOMMENDED CHANGES IN THE PLAN AS CONTAINED WITHIN YOUR PREFILED TESTIMONY?

A IN VIEWING UNION GAS' RESPONSE TO SIMILAR ALLEGED VIOLATIONS GOING BACK INTO YEARS '85, '84, '83, WE FIND NUMEROUS REFERENCES WHERE UNION GAS STATES THAT THE ITEMS CAN BE TAKEN CARE OF IN 30 DAYS, IN 60 DAYS, OR IN SIX MONTHS. THAT WAS, IN SOME CASES, FIVE YEARS AGO. THOSE SAME--MANY OF THOSE SAME VIOLATIONS HAVE BEEN ALLEGED IN THE JUNE 1 REPORT. WE FEEL THAT BASED UPON UNION GAS' PRIOR RESPONSES THAT SIX MONTHS OR JULY 1ST IS AN ADEQUATE TIME PERIOD. THAT IS ALSO, AS I UNDERSTAND, IN A SEPARATE ITEM, THE POINT AT WHICH THE ORDERED MANAGEMENT AUDIT WILL BE COMPLETED AND AVAILABLE. AND WE FEEL FOR ALL THOSE REASONS THAT THOSE TIME PERIODS ARE VALID.

Q I WOULD LIKE TO ADDRESS SOME QUESTIONS TO SOME OF THE SPECIFIC CHANGES WHICH YOU RAISED IN REFERENCE TO THE PLAN IN YOUR PREFILED TESTIMONY. I BELIEVE THE FIRST ITEM WAS, "OVERPRESSURE PROTECTION DEVICES". CORRECT ME IF I AM WRONG, BUT THE PLANNED AGREEMENT AS ENTERED INTO BY THE COMMISSION STAFF AND UNION GAS CALLED FOR OVERPRESSURE PROTECTION DEVICES TO BE COMPLETED AND INSTALLED BY JULY 1991, AND THE CITY, THROUGH YOUR PREFILED TESTIMONY IS ADVOCATING A COMPLETION DATE OF JULY 1989?

A THAT IS CORRECT. AND I BELIEVE MR. ELLIOTT IS RECOMMENDING--TWO PARTS OF HIS TESTIMONY. ONE HAD TO DEAL WITH THE JULY 1, 1989 DATE AND I'M NOT SURE WHETHER RELATED TO THE OVERPROTECTION DEVICE HE HAS ALSO SUGGESTED SOME ALTERNATIVE DATES IN HIS TESTIMONY AND I THINK BASICALLY WE WOULD BE IN AGREEMENT WITH HIS EXPERT OPINION AS TO THOSE COMPLETION DATES.

Q ARE YOU AWARE OF ANY INFORMATION EITHER PERSONALLY OR IN YOUR CAPACITY AS REPRESENTATIVE OF THE CITY OF OVERLAND PARK AS TO WHAT TYPE OF WORK AND ENGINEERING IS REQUIRED TO COMPLETE THE OVERPRESSURE PROTECTION DEVICE BY JULY 1989 AS SUGGESTED IN YOUR PREFILED TESTIMONY?

A I WOULD RELY UPON THE JUDGMENT OF CHIEF ENGINEER, ELLIOTT.

Q WERE YOU AWARE THAT EACH OVERPRESSURE PROTECTION REGULATOR, EACH INDIVIDUAL STATION THAT IS CHANGED OUT MUST BE CUSTOM-DESIGNED, ENGINEERED AND MANUFACTURED?

A I WOULD ASSUME THERE WOULD BE A MANUFACTURING AND INSTALLATION PROCESS.

Q WERE YOU, OR ANYONE ON BEHALF OF THE CITY, AWARE THAT IN ORDER TO CHANGE OUT OVERPRESSURE PROTECTION DEVICES DURING THE WINTER MONTHS THAT THE POSSIBILITY OF, VERY REAL POSSIBILITY OF DOWNSTREAM GAS SHUTOFF TO LARGE NUMBERS OF CUSTOMERS CREATING PROBLEMS WITH PILOT LIGHTS

AND FROZEN PIPES WOULD PREVENT THAT WORK BEING DONE IN THE WINTER HEATING MONTHS OF NOVEMBER THROUGH MARCH?

A I WOULD ASSUME THERE WOULD BE A LARGER DEMAND FOR GAS IN THE WINTER MONTHS THAN IN THE SUMMER MONTHS.

Q THE SECOND AREA THAT YOU ADDRESS FOR CHANGE IN THE AGREEMENT AND PLAN ENTERED INTO BY THE STAFF AND UNION ON SEPTEMBER 16, 1988 HAD TO DO WITH "HOT SPOT PROTECTION AND ELECTRICAL SURVEY." AGAIN, I WILL ASK AND CORRECT ME IF I AM WRONG, BUT MY READING INDICATES THAT THE PLAN REQUIRED A COMPLETION DATE OF OCTOBER 1991 AND THE CITY HAS SUGGESTED, THROUGH YOUR PREFILED TESTIMONY, THAT THAT WORK BE COMPLETED BY JANUARY 1, 1989 FOR THE ELECTRICAL SURVEY PORTION OF THAT WORK, WITH A DEADLINE OF JULY 1, 1989 FOR "HOT SPOT PROTECTION" INSTALLATION. IS THAT A CORRECT INTERPRETATION?

A YES. I THINK THE CITY'S RESPONSE OR AWARENESS WAS BASED UPON THE FACT THAT MANY OF THE ALLEGED VIOLATIONS CONTAINED IN THE MOST RECENT REVIEW HAVE BEEN MENTIONED AND RECORDED IN YEARS PAST. THAT BEING THE CASE, WE FELT THAT RESPONSES BY UNION GAS HAVE BEEN GIVEN IN YEARS PAST AND IT WAS GOING TO BE ADDRESSED, IT WAS GOING TO BE TAKEN CARE OF AND EVIDENTLY HAD NOT BEEN, AND THAT THERE NEEDED TO BE A RELATIVELY SHORT TIME FRAME PLACED UPON UNION GAS TO RESPOND IN THE AFFIRMATIVE

FINALLY.

Q WOULD IT BE A FAIR ASSUMPTION TO ASSUME, AGAIN, YOU NOR THE CITY HAS ANY PERSONAL KNOWLEDGE AS TO WORK, TYPE AND CHARACTER OF WORK THAT IS INVOLVED IN CONDUCTING THE HOT SPOT PROTECTION AND ELECTRICAL SURVEY? AGAIN, YOU WOULD BE RELYING ON THE EXPERT-- (INTERRUPTED)

A I HAVE NO LEVEL OF EXPERTISE IN NATURAL GAS EQUIPMENT.

Q I UNDERSTAND THAT. BUT, AGAIN, THE CITY WOULD BE RELYING ON THE EXPERTISE OF MR. ELLIOTT?

A AS I HAVE READ MR. ELLIOTT'S PREFILED TESTIMONY AS TO THE DATES FOR COMPLIANCE OF THE AMENDED AGREEMENT, NOT THE ORIGINAL AGREEMENT, BUT AMENDED, I AM WILLING TO RELY UPON HIS EXPERT JUDGMENT.

Q WERE YOU OR THE CITY AWARE UNION GAS HAD ENTERED INTO A CONTRACT IN FEBRUARY 1988 WITH AN INTERNATIONAL ELECTRICAL SURVEY FIRM TO CONDUCT AN ELECTRICAL SURVEY ON ITS ENTIRE 900 MILES OF STEEL PIPE?

A I MAY HAVE BEEN, I DO NOT RECALL.

Q WERE YOU AWARE, OR WAS THE CITY AWARE, AN ELECTRICAL SURVEY OF RELIABLE AND ACCURATE CHARACTER CANNOT BE CONDUCTED IN THE WINTER MONTHS WHEN FROST OR FROZEN CONDITIONS ARE PRESENT?

A ONE WOULD ASSUME THAT TO BE THE CASE.

Q WERE YOU MADE AWARE AT ANY TIME THAT UNION HAS AN ONGOING FLAME IONIZATION SURVEY AND LEAK PREPARE PROGRAM TO



IDENTIFY HOT SPOTS IN AREAS IN NEED OF CATHODIC PROTECTION PRIOR TO FEBRUARY 1988?

A I AM AWARE OF AN ONGOING PROCESS OVER AT LEAST THE LAST FIVE YEARS WHERE UNION GAS HAS SAID CERTAIN THINGS WOULD BE DONE WITH IN TIME FRAMES AND THAT THEY HAVE NOT MATERIALIZED.

Q I BELIEVE THE THIRD AREA YOU ADDRESS IN YOUR PREFILED TESTIMONY HAS TO DO WITH CATHODIC PROTECTION FOR COATED STEEL RISERS. AGAIN, I WOULD INVITE YOUR CORRECTION, BUT MY INTERPRETATION, YOUR PREFILED TESTIMONY SUGGESTED THAT UNION GAS COMPLETE THAT BY JULY 1, 1989 WHERE THE PLAN AND AGREEMENT ENTERED INTO BY STAFF AND UNION GAS CALLS FOR COMPLETION OCTOBER 31, 1989?

A AGAIN, I WOULD RELY UPON MR. ELLIOTT'S EXPERT AMENDMENTS THAT HAVE BEEN OFFERED IN HIS PREFILED TESTIMONY AT THIS HEARING.

Q WERE YOU AWARE, OR WAS THE CITY AWARE, THAT, AGAIN, IN ORDER TO PROPERLY INSTALL CATHODIC PROTECTION ON COATED STEEL RISERS IT WOULD BE NECESSARY TO CONDUCT PIPE-TO-SOIL TESTS WHICH, AGAIN, CANNOT BE CONDUCTED IN THE WINTER MONTHS DURING FROST AND FROZEN SOIL CONDITIONS?

A I THINK A REASONABLE PERSON WOULD ASSUME THAT THERE ARE ACTIVITIES THAT CANNOT TAKE PLACE DURING WINTER MONTHS.

Q A COUPLE MORE QUESTIONS, MAYOR. THERE ARE TWO AREAS,

I BELIEVE, IN YOUR TESTIMONY THAT YOU RAISE THAT WERE NOT ADDRESSED AT ALL IN THE AGREEMENT AND PLAN AS ENTERED INTO BY THE STAFF AND UNION. FIRST, YOU MADE SOME COMMENTS AND TESTIFIED TO THE EFFECT THAT THE PLAN DOES NOT ADEQUATELY ADDRESS FLAME PACK OR FLAME IONIZATION SURVEYS OF SERVICE LINES BETWEEN THE MAIN AND METERS THROUGHOUT JOHNSON COUNTY.

A YOUR QUESTION?

Q THE QUESTION IS: DID YOU NOTE IN REVIEWING THE 108-PAGE COMPREHENSIVE REPORT AND THE OTHER DOCUMENTS YOU HAVE REVIEWED RELATIVE TO THE KCC INVESTIGATION IN FEBRUARY 1988 AND THE PAST INVESTIGATIONS THAT AT NO TIME HAD UNION GAS EVER BEEN CITED FOR FAILING TO TAKE FLAME IONIZATION SURVEYS OF SERVICE LINES?

A I AM AWARE, I BELIEVE, THAT A RECENT ORDER BY THE KCC THAT ADDITIONAL SURVEYS HAVE BEEN REQUESTED.

Q WERE YOU AWARE THAT UNION GAS HAS BEEN CONDUCTING FLAME IONIZATION SURVEYS OF SERVICE LINES BETWEEN THE METER AND THE MAIN REGARDLESS OF THE LOCATION OF THE METER SINCE 1982?

A I AM TOLD THAT IS THE CASE. I HAVE NO KNOWLEDGE OF HOW EXTENSIVE, OR HOW THOROUGH THEY HAVE BEEN.

Q AND LASTLY, YOU ADDRESS OR DISPUTE THE DEGREE AND AMOUNT OF MONETARY PENALTIES AS SET FORTH WITHIN THE AGREEMENT AND PLAN.

A THAT'S CORRECT.

Q PRIMARILY IN REVIEWING YOUR TESTIMONY IT SEEMS THE REASON HAD TO DO WITH REPEAT VIOLATIONS IN THE AREA OF OVERPRESSURIZATION OF GAS LINES?

A I THINK FOR THIS BODY TO MAKE AN ADEQUATE JUDGMENT AS TO THE AMOUNT OF SETTLEMENT FEE OR FINE, AS IT IS CALLED, THE TOTALITY, HISTORICAL TOTALITY OF THE SYSTEM AND THE ACTIONS OF THE UNION GAS MUST BE BROUGHT INTO BEAR. IF THEY ARE NOT, MY FEELING IS, THAT NOTHING BASICALLY WILL CHANGE AS HAS BEEN THE CASE OVER THE YEARS, AND IF THAT WERE TO OCCUR I THINK THAT WOULD BE MOST UNFORTUNATE FOR THOSE WHO RECEIVE SERVICE FROM UNION GAS.

WE BELIEVE AS RECOMMENDED BY THE KCC STAFF IN VARIOUS DOCUMENTS AND TESTIMONY THAT THERE WAS A SPECIAL FORMULA THAT WAS USED TO DETERMINE THE RECOMMENDATION AND THAT HAD TO DO WITH THE NUMBER OF VIOLATIONS, WITH THE LENGTH OF TIME THOSE ALLEGED VIOLATIONS HAD GONE UNCORRECTED, AND THEREFORE, THE RECOMMENDATION WAS A RANGE OF FINES OF \$100 TO \$600,000, AS I RECALL. I THINK IT IS ALSO, AS I HAVE READ OTHER PREFILED TESTIMONY, IT IS INDICATED THAT \$100,000 IS SIGNIFICANT AND THERE WERE NO LIVES LOST. WHY THERE WERE NO LIVES LOST IS A MYSTERY. I DON'T THINK THAT THAT IS AN ADEQUATE JUDGMENT THAT CAN BE, SHOULD BE DETERMINED INTO SAYING \$100,000 FINE IS AN EXCESSIVE FINE.

IN MY JUDGMENT, WHEN YOU ADD UP ALL THE KCC'S EXTENSIVE EXPERIENCE WITH UNION GAS, WHEN YOU CONSIDER THE FACT THAT THE EXPLOSION IN OVERLAND PARK WAS CAUSED BY A FAULTY T-CONNECTION AND I BELIEVE IN THE PRIOR YEAR THERE HAD BEEN AT LEAST TWO OTHER EXPERIENCES IN OVERLAND PARK WITH FAULTY T-CONNECTIONS ON UNION GAS' SYSTEM, AND, AGAIN, THIS IS DOCUMENTED IN KCC RECORDS. I THINK IT IS IMPERATIVE THAT THE FINE FIT THE RECORD OF NON-COMPLIANCE, WHATEVER THAT RECORD BE.

Q MAYOR, WERE YOU AWARE THAT THE PLAN AND AGREEMENT AS ENTERED INTO BY STAFF AND UNION CALLED FOR FINES UP TO AND IN THE AMOUNT OF \$400,000 IF UNION FAILS TO COMPLY WITH THE TERMS OF THE AGREEMENT?

A THE POSSIBILITY EXISTED. AND AS HAS ALREADY BEEN DEMONSTRATED, I THINK, THE ORIGINAL AGREEMENT SAID THAT THESE VARIOUS AREAS MUST BE COMPLETED IN TWO YEARS OR THREE YEARS. AS HAS ALREADY BEEN DEMONSTRATED, AND IN LARGE PART AGREED TO BY UNION GAS, THEY CAN COMPLETE THOSE ITEMS MUCH BEYOND THE EXPIRATION OF THREE YEARS. SO, I THINK WHAT WE HAVE BEFORE US--THE \$400,000 IS A PAPER TIGER, QUITE FRANKLY, IN THE ORIGINAL AGREEMENT, AND I THINK THAT'S DEMONSTRATED BY WHAT WE HAVE BEEN SHOWN TO US.

Q ONE LAST QUESTION, MAYOR. IN REFERENCE TO THE TIME FRAMES AS CONTAINED WITHIN THE PLAN AND AGREEMENT, YOU

ARE WILLING TO RELY ON THE EXPERTISE AS PROVIDED BY MR. ELLIOTT IN HIS PREFILED TESTIMONY, YET YOU SEEM TO REJECT THE AMOUNT OF THE FINE OR MONETARY AMOUNTS AS SET FORTH IN THE PLAN THAT WERE PUT TOGETHER THROUGH THE EXPERTISE OF THE KCC IN SEPTEMBER. IS THERE SOME EXPLANATION WHY YOU ARE WILLING TO RELY ON THEIR EXPERTISE IN ONE AREA AND YET SEEMINGLY TO REJECT IT IN ANOTHER?

A THE EXPERTISE OF THE STAFF INDICATED A FINE IN THE RANGE OF \$100,000 TO \$600,000.

Q YOU DO UNDERSTAND STAFF DID RECOMMEND ACCEPTANCE OF THE PLAN SIGNED ON SEPTEMBER 16, 1988?

A WITH A POTENTIAL ADDITIONAL \$400,000. AS I HAVE ALREADY STATED, THE \$400,000 IS A PAPER TIGER AND I THINK WE ALL UNDERSTAND THAT.

MR. GRIER: I HAVE NO FURTHER QUESTIONS AND I THANK YOU FOR YOUR TIME, MAYOR EILERT.

COMMISSIONER KOWALEWSKI: MR. RIGGINS.

MR. RIGGINS: THANK YOU, COMMISSIONER KOWALEWSKI.

CROSS-EXAMINATION

BY MR. RIGGINS:

Q MAYOR EILERT, WE MET EARLIER THIS AFTERNOON. MY NAME IS BILL RIGGINS AND I REPRESENT THE CITIZENS UTILITY RATEPAYERS BOARD.

DO YOU HAVE A FIGURE IN MIND THAT WOULD BE A MORE APPROPRIATE FINE, IN YOUR VIEW, FOR UNION GAS?

A I THINK IT IS DIFFICULT TO SAY SPECIFICALLY WITHOUT REVIEWING THE ENTIRE RECORD OF UNION GAS. I DO HAVE KNOWLEDGE OF AN EXPERIENCE IN THIS AREA WHERE ANOTHER UTILITY, THE BOARD OF PUBLIC UTILITIES IN KANSAS CITY, KANSAS, WAS ASSESSED AN AMOUNT OF, I THINK, \$168,000 FINE FOR ALLOWING CERTAIN POLLUTANTS TO ESCAPE FROM ONE OF THEIR BURNING STACKS. CERTAINLY NOT A DIRECT THREAT TO PUBLIC SAFETY AS I THINK THESE INCIDENCES HAVE BEEN. THEY ALSO WERE REQUIRED TO EXPEND \$10 MILLION TO PUT IN NEW EQUIPMENT. I BALANCE AN ACTION LIKE THAT AGAINST AN EXPLOSION WHICH OCCURRED IN OUR CITY IN WHICH A HOUSE WAS COMPLETELY EXPLODED. PEOPLE BARELY ESCAPED SECONDS BEFORE THAT. ONE OTHER HOUSE WAS EXTENSIVELY DAMAGED AND A THIRD HOUSE WAS DAMAGED.

Q YOU STATED THAT YOU FEEL UNION SHOULD BE REQUIRED TO STRICTLY COMPLY WITH THE PLAN. IF THEY DO NOT STRICTLY COMPLY WITH ONE OF THE REQUIREMENTS OF THE PLAN, WOULD IT BE YOUR POSITION THAT THEY SHOULD BE FINED AND IF SO, IS IT YOUR POSITION THEY SHOULD BE FINED THE MAXIMUM AMOUNT POSSIBLE UNDER THE AGREEMENT?

A YES, IT WOULD BE.

Q WOULD IT BE YOUR PREFERENCE THAT IF THERE WERE VIOLATIONS BY UNION FOR WHICH THEY COULD BE FINED MORE UNDER THE PROVISIONS OF K.S.A. 56-1,151 THAT THAT PROVISION ALSO SHOULD BE CONSIDERED IN DETERMINING THE

FINE?

A I AM NOT FAMILIAR WITH THE SPECIFICS OF THAT PROVISION. I THINK IN GENERAL THE RESPONSE TO THAT QUESTION WOULD BE, AS I HAVE REVIEWED THE MATERIAL AVAILABLE TO ME FROM THE KCC STAFF, THAT IT IS TIME TO MAKE SURE THAT UNION GAS COMPLIES WITH ALL THE REQUESTS OF THE KCC, COMPLIES WITH ALL FEDERAL AND STATE REQUIREMENTS. WHATEVER MONETARY METHOD IS AVAILABLE TO ENCOURAGE THAT COMPLIANCE, WHATEVER AVENUE IS AVAILABLE SHOULD BE TAKEN ADVANTAGE OF.

Q ONE MORE QUESTION ON FINES SO THAT I MAKE SURE I UNDERSTAND YOUR POSITION. WOULD IT BE THAT THE MAXIMUM AMOUNT ACCESSIBLE SHOULD BE ASSESSED FOR ANY VIOLATIONS NO MATTER HOW SMALL?

A I DON'T KNOW THAT I CAN SAY THAT WITHOUT LOOKING AT THE CIRCUMSTANCES SURROUNDING EACH SITUATION. I WOULD MAKE THIS STATEMENT BASED UPON THE DOCUMENTATION I HAVE SEEN THAT HAS BEEN PROVIDED FROM THE KCC FILES OF THE HISTORY OF THE ACTIONS AND RELATIONSHIP OF THE KCC WITH UNION GAS, AND ALLEGED VIOLATIONS, I SEE NO REASON WHY MAXIMUM PENALTIES SHOULD NOT BE LEVIED.

Q I HAVE A QUESTION ABOUT YOUR COMMENTS REGARDING PARAGRAPH 12 OF THE AGREEMENT WHICH TALKS ABOUT INCLUSION IN RATES, EXPENDITURES MADE BY UNION TO COMPLY WITH THE PLAN. DO I UNDERSTAND YOUR POSITION CORRECTLY IN THAT WHAT YOU STATE IS; IN UNION'S NEXT RATE

CASE THE EXPENDITURES SHOULD BE LOOKED AT AND IF THERE ARE EXTRA COSTS, SAY INCREASES ASSOCIATED PERHAPS WITH INFLATION OR OVERTIME OR SPECIAL CONTRACT WORK THAT WAS NECESSARY TO COMPLY WITH THE DEADLINES ESTABLISHED THAT THOSE EXTRA COSTS SHOULD NOT BE ALLOWED IN THE RATES?

A I WOULD AGREE WITH THAT GENERALLY. I THINK, AGAIN, AS I REVIEW STAFF'S TESTIMONY THAT HAS BEEN PREFILED, FOR INSTANCE IN SOME CASES ACTIONS THAT WERE REQUIRED AS OF 1971 WERE AS OF THIS JUNE 1 PERIOD NOT COMPLIED WITH. I THINK YOU HAVE GOT TO CONSIDER THE FACT THAT IN MOST OF THESE ALLEGED VIOLATIONS THEY ARE NOT NEW AND THERE IS A HISTORY OF REPORTING SAME BEFORE THE KCC. I THINK TO THE EXTENT THAT UNION GAS COULD HAVE ANSWERED THESE VIOLATIONS AND MADE THESE CORRECTIONS IN '83, '84, '85, '86, '87 AND NOW THERE HAS TO BE A CRASH PROGRAM, IF YOU WILL, TO CORRECT THOSE VIOLATIONS. I THINK THE COMPANY, NOT THE RATE-PAYERS, SHOULD HAVE TO CARRY THAT DEFICIENCY AND THE EXPENSES THEREOF.

Q YOU ALSO STATE IN YOUR TESTIMONY, AS I UNDERSTAND, THAT YOU FEEL IT WOULD BE INAPPROPRIATE TO ALLOW UNION TO RECOVER THROUGH RATES, THE COST OF THE MANAGEMENT AUDIT ORDERED BY THE COMMISSION, IS THAT CORRECT?

A THAT'S CORRECT. I THINK THE MANAGEMENT AUDIT IN A SEPARATE ORDER IS AN INTEGRAL PART OF THE CONSIDERATION



BY THE KCC. AND I SAY THAT BECAUSE I THINK THE KCC, THE CITY, CUSTOMERS OF UNION GAS NEED TO HAVE THE QUESTION ANSWERED WHETHER THE COMPANY HAS THE FINANCIAL RESOURCES, WHETHER THE COMPANY HAS THE MANAGEMENT STRENGTH, THE MANAGEMENT DEPTH, WHETHER GENERALLY THE COMPANY HAS THE ABILITY TO PROVIDE NATURAL GAS SERVICES TO SPECIFICALLY A GROWING AREA LIKE JOHNSON COUNTY, OR FOR THAT MATTER, ITS ENTIRE SYSTEM, WHETHER THEY CAN, IN THE FUTURE, PROVIDE THE REQUIRED LEVEL OF SERVICE.

Q IN TERMS OF YOUR RATIONALE FOR NOT ALLOWING THE COST OF THAT AUDIT BE INCLUDED IN RATES, IS THAT RATIONALE BASICALLY THAT THE AUDIT WOULD NOT HAVE BEEN REQUIRED HAD UNION BEEN DOING WHAT IT WAS SUPPOSED TO BE DOING ALL ALONG?

A YES, THAT IS CORRECT. AND I GUESS I THINK OF A SPECIFIC SITUATION IN THIS CITY BACK IN 1984, 1985, WHICH I BELIEVE MR. REEDER SPEAKS TO IN HIS TESTIMONY, WHEREBY IN A PARTICULAR SUBDIVISION OF THIS CITY, BECAUSE EVIDENTLY OF AN INADEQUACY OF PIPING INTO THAT AREA THAT THE COMPANY KNOWINGLY OVERPRESSURIZE THOSE LINES SIGNIFICANTLY FOR AN EXTENDED PERIOD OF TIME IN ORDER TO MAINTAIN GAS LEVEL PRESSURES IN THAT SUBDIVISION, WAS REVEALED OR SUBSEQUENTLY THEY DID INSTALL ADDITIONAL GAS LINES. BUT IT IS NO SECRET IN THIS CITY THAT WE PROVIDE ALL TYPES OF LONG-RANGE

PLANNING INFORMATION, PLAT DEVELOPMENT INFORMATION AND MAKE IT AVAILABLE TO ALL PUBLIC AGENCIES OR AGENCIES THAT OPERATE IN THE CITY. IT IS A MYSTERY TO ME WHY THAT TYPE OF SITUATION EVEN SHOULD HAVE EXISTED IF THERE WAS IN PLACE IN THE COMPANY THE PROPER PLANNING, PROPER FINANCIAL RESOURCES. SO I THINK THAT MANAGEMENT AUDIT IS A KEY TO ANY FUTURE DECISION THAT THIS BODY MUST MAKE IN REGARD TO UNION GAS' OPERATION. AND I THINK IT IS BECAUSE OF ACTIONS OR BECAUSE OF INACTIONS ON THE PART OF THE COMPANY THAT REQUIRES THAT AUDIT. I DON'T THINK THE RATEPAYERS SHOULD PAY FOR THAT.

MR. RIGGINS: THANK YOU, MR. MAYOR.

I HAVE NO FURTHER QUESTIONS, MR. KOWALEWSKI.

COMMISSIONER KOWALEWSKI: MS. BRADBURY.

CROSS-EXAMINATION

BY MS. BRADBURY:

Q JUST A COUPLE OF QUESTIONS, MAYOR EILERT. HAVE YOU OR YOUR STAFF MET WITH THE OFFICIALS OF UNION ANY TIME SINCE STAFF ENTERED INTO THE AGREEMENT WITH UNION?

A YES, ONCE.

Q WAS IT YOURSELF, PERSONALLY, OR WAS IT YOUR STAFF?

A AT THE REQUEST OF UNION GAS WE MET WITH UNION GAS OFFICIALS, MYSELF, COUNSEL MEMBER BYRD, COUNSEL PRESIDENT, BYRD, COUNSEL MEMBER AILIE SPEER, CHAIRMAN OF THE COMMUNITY DEVELOPMENT COMMITTEE AND VARIOUS STAFF

MEMBERS.

Q AT THAT TIME, WERE YOU LED TO BELIEVE THAT UNION WAS, IN FACT, AHEAD OF SCHEDULE ON THIS PLAN?

A AS I RECALL THAT MEETING, THE MEETING WAS REQUESTED SO THAT UNION GAS COULD APPRISE THE CITY OF WHAT ACTIONS IT HAD TAKEN AND GENERALLY IT WAS MY IMPRESSION, YES, THEY WERE FAR AHEAD OF THE SCHEDULE THAT THE AGREEMENT CALLED FOR.

MS. BRADBURY: THANK YOU, MR. MAYOR.

I HAVE NO FURTHER QUESTIONS.

COMMISSIONER KOWALEWSKI: MS. ARNOLD-BURGER, ANY REDIRECT?

MS. ARNOLD-BURGER: NO REDIRECT.

COMMISSIONER KOWALEWSKI: THANK YOU, MAYOR EILERT, YOU MAY STEP DOWN.

(THEREUPON, THE WITNESS WAS EXCUSED AT 2:25 P.M.)

House Energy and Natural Resources Committee  
Natural Gas Pipeline Safety Subcommittee

Testimony of

Robert Elliott, Chief Engineer  
Kansas Corporation Commission

February 22, 1989

The Kansas Corporation Commission appreciates the opportunity to appear before the Special Subcommittee established to review the laws pertaining to natural gas pipeline safety. The Commission has proposed legislation that, if enacted, would make the natural gas system much safer. Specifically, the Commission proposes legislation that would establish a mandatory underground utility damage prevention or "one-call" program. The Commission is also seeking legislation authorizing the Natural Gas Pipeline Safety Staff to secure evidence at the scene of a possible natural gas pipeline safety incident. Legislation is proposed to increase the maximum civil penalty for pipeline safety violations from \$1,000 per day to \$10,000 per day and from \$200,000 to \$500,000 for any related series of violations. Finally, a bill is requested to bring a statute into conformance with contemporary standards for pipeline design.

H Energy and NR  
25-22-89  
Attachment 3

## I. Kansas Natural Gas Pipeline Safety Program

The Kansas Natural Gas Pipeline Safety Program is a Federal/state partnership wherein we annually certify that to the Office of Pipeline Safety, U.S. Department of Transportation (DOT) that we have the necessary legislative authorization and state regulations to comply with our Section 5(a) Agreement with them. The Natural Gas Pipeline Safety Act (NGPSA) of 1968 specifies that Section 5(a) Agreements are for those states who have state statutory authority to act as DOT's agent in pipeline safety matters. The Commission has such statutory authority with respect to intrastate operators, privately-owned distribution facilities and municipally-owned facilities.

Pursuant to the NGPSA, the U.S. DOT, in 1971, adopted national pipeline safety standards. The Kansas Natural Gas Pipeline Safety Section is responsible for enforcing the Federal Natural Gas Pipeline Safety Regulations as amended by the Kansas Corporation Commission. The Pipeline Safety Section is funded in part by Federal grants-in-aid (36 percent in calendar year 1988), with the remainder coming from the Natural Gas Pipeline Safety Inspection Fee Fund, a fund assessed against jurisdictional gas operators, and the Public Service Regulation Fund, through assessments authorized pursuant to K.S.A. 66-1501, et. seq. There are 98 jurisdictional gas operators, with over 127 individual inspection units. In calendar year 1988, inspections were completed on every inspection

unit in the state, resulting in 317 probable non-compliances being brought to the attention of operators for correction. In addition, the staff has conducted construction inspections as well as investigations of natural gas pipeline safety incidents. We are currently investigating the incident at 5611 W. 98th Terrace in Overland Park, along with several other incidents that have occurred in the past 12 months.

As members of the Committee may be aware, the Commission has ordered a management audit of Union Gas in conjunction with ordering a comprehensive improvement program to require improvements on its system in the next year and a half. The Commission is seeking supplemental appropriations to fund the management audit. The Commission did not file its request in November because the Request for Proposal (RFP) had not yet been issued and no definitive estimate of expenditures could be provided. On December 16th, the Commission received three proposals, all of which exceeded budget limitations imposed on the Commission in the current fiscal year. Consequently, the Commission re-issued an RFP which is slightly reduced in scope and which is structured in phases. The Commission has identified its highest priority elements of the original audit in Phase I and has set-out the remainder of the work in Phases II and III. We believe that this phased approach will allow us to make the best use of our time and resources. We are currently in a position to initiate a

portion of the audit work within existing budget limitations (\$80,000 - \$100,000). Proposals are due February 17; information provided by consultants in response to this second RFP will allow us to more definitively identify our additional funding needs. We believe it prudent to delay the filing of our request until consideration of the Omnibus Bill. The Commission will utilize the intervening time period to evaluate proposals, convene the Negotiating Committee, select a consultant, negotiate and initiate Phase I work, and identify remaining needs and related costs. The Phase I work product is structured so as to be of value to the commission in and of itself, regardless of future funding opportunities.

The need to strengthen the laws and regulations relating to natural gas pipeline safety cannot be overemphasized. The Kansas Corporation Commission has taken steps to enact tougher Natural Gas Pipeline Safety Regulations. The proposed regulations can properly be characterized as some of the toughest pipeline safety regulations in the nation. The proposed regulations would require:

- \* **Flame ionization leak surveys of all gas lines at least once every three years; current Federal regulations require instrument leak surveys only in business districts and for areas outside of business districts, requires leak surveys once every five years.**

\* Electrical survey of all bare steel pipe, including bare steel service lines; current Federal regulations are ambiguous, at best, requiring electrical surveys only where "practical".

\* As an alternative to electrical surveys, require:

1. Annual flame ionization leak surveys and the replacement of all bare steel service lines by December 31, 1993;
2. Annual flame ionization leak surveys and placing cathodic protection on all bare steel service lines by December 31, 1991; or
3. Annual flame ionization leak surveys and, when the number of service repaired or replaced in a defined area equals 25 percent or more, the replacement of all remaining service lines within 18 months.

Current Federal regulations do not provide for the change-out of unprotected bare steel pipe. As experience is indicating, it is essential that unprotected bare steel pipe either be protected or replaced according to an aggressive time schedule.



- \* **Flame ionization leak surveys of all service lines and customer owned piping between the main and the building wall in the state within the next 12 months. On November 30, 1988, the Commission issued an emergency order requiring all utilities in the state to instrument leak survey, by December 31, 1988, all bare steel service lines not cathodically protected to approved criteria.**
  
- \* **Annual flame ionization leak surveys of all customer owned piping between the meter and the building wall; current Federal regulations do not require utilities to leak survey or maintain this pipe (referred to in the industry as yard lines).**
  
- \* **All pressure relief and limiting valves to be designed to prevent unauthorized operation that might allow over-pressuring of the line; current Federal regulations apply to only some pressure relief and limiting valves.**
  
- \* **Coated lengths of pipe to be instrumentally checked for defects in the coating prior to lowering it into the ditch; current Federal regulations do not require instrumental checks even though it is a prudent industry practice.**

- \* Replacement of each imperfection or damage that would impair the serviceability of plastic pipe; current Federal regulations allow patching saddles to be used.
  
- \* Burial of almost all aboveground pipe by December 31, 1995; current Federal regulations make no provision for the phasing out of aboveground pipe.
  
- \* Establishment of a repair and replacement program for bare steel and cast iron transmission lines and mains; current Federal regulations do not explicitly require a replacement program for these two outmoded types of pipelines.
  
- \* Maintaining records and maps to show location of all cathodically protected piping; current Federal regulations require only records or maps and experience indicates that maps may assist in the review of leak histories.
  
- \* Monthly odorimeter sampling at selected points in the system and sniff tests during each service call; current Federal regulations simply require "periodic sampling".

- \* Replacement, repair or removal from service within five days of segments of pipeline in an unsafe condition; current Federal regulations contain no time requirement.
  
- \* Inspection and classification of leaks within two hours of notification; current Federal regulations require "prompt" attention.
  
- \* Establishment of classes of leaks:

Class 1. Hazardous leaks; with repairs to begin the same day;

Class 2. Probable future hazard; with repairs to begin with 6 months of detection, but any leak discovered after June 30 of any calendar year to be repaired no later than December 31 of the same year, or ground freezing, whichever occurs first; and

Class 3. Non-hazardous; shall be rechecked every 6 months and repaired or replaced within 30 months.

Current Federal regulations require only that  
"hazardous leaks must be repaired promptly."

- \* Maximum intervals between patrols of distribution mains not to exceed seven and a half months in populated areas and fifteen months in sparsely populated areas; current Federal regulations do not establish maximum intervals between patrols.
  
- \* Notice to Natural Gas Pipeline Safety Section of all construction; current Federal regulations do not require notice of service line installations.
  
- \* Yard lines installed after May 1, 1989, to comply with the design, installation, testing, maintenance and replacement requirements as specified in the code; current Federal regulations have no such requirement.

The Commission has held hearings on the proposed regulations and will consider the adoption of the changes on Wednesday, February 22.

II. Mandatory Underground Utility Damage Prevention Act  
("One-Call")

When Damage Prevention legislation was first introduced in the Kansas Legislature four years ago, there were approximately 26 states in the U.S. with mandatory damage prevention laws on the books. Today, the number of states has increased to 38 states and Kansas is still not among them. We believe the issues of public safety and damage prevention are inseparable. Outside force damage, principally damage by mechanized excavation equipment, continues to be the largest single cause of pipeline incidents.<sup>1</sup> Kansas needs a mandatory damage prevention program.

You may be interested in knowing of some of the incidents which have occurred in the recent past which support the need for damage prevention legislation: (1) An inter-city telephone cable serving El Dorado, Eureka, Hamilton, and Towanda was severed when a sprinkler system was installed; (2) Several buildings in downtown Wichita has to be evacuated by fire department personnel because of a damaged natural gas pipeline; (3) In Topeka, a 900 pair telecommunications cable was cut during the placement of a culvert; (4) In a matter which is currently under investigation, and thus I am not at liberty to discuss in detail, a residence in Liberal, Kansas was destroyed by a natural gas explosion. The yard line had

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<sup>1</sup> ANNUAL REPORT ON PIPELINE SAFETY, Calendar Year 1987, page 2; U.S. Department of Transportation, Research and Special Programs Administration, Office of Pipeline Safety

been hit by a crew installing a phone line; (5) According to media reports, one of the natural gas fires in Kansas City, Missouri, involved a natural gas line that had been struck by crews installing a water line; and (6) In Leawood, Kansas, on December 19, 1988, construction crews, digging in the area to install street lights, hit a natural gas line

Several other examples from across the nation illustrate the need for action to prevent third party damage: (1) A contractor installing storm sewer lines in a highway median in Austin, Texas, struck and ruptured a steel gas main pipe on December 18, 1987. Natural gas escaped and ignited; (2) On June 11, 1987, a Colonial Pipeline Company's 32-inch petroleum products pipeline was punctured by a bulldozer ripping rock for a sidewalk across pipeline right-of-way in the area of a partly completed apartment development in Centreville, Virginia. Thirteen county and city personnel were treated for gasoline fume exposure; and (3) On August 5, 1987, a subcontractor working on installation of a sewer line for the City of Wilmington, North Carolina, struck and pulled a 3/4-inch gas service line out of its connection at the top of a 6-inch gas main. While gas company personnel were working to secure the leak, the escaping natural gas was ignited, resulting in 1 fatality and 19 injuries.

The legislation proposed by the Commission would establish a mandatory One-Call system. Like the existing One-Call system, the service would be provided by a non-profit corporation established by the utilities (the existing entity would continue to operate). Mandatory participation is important. When a contractor or homeowner is ready to dig, he or she thinks very little of the importance of damage prevention. Calling the electric, gas, water, telephone, cable and sewer utilities seems to be too much trouble to dig a hole for landscaping. One-Call provides one easy call to a well-advertised toll-free number that will minimize the effort for the caller and ensure that the marking of facilities is completed.

Mandatory Damage prevention legislation is needed in Kansas to protect Kansans. Kansas has an existing voluntary One-Call System, but the lack of participation by all utilities in the state reduces its effectiveness. It is important that a damage prevention program be comprehensive in scope and easy to use.

The current voluntary One-Call program is a non-profit group with a membership of over 123 companies. Its membership includes Kansas natural gas companies, electric companies, telephone companies, cable television companies (Wichita and Olathe) and some municipalities as well as some interstate natural gas and telephone companies. Membership is open to any entity and the organization

operates under By-laws and a Board of Directors. Costs to operate the notification formula using the number of telephone calls which are directed to that respective member and the size of the company. The Board of Directors has entered into a contract with an outside entity to take care of the responsibilities of the day-to-day activities of the center. The notification center provides an 800 telephone number so that it can receive calls from anywhere in the state of Kansas. Contractors utilizing the notification center to determine the location of underground utilities near their projects receive this service free of charge.

### III. HB 2456 Investigative Authority

HB 2456 provides specific authorization to natural gas pipeline safety inspectors to conduct on-site investigations of possible natural gas pipeline safety incidents and to take possession of evidence of the cause or origin of the incident. The legislation is necessary to avoid any unnecessary delays in obtaining access to the site of an incident and to ensure that evidence be secured for testing by an independent laboratory. The interest of public safety in a complete and thorough investigation makes this legislation necessary.



IV. HB 2457 Increases in the Maximum Penalties that May be Levied (in conformance with the Federal Pipeline Safety Reauthorization Act of 1988)

The proposed legislation would increase the maximum civil penalty for pipeline safety violations from \$1,000 per day to \$10,000 per day and from \$200,000 to \$500,000 for any related series of violations. The legislation mirrors the maximum penalties contained in the Federal Pipeline Safety Reauthorization Act of 1988.

V. HB 2454 Clarification Language for Design Criteria

Finally, a bill is requested to bring a statute into conformance with contemporary standards for pipeline design. The change would bring the statute into conformance with standards already contained in the Natural Gas Pipeline Safety Regulations, as amended. Wrought or cast iron is no longer an acceptable material for new installations of pipe.

## EXHIBIT NO. 1

KCC PIPELINE SAFETY INSPECTION STATISTICS

<u>Item</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>	<u>1987</u>	<u>1988</u>
1. No. of Jurisdictional Inspection Units	139	137	131	127	127
2. Inspection Units Inspected	123	130	127	112	127
3. No. of Non-compliances Issued	589	382	579	230	317
4. Enforcement Actions Taken	88	70	-	92	94
5. Percent of Inspection Units Incurring Enforcement Actions	72	54	-	82	74
6. Penalties Assessed *					

\* 1984 - \$ 12,800  
 1985 - \$ 45,000  
 1986 - \$ 0  
 1987 - \$ 600  
 1988 - \$426,000

(KPL Gas Service - \$26,000; Union Gas -  
 \$200,000 assessed and \$200,000 held in  
 abeyance pending compliance with the plan)

EXHIBIT NO. 2

1986 RATINGS BY STATE

ALABAMA	98.3	NEVADA	98.45
ARIZONA	94.1	NEW HAMPSHIRE	86
ARKANSAS	94	NEW JERSEY	96
CALIFORNIA GAS	90.8	NEW MEXICO	89
CALIFORNIA LIQUID	92.2	NEW YORK	98
COLORADO	84	NORTH CAROLINA	100
CONNECTICUT	95	NORTH DAKOTA	98.3
DELAWARE	94.3	OHIO	87
FLORIDA PSC	89	OKLAHOMA GAS	92
FLORIDA STIC	84	OKLAHOMA LIQUID	75
HAWAII	83.5	OREGON	94.12
GEORGIA	88.2	PENNSYLVANIA	95
ILLINOIS	93	RHODE ISLAND	95
INDIANA	93	SOUTH CAROLINA	92.4
IOWA	97	TENNESSEE	96.6
KANSAS	95	TEXAS GAS	91
KENTUCKY	95.3	TEXAS LIQUID	91
LOUISIANA	91	UTAH	89.9
MAINE	89	VERMONT	95
MARYLAND	86	VIRGINIA	93
MASSACHUSETTS	94	WASHINGTON	83.7
MICHIGAN	95	WEST VIRGINIA	97
MINNESOTA	78	WEST VIRGINIA LIQUID	85
MISSISSIPPI GAS	94.1	WISCONSIN	69
MISSISSIPPI LIQUID	97	WYOMING	93.8
MISSOURI	88.8	DISTRICT OF COLUMBIA	93
MONTANA	91.6	PUERTO RICO	88
NEBRASKA	87		

1986 REGIONAL DATA

AVERAGE RATING FOR ALL REGIONS: 91.17

RATINGS BY REGION

<u>EASTERN</u>		<u>SOUTHERN</u>		<u>CENTRAL</u>		<u>SOUTHWEST</u>		<u>WESTERN</u>	
CT	95	AL	98.3	IL	93	AR	94	AZ	94.1
DE	94.3	FL:		IN	93	LA	91	CA:	
ME	89	PSC	89	IA	97	NM	89	GAS	90.8
MD	86	STIC	84	KS	95	OK:		LIQ	92.2
MA	94			MI	95	GAS	92		
NH	86	GA	88.2	MN	78	LIQ	75	CO	84
NJ	96	KY	95.3	MO	88.8			HI	83.5
NY	98	MS:		NE	87	TX:		MT	91.6
PA	95	GAS	94.1	ND	98.3	GAS	91	NV	98.45
RI	95	LIQ	97	OH	87	LIQ	91	OR	94.12
VT	95			WI	69			UT	89.9
VA	93	NC	100			AVERAGE:		WA	83.7
WV:		SC	92.4	AVERAGE:		89.00		WY	93.8
GAS	97	TN	96.6	89.19					
LIQ	85							AVERAGE:	90.56
		AVERAGE:							
DC	93	93.49							
PR	88								
AVERAGE:									
92.46									

NATURAL GAS PROGRAM AVERAGE: 91.49

HAZARDOUS LIQUID PROGRAM AVERAGE: 88.04

HIGHEST RATING: NORTH CAROLINA 100

LOWEST RATING: WISCONSIN 69

## EXHIBIT NO. 3

DOT ANNUAL AUDIT STATISTICS ON KCC PIPELINE SAFETY

<u>Subject</u>	<u>Calendar Year</u>		
	<u>1987</u>	<u>1986</u>	<u>1985</u>
1. Overall Rating (out of 100)	94	95	95
2. Does State Have Jurisdiction Over All Intrastate Facilities (i.e. Lack master meter, direct sales and LP Gas)	No	No	No
3. Percent of Municipal Operators Inspected	94*	100	100
4. Percent of Private Operators Inspected	85*	100	100
5. Percent of Inspection Units Inspected	88*	98	95
6. Total Person Days on Inspections	408*	583	419
7. Does State Comprehensively Inspect All Inspection Units in a 2.5 to 3 Year Interval?	Yes	Yes	Yes
8. Are Inspection Results Adequately Documented and Recorded?	Yes	Yes	Yes
9. Is the Actual Number of Inspection Days Acceptable? (Minimum = 375)	Yes	Yes	Yes
10. Are Prompt Enforcement Actions Taken On All Violations Discovered?	Yes	**	**
11. Is The Level of Staff Assigned to The Program Adequate According to DOT Guidelines?	Yes	No	No
12. Are Inspection Personnel Properly Qualified?	Yes	Yes	Yes
13. Are Investigations of Accidents Thorough and Conclusions and Recommendations Documented in an Acceptable Manner?	Yes	Yes	Yes

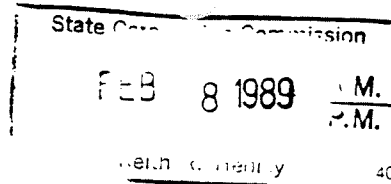
\* The comparable statistics for Calendar Year 1988 are: 100%, 100%, 100% and 459 Inspection Persondays.

\*\* This question was first addressed in this form by the DOT audit inspection in calendar year 1987.



U.S. Department  
of Transportation

**Research and  
Special Programs  
Administration**



400 Seventh Street, S.W.  
Washington, D.C. 20590

EXHIBIT NO. 4

FEB - 1 1989

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Keith Henley  
Chairman  
Kansas Corporation Commission  
Fourth Floor, State Office Building  
Topeka, Kansas 66212

Dear Mr. Henley:

On October 11-13, 1988, Edward J. Ondak, Chief, Central Region, Office of Pipeline Safety (OPS), conducted a review of the Corporation Commission's gas pipeline safety program being conducted in cooperation with this office pursuant to Section 5(a) of the Natural Gas Pipeline Safety Act of 1968 (NGPSA), as amended. During the visit, he monitored your pipeline safety activities including a field audit of the Mapleton Gas Pipeline Company facilities in Mapleton, Kansas. I thank you for the courtesies your staff extended to Mr. Ondak.

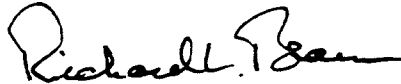
The following is a resume of the items discussed in Mr. Ondak's report on the visit:

1. Your gas pipeline safety program continues to improve. Mr. Ondak reports that the filing system and documentation of inspections is excellent. Mr. Ondak also informed me that the Commission has issued orders to both Union Gas Systems, Inc., and KPL-Gas Services Company, as a result of recent accidents, requiring the companies to take actions to assure the public safety. In addition, the Commission has proposed significant rule changes to further strengthen its pipeline safety regulations. I support these Commission actions to improve program performance.
2. In the past, we encouraged the Commission to seek jurisdiction over master metered systems, LP gas systems, and direct sales lines. Mr. Ondak reports that proposed legislation to include all intrastate operators under the safety jurisdiction of the Commission was not passed. We continue to encourage you to seek this jurisdiction.

3. Outside force damage, principally from excavation equipment, remains the leading cause of pipeline incidents. Kansas has not enacted legislation for prevention of damage to pipelines from outside force nor is the state actively pursuing such legislation. We are aware that Kansas has a statewide one-call system; however, unless it is mandated by state law, operators and excavators are not required to participate. This diminishes the effectiveness of the one-call program. We solicit your leadership in seeking enactment of legislation to prevent unnecessary dig-ins and to provide a safer environment for the residents of Kansas.

I would appreciate receiving your comments on the above items within 30 days of your receipt of this letter. We look forward to a continued close relationship between the OPS and the Commission in matters concerning pipeline safety.

Sincerely,



Richard L. Beam  
Director  
Office of Pipeline Safety