AmeriGas®

America's Propane Company

December 2, 2013

Mr. Wayne T. Lemoi
Director, Office of Pipeline Safety
PHMSA Southern Region
233 Peachtree Street
Suite 600
Atlanta, GA 30303

Re: **Notice of Probable Violation CPF 2-2013-0022**

Dear Mr. Lemoi:

This is to reply to your letter addressed to AmeriGas's COO, Paul Grady dated November 7, 2013 for alleged violations of the Pipeline Safety Regulations, Title 49, Code of Federal Regulations and NFPA 58 2004 Edition. Your letter has been referred to me for response.

Item 1 – Section 192.11 Petroleum Gas Systems:
...(b) Each pipeline system subject to this part that transports only petroleum gas/air mixture must meet the requirements of this part and of ANSI/NFPA 58 and 59

AmeriGas did not meet the requirements for "Regulator Installation" in NFPA 58, Section 6.7.4.5, which states, *"The point of discharge from the required pressure relief device on regulating equipment installed outside of buildings in fixed piping systems shall be located not less than 3 ft. (1 m) horizontally away from any building opening below the level of such discharge, and not beneath any building unless this space is well ventilated to the outside and is not enclosed for more than 50 percent of its perimeter."*

Response

The regulator at 6500 Sargasso Lane in Loxahatchee Point has been addressed and remediated. It has been properly vented away from the building opening using ANSI/UL 651 ridged PVC electrical conduit as per NFPA 58 (See attached photo).

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2317 Avenida Madrid

AmeriGas did not meet the requirements for "Regulator Installation" in NFPA 58, Section 6.7.4.6, which states, *"The point of discharge* [of a regulator] *shall also be located not less than 5 ft. (1.5 m) in any direction away from any source of ignition, openings into direct-vent (sealed combustion system) appliances, or mechanical ventilation air intakes."*

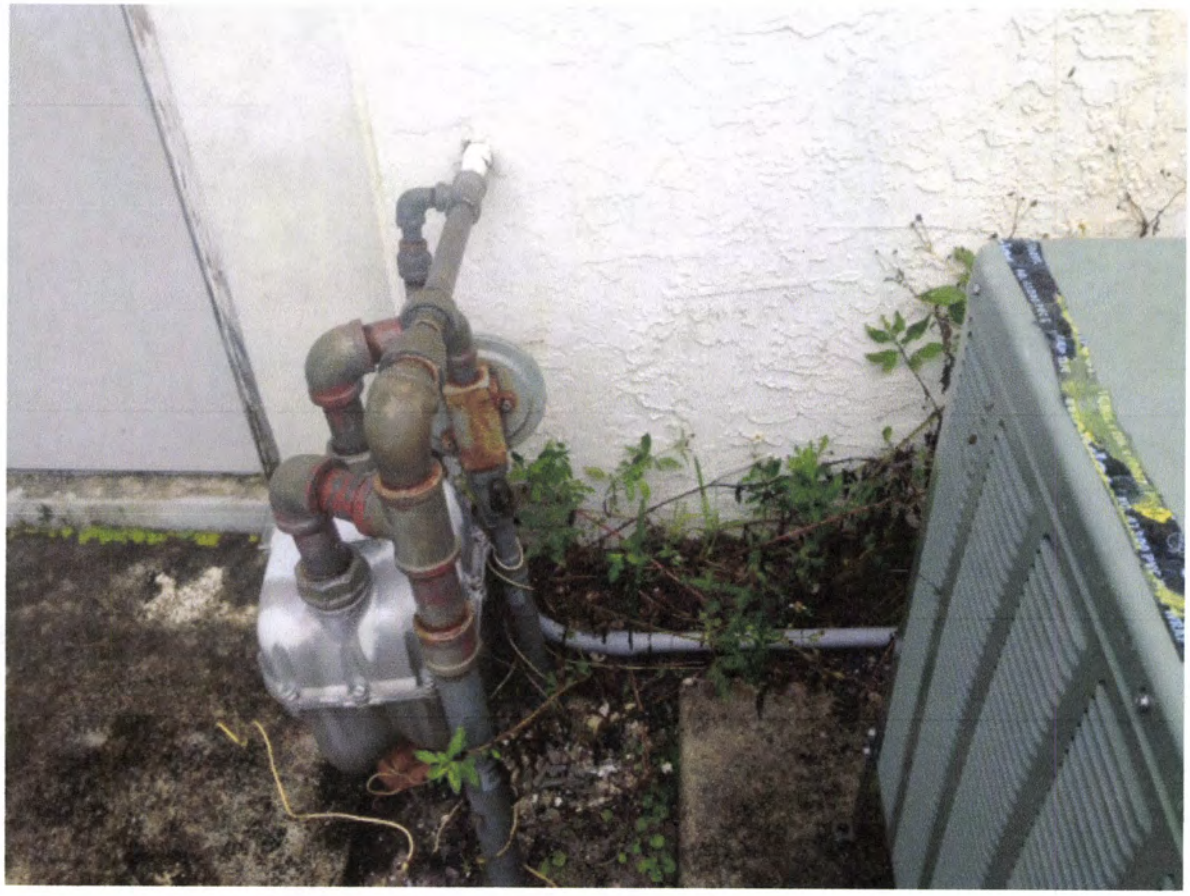
The PHMSA inspector observed and photographed AmeriGas pressure relief devices with points of discharge less than 5 feet from sources of ignition at

- 2175 Santa Catalina and 2317 Avenida Madrid Oste in Tavares Cove; and,
- 19842 Loxahatchee Pointe Drive and 6500 Sargasso Lane in Loxahatchee Pointe.

Response

The Meter at 2317 Avenida Madrid Oste in Tavares Cove has been removed and line is capped off. The other three regulators have been addressed and remediated and properly vented away from ignition sources using ANSI/UL 651 ridged PVC electrical conduit as per NFPA 58 (See attached photos for all three observed locations listed below).

- 2175 Santa Catalina, located in Tavares Cove.
- 2317 Avenida Madrid Oste in Tavares Cove. **Meter Removed**
-19842 Loxahatchee Point Drive, located in Loxahatchee Point.
- 6500 Sargasso Lane located in Loxahatchee Point.

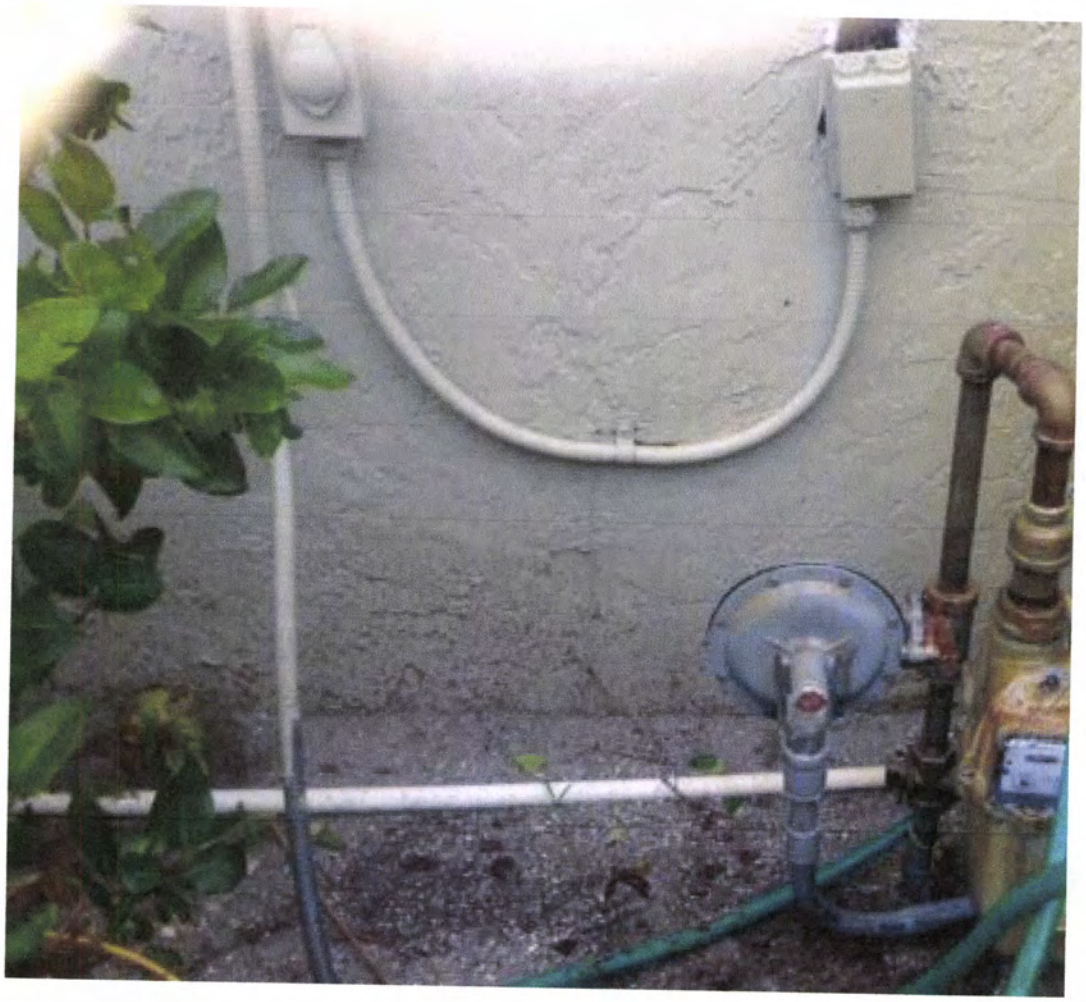


6500 Sargasso Lane

6500 Sargasso Lane

2175 Santa Catalina

2175 Santa Catalina



19842 Loxahatchee Pointe Lane

19842 Loxahatchee Pointe Lane

Item 2 – Section 192.463 External Corrosion Control: Cathodic protection.

(a) Each cathodic protection system required by this subpart must provide a level of cathodic protection that complies with one or more of the applicable criteria contained in appendix D of this part. If none of these criteria is applicable, the cathodic protection system must provide a level of cathodic protection at least equal to that provided by compliance with one or more of these criteria.

AmeriGas did not ensure that its installed cathodic protection systems provided a level of cathodic protection that complied with one or more of the applicable criteria contained in Appendix D of Part 192.

Cathodic protection testing performed during the inspection found locations with low[a] pipe-to-soil (p/s) readings indicating inadequate levels of cathodic protection. Some of the locations and associated p/s readings were as follows:

- Sand and Sea
  - North clubhouse - 834 mV
  - 2364 27th Ave NW - 757 mV
- Tavares Cove
  - 2317 Avenida Madrid Oste - 400 mV
- Palm Lake Estates North
  - 467 74th ST N - 477 mV
- Palm Lake Estates South
  - 11167 68th ST N - 388 mV

Response

AmeriGas is currently evaluating the cost difference between catholically protecting all of the sites observed or abandoning these systems and installing individual tanks at each location. AmeriGas will follow up in a timely manner as to what action we will be taking on the following observed sites.

- Sand and Sea:
  - North Club House
  - 2364 27th Ave. NW
- Tavares Cove:
  - 2317 Avenida Madrid Oste
  - Tavares Cove:
  - 2317 Avenida Madrid Oste
- Palm Lake Estates North:
  - 467 74th ST N
- Palm Lake Estates South:
  - 11167 68th ST N

Item 3 – Section 192.465 External Corrosion Control: Monitoring.

(a) Each pipeline that is under cathodic protection must be tested at least once each calendar year, but with intervals not exceeding 15 months, to determine whether the cathodic protection meets the requirements of § 192.463. However, if tests at those intervals are impractical for separately protected short sections of mains or transmission lines, not in excess of 100 feet (30 meters), or separately protected service lines, these pipelines may be surveyed on a sampling basis. At least 10 percent of these protected structures, distributed over the entire system must be surveyed each calendar year, with a different 10 percent checked each subsequent year, so that the entire system is tested in each 10-year period.

AmeriGas did not test each pipeline that is under cathodic protection at least once each calendar year, but with intervals not exceeding 15 months, to determine whether the cathodic protection met the requirements of §192.463. AmeriGas was unable to demonstrate that it had performed external corrosion control monitoring on the following systems[b]:

- Palm Lake Estates North — No monitoring in calendar years 2010 and 2011
- Palm Lake Estates South — No monitoring in calendar years 2010, 2011, and 2012
- Sand and Sea Village — No monitoring in calendar year 2012
- Tavares Cove — No monitoring in calendar year 2012

Response

AmeriGas did conduct these inspections in April of 2013 (see attached) unfortunately those readings produced some low cathodic levels. As stated in **Item - 2** we are currently evaluating these systems.

As the newly appointed AmeriGas Corporate OPS Compliance Manager, I have recently established a required monthly OPS compliance call to be conducted in every Area that has jurisdictional pipeline systems. These calls will be headed up and conducted by the Area Manager to discuss OPS compliance in their respective Area. The call will include: all of the District Managers in their Area who have jurisdictional pipeline systems, the Regional Safety Manager, the Area Safety Advisor and the Corporate OPS Compliance Manager. The premise of these calls is to ensure that compliance tasks are being addressed in a timely manner and make sure the District has the necessary resources to complete the compliance tasks. I strongly believe these monthly calls will ensure compliance in AmeriGas and to help keep our front line leaders focused on compliance.

UPS

CATHODIC PROTECTION SURVEY

FREQUENCY – **Annually**

System: Name: TAVARIS COVE

Location: Purdy Lane WPB

Surveyed By: Bill Bialczak Date: 4/2/13

Starting Location of Survey: North Side

Ending Location of Survey: South Side

Must have a minimum of 2 readings or 1 per each 35 customers with a copper sulfate 1\2 cell.

Location	Reading	Location	Reading	Location	Reading
1 North	.91	8 North/Mco		15	
2 South	.40	9		16	
3 South	.38	10		17	
4		11		18	
5		12		19	
6		13		20	
7		14		21	

Services to set up for Install of Anodes ASAP 4/30/13

CATHODIC PROTECTION SURVEY

OPS

FREQUENCY – **Annually**

System: Name: SAND AND SEA VILLAGE

Location: 2350 N.W 20TH AVE Boynton Beach

Surveyed By: Bill BIALCZAK Date: 4-30-13

Starting Location of Survey: 1501 N.W 23ST (SOUTH SIDE)

Ending Location of Survey: NORTH - POOL - AREA

Must have a minimum of 2 readings or 1 per each 35 customers with a copper sulfate 1\2 cell.

Location	Reading	Location	Reading	Location	Reading
1 SOUTH	-1.160	8		15	
2 NORTH POOL	.853 .780	9		16	
3		10		17	
4		11		18	
5		12		19	
6		13		20	
7		14		21	

CATHODIC PROTECTION SURVEY

TANKS.

OPS

FREQUENCY – **Annually**

System: Name: Palm Lakes Estates

Location: Blue Heron Blvd. Riv Beach.

Surveyed By: Bill Blakeslee Date: 4/30/13

Starting Location of Survey: NORTH SIDE 3-1000 GAL. UG TANKS.

Ending Location of Survey: SOUTH SIDE 1-1000 GAL UG TANK.

Must have a minimum of 2 readings or 1 per each 35 customers with a copper sulfate 1\2 cell.

Location	Reading	Location	Reading	Location	Reading
1 NORTH SIDE TANKS	-.663	8		15	
2	-.750	9		16	
3 SOUTH TANKS	-.430	10		17	
4	-.320	11		18	
5		12		19	
6		13		20	
7		14		21	

ALL TANK LOW NEED 2-17# ANODES ON TANKS

TOTAL ANODES (8) Needed

The Corporate OPS Compliance Manager's duties include conducting periodic audits to review the work is being completed, determine that corrective action was taken for any deficiencies found, provide guidance to the field and oversee and monitor compliance reports on a monthly basis. We have already seen an improvement in compliance with the West Palm Beach, FL location.

Item 4 – Section 192.465 External corrosion control; Monitoring:

... (b) Each cathodic protection rectifier or other impressed current power source must be inspected six times each calendar year, but with intervals not exceeding 2½ months, to insure that it is operating.

AmeriGas did not inspect its cathodic protection rectifier at Sand and Sea Village six times each calendar year, with intervals not exceeding 2½ months. AmeriGas only inspected its Sand and Sea rectifier one time in calendar year 2012. AmeriGas records showed the rectifier was inspected on December 27, 2011, January 16, 2012, and not again until April 30, 2013.

Response

AmeriGas has conducted a rectifier inspection on the Sand and Sea Village location (see attached inspection form).

As the newly appointed AmeriGas Corporate OPS Compliance Manager, as stated in the above **Item- 3** I have recently established a required monthly OPS compliance call to be conducted in every Area that has jurisdictional pipeline systems. The premise of these calls is to ensure that compliance tasks are being addressed in a timely manner and make sure the District has the necessary resources to complete the compliance tasks. I strongly believe these monthly calls will ensure compliance in AmeriGas and to help keep our front line leaders focused on compliance.

CORROSION CONTROL RECTIFIER INSPECTION

OPS

FREQUENCY - **Every (2) months.**

System:

Name Sand & Sea Village

Location: 2350 20 AVE Boynton Beach

Rectifier

Type:

DATE	SUPPLY VOLTAGE	OUTPUT VOLTS	OUTPUT AMPS	RECTIFIER CONDITION	REMARKS
4/30/13	115	33	10	Good	OK
11/20/13	115	32	9.5	Good	Dawny Martin

Inspected by: Bill Bialaim Date: 4/30/13

Item 5 – Section 192.481 Atmospheric corrosion control. Monitoring:

(a) Each operator must inspect each pipeline or portion of pipeline that is exposed to the atmosphere for evidence of atmospheric corrosion, as follows:

If the pipeline is located:	Then the frequency of inspection is:
Onshore	At least once every 3 calendar years, but with intervals not exceeding 39 months
Offshore	At least once each calendar year, but with intervals not exceeding 15 months

AmeriGas did not inspect each onshore pipeline or portion of pipeline that is exposed to the atmosphere for evidence of atmospheric corrosion once every 3 calendar years, but with intervals not exceeding 39 months. AmeriGas has onshore pipelines at Tavares Cove and Loxahatchee Pointe. The last atmospheric corrosion control monitoring at Tavares Cove was performed on January 29, 2009. While the next inspection would have been due by April 29, 2012, AmeriGas did not have records of any subsequent inspection(s). Furthermore, AmeriGas did not have any records demonstrating atmospheric corrosion control monitoring had been performed at Loxahatchee Pointe.

Response

As the newly appointed AmeriGas Corporate OPS Compliance Manager, as stated in the above **Items 3, 4** I have recently established a required monthly OPS compliance call to be conducted in every Area that has jurisdictional pipeline systems. I strongly believe these monthly calls will ensure compliance in AmeriGas and to help keep our front line leaders focused on compliance.

Item 6 – Section 192.615 Emergency plans:

... (c) Each operator shall establish and maintain liaison with appropriate fire, police, and other public officials to:
(1) Learn the responsibility and resources of each government organization that may respond to a gas pipeline emergency;
(2) Acquaint the officials with the operator's ability in responding to a gas pipeline emergency;
(3) Identify the types of gas pipeline emergencies of which the operator notifies the officials; and
(4) Plan how the operator and officials can engage in mutual assistance to minimize hazards to life or property.

AmeriGas did not establish and maintain liaison with appropriate fire, police, and other public officials as required by the regulation. AmeriGas did not have records to demonstrate that it had performed liaison activities with public officials and emergency responders prior to 2013. AmeriGas personnel present at the inspection indicated that a liaison program requiring face-to-face meetings was being implemented in calendar year 2013.

Response

The AmeriGas District Manager will review AmeriGas Emergency Responder Training, The AmeriGas District Manager along with the local Area Safety Advisor and local OPS manager will then coordinate and attend the liaison meetings with the local emergency responders and other public officials to exchange emergency contact information, review system maps and shut off valve locations, review steps for public safety and discuss making strategies for propane emergencies. Please be so kind to understand, based on the availability of the emergency responders, these meetings will take at least 30 to 60 days to coordinate and conduct. I will send a follow up letter to confirm, once these meetings have been completed.

Item 7 – Section 192.625 Odorization of gas:

... (f) To assure the proper concentration of odorant in accordance with this section, each operator must conduct periodic sampling of combustible gases using an instrument capable of determining the percentage of gas in air at which the odor becomes readily detectable. Operators of master meter systems may comply with this requirement by
(1) Receiving written verification from their gas source that the gas has the proper concentration of odorant; and
(2) Conducting periodic "sniff" tests at the extremities of the system to confirm that the gas contains odorant.

AmeriGas did not assure the proper concentration of odorant by conducting periodic sampling of combustible gases using an instrument capable of determining the percentage of gas in air at which the odor becomes readily detectable. AmeriGas provided documentation from its propane supplier showing the propane was odorized prior to delivery and records showing that the operator conducted periodic "sniff" tests to confirm the gas contained odorant. However, since AmeriGas was not operating master meter systems, it cannot solely use this method to comply with the regulation.

While conducting sniff tests when gas is delivered to a bulk plant meets NFPA 58 requirements, it only assures that odorant is present prior to entering the distribution system. It does not ensure that at a concentration in air of one-fifth of the lower explosive limit, the gas is readily detectable by a person with a normal sense of smell, as required by 192.625(a), or that gas with adequate levels of odorant are present at the extremities of the system or in segments of low utilization, such as dead legs.

Response

Section 192.11 provides that:

> (a) Each plant that supplies petroleum gas by pipeline to a natural gas distribution system must meet the requirements of this part and ANSI/NFPA 58 and 59.
>
> (b) Each pipeline system subject to this part that transports only petroleum gas or petroleum gas/air mixtures must meet the requirements of this part and of ANSI/NFPA 58 and 59.
>
> (c) **In the event of a conflict between this part and ANSI/NFPA 58 and 59, ANSI/NFPA 58 and 59 prevail.** (Emphasis added)

The LP-Gas Code, NFPA 58 (2004 ed.), Section 4.2.3 provides that:

> If odorization is required, the presence of the odorant shall be determined by sniff-testing or other means and the results shall be documented as follows:
>
> (1) When LP-Gas is delivered to a bulk plant
> (2) When shipments of LP-Gas bypass the bulk plant.

AmeriGas acknowledges that no master meter system is involved here. Nevertheless, there is clearly a conflict between Part 192 and NFPA 58 and accordingly NFPA 58 applies, requiring sniff testing. For non-master meter systems, Section 192.625 requires the use of "an instrument capable of determining the percentage of gas in air at which the odor becomes readily detectable," whereas Section 4.2.3 requires the use of sniff testing.

PHMSA recognizes this and in its Training Guide for Operators of Small LP Gas Systems, which is currently available on the PHMSA website under Pipeline Safety Community, Training & Qualifications, specifically provides at page II-3:

> Odorization
> The LP-Gas Code specifies that LP gas be odorized prior to delivery to the bulk plant. It goes on to require verification by "sniff-testing or other means, **and the results shall be documented**" when gas is delivered to the bulk plant or in the case where a delivery bypasses the bulk plant. If the documentation required by the LP-Gas Code is not available to the LP gas system operator, then the operator will need to do his own sniff tests to verify odorization and document the results. (Emphasis in the original)

Based on the conflict and the primacy of NFPA 58 under Section 192.11, sniff testing is the means to be used for the detection of odorant for small propane gas systems, which are involved here.

Item 8 – Section 192.707 Line markers for mains and transmission lines:

(a) Buried pipelines. Except as provided in paragraph (b) of this section, a line marker must be placed and maintained as close as practical over each buried main and transmission line:
(1) At each crossing of a public road and railroad; and
(2) Wherever necessary to identify the location of the transmission line or main to reduce the possibility of damage or interference.

AmeriGas did not place and maintain line markers as close as practical over each buried main at each crossing of a public road. During the field inspection, the inspector identified several locations without line markers where mains crossed public roads at Loxahatchee Pointe, Mystic Cove, Sand and Sea Village, and Tavares Cove.

Response

The District Manager along the local OPS Manager will review all system maps at the West Palm Beach, FL location and identify the systems where the mains cross public roads. Once those systems are identified, a physical visit to those locations will be made to verify that the line markers exist. Any system that is missing line makers where the main crosses the road, line makers will be installed as defined in accordance with the Damage Prevention Program section in the AmeriGas O&M manual which starts on pages 5 of 8 of the policy (see attached section).

Damage Prevention Program

Purpose

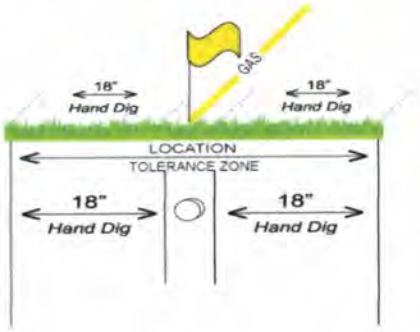
The purpose of the Damage Prevention Program is to safeguard company facilities from damage either by excavation or demolition activities.

Scope

This procedure is applicable to all construction and demolition activities and applies when excavation is done near a facility by employees or outside contractors. Construction and demolition activities include excavation, blasting, boring, tunneling, drilling, backfilling, the removal of above ground structures by either explosive or mechanical means and other earth moving operations.

General Requirements

All pipeline systems must be registered with the states One Call system. Employees or contractors must exercise care and take all reasonable steps to avoid damage or interference to any buries lines or cables. When excavating within tolerance zones prudent excavating techniques must be used, such as hand digging or vacuum excavation.



Damage Prevention Program Requirement (192.614)

(a) Except as provided in paragraphs (d) and (e) of this section, each operator of a buried pipeline must carry out, in accordance with this section, a written program to prevent damage to that pipeline from excavation activities. For the purposes of this section, the term "excavation activities" includes excavation, blasting, boring, tunneling, backfilling, the removal of aboveground structures by either explosive or mechanical means, and other earthmoving operations.
(b) An operator may comply with any of the requirements of paragraph (c) of this section through participation in a public service program, such as a one-call system, but such participation does not relieve the operator of responsibility for compliance with this section. However, an operator must perform the duties of paragraph (c)(3) of this section through participation in a one-call system, if that one-call system is a qualified one-call system. In areas that are covered by more than one qualified one-call system, an operator need only join one of the qualified one-call systems if there is a central telephone number for excavators to call for excavation activities, or if the one-call systems in those areas communicate with one another. An operator's pipeline system must be covered by a qualified one-call system where there is one in place. For the purpose of this section, a one-call system is considered a "qualified one-call system" if it meets the requirements of section (b)(1) or (b)(2) of this section.

(1) The state has adopted a one-call damage prevention program under §198.37 of this chapter; or
(2) The one-call system:
(i) Is operated in accordance with §198.39 of this chapter;
(ii) Provides a pipeline operator an opportunity similar to a voluntary participant to have a part in management responsibilities; and
(iii) Assesses a participating pipeline operator a fee that is proportionate to the costs of the one-call system's coverage of the operator's pipeline.
(c) The damage prevention program required by paragraph (a) of this section must, at a minimum:
(1) Include the identity, on a current basis, of persons who normally engage in excavation activities in the area in which the pipeline is located.
(2) Provides for notification of the public in the vicinity of the pipeline and actual notification of the persons identified in paragraph (c)(1) of this section of the following as often as needed to make them aware of the damage prevention program:
(i) The program's existence and purpose; and
(ii) How to learn the location of underground pipelines before excavation activities are begun.
(3) Provide a means of receiving and recording notification of planned excavation activities.
(4) If the operator has buried pipelines in the area of excavation activity, provide for actual notification of persons who give notice of their intent to excavate of the type of temporary marking to be provided and how to identify the markings.
(5) Provide for temporary marking of buried pipelines in the area of excavation activity before, as far as practical, the activity begins.
(6) Provide as follows for inspection of pipelines that an operator has reason to believe could be damaged by excavation activities:
(i) The inspection must be done as frequently as necessary during and after the activities to verify the integrity of the pipeline; and
(ii) In the case of blasting, any inspection must include leakage surveys.
(d) A damage prevention program under this section is not required for the following pipelines:
(1) Pipelines located offshore.
(2) Pipelines, other than those located offshore, in Class 1 or 2 locations until September 20, 1995.
(3) Pipelines to which access is physically controlled by the operator.
(e) Pipelines operated by persons other than municipalities (including operators of master meters) whose primary activity does not include the transportation of gas need not comply with the following:
(1) The requirement of paragraph (a) of this section that the damage prevention program be written; and
(2) The requirements of paragraphs (c)(1) and (c)(2) of this section.

Response to One Call Requests

If a district performs their own mark outs they must follow the state One Call requirements and be qualified to perform locates along with the following procedure:

- Screen the One Call ticket to determine if the pipeline facility is by the excavation site

- Verify that the geographical location of the locate request and company records are correct.
- Verify locate by direct (conductive) methods. DIRECT – properly connect transmitter directly to the pipe or wire.
- Locate and mark area that is part of the locate request with highly visible yellow paint or yellow flags or stakes directly above the main or service.
- Review the marks against system the system drawing, map or sketch. If there is a conflict, determining the exact location of the pipeline will require the pipe to be exposed by hand digging or vacuum excavating.
- Complete appropriate locate documentation (see the AmeriGas One Call Locate Request Form). Retain paperwork and call ticket with system binder or folder.

Know what's **below.**
Call before you dig.

Revisit locates:

- Go to site and inspect previous markings and make sure they are visible.
- Check all excavations for pipe damage.
- Speak with job site foreman or supervisor. Verify the following:
    1. Were all markings identified by the supervisor?
    2. Were the current markings accurate?
    3. Is there a need for additional markings?
- Complete appropriate paperwork (see the AmeriGas One Call Locate Request Form).

Note: Caution should be taken while locating by vehicular traffic. Where practical, use a vehicle as a barrier.

If locates are to be performed by a third party contractor, the contractor must be Operator Qualified to perform locates. The contractor will also be responsible to follow AmeriGas and State One Call procedures and keep all records of locates and make them available, upon request, to AmeriGas.

Excavation Activities

All excavation must be done in a manner to prevent damage to the pipeline or other facilities. Prior to performing any excavation or any subsurface activity, notification must be made to the appropriate State One Call center (normally 3 business days prior to planned excavating activities). The confirmation number of the call must be kept on record on the work order and if excavating has not started within the given time frame (normally 10 days) the One Call center must be re-notified. If the exact site of excavating or subsurface activity cannot be provided, white paint, white flags or stakes must be used to mark the proposed excavation site.

UTILITY/TYPE OF PRODUCT	IDENTIFICATION COLOR
Gas, Oil, Steam, Petroleum	Yellow
Electric	Red
Potable Water	Blue
Communication, TV	Orange
Sewer and Drain Lines	Green
Reclaimed Water, Irrigation	Purple
Temporary Survey	Pink
Proposed Excavation	White / Black on snow

***Note:** One Call notification is required for bar hole surveys.*

If an emergency notification is required, notification to the appropriate State One Call center must be placed. If the other utilities do not respond to the emergency locate request, attempts must be made to identify the location of the other structure which may be in the excavation area

Continuing Surveillance Requirement (192.613)

(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).

Procedure

All AmeriGas personnel must monitor and report any excavation activity by or near the pipeline. The contractor must be informed and instructed of the location of the pipeline and verification of the locates must be visible.

Distribution Systems: Patrolling Requirement (192.721)

(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—
(1) In business districts, at intervals not exceeding 41/2months, but at least four times each calendar year; and
(2) Outside business districts, at intervals not exceeding 71/2months, but at least twice each calendar year.

Frequency

The frequency of patrols must be determined based on the anticipated physical movement or external loading which could cause failure or leakage to a system but must not exceed the following:

- Residential Areas - Two times a year but at intervals not to exceed 7 ½ months
- Business Districts – Four times a year but at intervals not to exceed 4 ½ months

Procedure

When making a patrol look for visual signs of leaks or potential leaks.
Visual signs include:

- Soil subsidence
- Damaged or corroded equipment
- Encroachment or diversions
- Vegetation changes may indicate a sub-soil leak.
- Recent excavation in the immediate area of the pipeline may have caused damage.
- Visually inspect for gas that is venting to the atmosphere
- Visually inspect condition of the regulators and meters and for external corrosion of the aboveground piping, tank(s), meter and valves.
- Patrolling should be performed after severe weather conditions (floods, earthquakes, etc.)

***Note:* In the case of blasting a leak survey must be conducted as part of the inspection.**

Line Markers for Mains Lines
Requirement (192.707)

(a) *Buried pipelines.* Except as provided in paragraph (b) of this section, a line marker must be placed and maintained as close as practical over each buried main and transmission line:
(1) At each crossing of a public road and railroad; and
(2) Wherever necessary to identify the location of the transmission line or main to reduce the possibility of damage or interference.
(b) *Exceptions for buried pipelines.* Line markers are not required for the following pipelines:
(1) Mains and transmission lines located offshore, or at crossings of or under waterways and other bodies of water.
(2) Mains in Class 3 or Class 4 locations where a damage prevention program is in effect under §192.614.
(3) Transmission lines in Class 3 or 4 locations until March 20, 1996.
(4) Transmission lines in Class 3 or 4 locations where placement of a line marker is impractical.
(c) *Pipelines aboveground.* Line markers must be placed and maintained along each section of a main and transmission line that is located aboveground in an area accessible to the public.
(d) *Marker warning.* The following must be written legibly on a background of sharply contrasting color on each line marker:
(1) The word "Warning," "Caution," or "Danger" followed by the words "Gas (or name of gas transported) Pipeline" all of which, except for markers in heavily developed urban areas, must be in letters at least 1 inch (25 millimeters) high with1/4inch (6.4 millimeters) stroke.
(2) The name of the operator and the telephone number (including area code) where the operator can be reached at all time.

Pipeline Markers

The pipeline markers must provide the public with emergency contact information and indicates that a pipeline facility is in the vicinity. This procedure describes the installation of pipeline markers to all distribution mains and is generally not applicable to service lines.

Installation

Markers styles may include round posts, flat posts and curb markers.
Markers must be replaced or repaired if damaged, not legible or missing. The following information must be visible on the marker:

- The words "Caution", "Danger" or "Warning followed by the words "Gas Pipeline. The letters must be at least 1" high written in black with a yellow background or yellow with black background.
- Company name "AmeriGas" with the districts emergency telephone number.
- The appropriate One Call telephone number. Normally 811.

Markers are required to be placed as close as practical over buried distribution lines:

- At each crossing of a public road or railroad
- Whenever it is necessary to identify the location of the line or main to reduce the possibility of damage or interference.
- Pipeline markers are not required if the distribution system is registered with one call unless one of the following exists and where permitted by the owner, line markers are recommended at the following locations:
    - At crossings of other pipeline or utilities
    - Agricultural areas in which deep plowing will occur
    - Waterways or bodies of water where gas lines cross
    - Drainage ditches where gas lines cross
    - Temporarily in active construction zones
    - Encroachments or right-of-ways

Line markers are required along each side of an aboveground section of a main line in an area accessible to the public. Other methods of line marking can be considered, such as, signage or decals, or painted markings.

Facility Damage

All reports of leaks and pipeline damage must be considered to be an emergency. If it is suspected that the pipeline was damaged, either by excavating or natural forces, the pipeline must be inspected using one or more of the following methods:

- Visual inspection
- Leak survey

Note: If upon arrival, an employee discovers an unplanned release of gas which may endanger life or property, the employee must call 911.
Any damage that is found must be isolated or repaired and any other utility that is damaged must be reported to the facility owner. All damage must be reported to the DM and, if necessary, to the AD and RSM.

Post Damage Investigation

All incidents must be reported following the procedure outlined in AP 1.3 Serious Safety Incident procedure and using Dakota Scout. When an incident occurs on a jurisdictional system, the operator is required to telephone an incident report to The National Response Center at the earliest possible moment, but in any case within two hours of:

A release of propane from a jurisdictional system and:

- A death or personal injury requiring hospitalization or damages of $50,000 or more, including other associated costs such as the cost of propane gas loss.
- An event that is significant in the judgment of the operator, even though it was not described above.

To report an incident:

1. Call your RSM
2. Your RSM will then report to the OPS manager / Legal

The telephone report of an incident should include:

- Identity of the reporting operator
- Name and phone number of individual reporting the incident
- Location of the incident (city, county, state, and street address)
- Time of the incident (date and hour)
- Number of fatalities and personal injuries, if any
- Type and extent of property damage (estimate)
- Description of the incident Operators of LP gas systems making a telephone report of an incident must follow up with a written report.

Responsibilities

The OPS manager is responsible for the development and implementation of the Damage Prevention program and responsible for updating the requirements due to regulatory changes or operational requirements.

The AD and DM are responsible for ensuring all of the Damage Prevention program requirements are met for all the pipeline systems within their given operating area.

References

AmeriGas Policy and Procedure AP 1.3 Serious Safety Incident
49 CFR 192.614, 192.707, 192.613 and 192.721

Item 9 – Section 192.741 Pressure limiting and regulator stations. Telemetering or recording gauges:

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

AmeriGas did not place telemetering or recording pressure gauges in its distribution systems served by more than one pressure regulating station. AmeriGas feeds its Loxahatchee Pointe distribution system from two separate regulator stations; however, AmeriGas did not supply telemetering or recording pressure gauges to indicate the gas pressure in the district.

Response

AmeriGas will remove the isolation valve that currently ties both supplies together. System is P.E. therefore no shutdown is required. AmeriGas will excavate valve, and perform squeeze off, cut and dead-end each side. Record and map area and keep records in the systems book and will have work completed no later than December 15th 2013.

Item 10 – Section 192.741 Pressure limiting and regulator stations. Capacity of relief devices:

(a) Pressure relief devices at pressure limiting stations and pressure regulating stations must have sufficient capacity to protect the facilities to which they are connected. Except as provided in §192.739(b), the capacity must be consistent with the pressure limits of §192.201(a). This capacity must be determined at intervals not exceeding 15 months, but at least once each calendar year, by testing the devices in place or by review and calculations

AmeriGas did not determine the capacity of relief devices at intervals not exceeding 15 months, but at least once each calendar year, by testing the devices in place or by review and calculations. AmeriGas had a relief device downstream of its regulator station at Mystic Cove. AmeriGas did not provide records demonstrating that the relief devices had sufficient capacity to protect the facilities to which they were connected, determined at intervals not exceeding 15 months, but at least once each calendar year, by testing the devices in place or by review and calculations.

Response

AmeriGas has changed this system in Mystic Cove and eliminated the external pressure relief by installing a series regulation system along with glycerin gauges to identify inlet and outlet pressures (see attached manufactures information on make and model of the regulators installed along with the current regulator inspection forms).

Thank you for your consideration in this matter. Please do not hesitate to contact me at 904-716-3006 or by email to mike.mclean@amerigas.com if you or your staff have any questions or require additional information.

Sincerely,

Mike McLean
AmeriGas
Corporate OPS Compliance

C.c.: Paul Grady

AmeriGas
America's Propane Company

REGULATOR INSPECTION REPORT

FREQUENCY – Annually

Monitoring System (Check One):

☐ Upstream Monitor ☐ Downstream Monitor ☑ Series Regulation

System Name: Mystic Cove
System Location: 144 Mystic Ln Jupiter Fl.

Monitor Worker

Location: 144 Mystic Ln - 3-1000gallon by playground
Make: Fisher Model: 64SR23
Vent Condition: ☑ Downward ☑ Screen ☐ Unobstructed
Inlet Pressure: tank pressure Outlet Pressure: 11#
Remarks:

Worker Monitor

Location: 144 Mystic Ln - 3-1000gallon by playground
Make: Fisher Model: 64SR23 Vent OK: yes
Vent Condition: ☑ Downward ☐ Screen ☐ Unobstructed
Inlet Pressure: 11# Outlet Pressure: 9#
Remarks:

General Condition			**Remarks**
Atmospheric Corrosion:	☐ Yes	☑ No	
Support Piping Rigid:	☑ Yes	☐ No	
Area Clear of Weeds	☑ Yes	☐ No	

Action to be taken:
Inspected By: Bill Thomas Date: 8/6/13

First Stage Regulator

Location:
Make: Model: Vent OK:
Vent Condition: ☐ Downward ☐ Screen ☐ Unobstructed
Inlet Pressure: Outlet Pressure:
Remarks:

General Condition			**Remarks**
Atmospheric Corrosion:	☐ Yes	☐ No	
Support Piping Rigid:	☐ Yes	☐ No	
Area Clear of Weeds	☐ Yes	☐ No	

Action to be taken:
Inspected By: Date:

64 and 67C Series Regulators Instruction Manual

⚠ WARNING

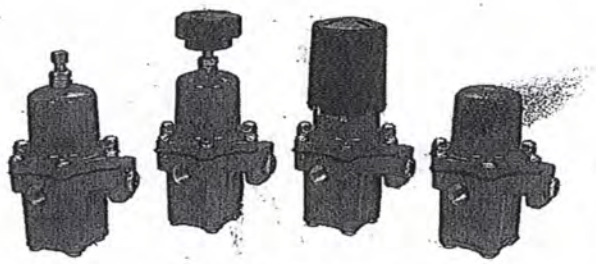
Failure to follow these instructions or to properly install and maintain this equipment could result in an explosion and/or fire causing property damage and personal injury or death.

Fisher® equipment must be installed, operated, and maintained in accordance with federal, state, and local codes and Emerson Process Management Regulator Technologies, Inc. instructions. The installation in most states must also comply with NFPA No. 54 and 58 standards.

Only personnel trained in the proper procedures, codes, standards, and regulations of the LP-Gas industry should install and service this equipment.

THINGS TO TELL THE GAS CUSTOMER:

1. Point out the regulator's vent to the customer (or vent assembly or vent tube), and **stress that this opening must remain unobstructed at all times.** Tell the customer to be sure to check the vent opening after a freezing rain, sleet storm, or snow to make sure ice has not formed in the vent.
2. Show the customer the shutoff valve on the container. The customer should close this valve immediately if gas is smelled, appliance pilot lights fail to stay on or appear higher than usual, or any other abnormal situation occurs.
3. Tell the customer to call your company to service the regulator if the regulator vents gas or a leak develops in the system. **Only a qualified gas service person should install or service the regulator.**



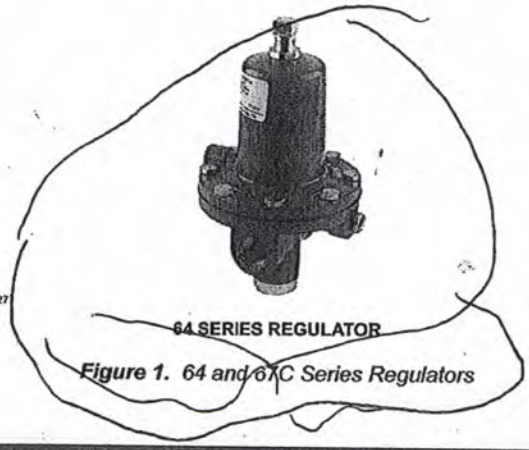


Figure 1. 64 and 67C Series Regulators

⚠ CAUTION

Do not use the 67C, 64, or 64SR Series regulators in anhydrous ammonia (NH_3) service. They contain brass materials that are not compatible with anhydrous ammonia (NH_3).

Introduction

Scope of the Manual

This manual provides instructions and maintenance for the following high-pressure regulators: Types 64, 64KB, 64SR, 67CW, 67CH, 67CD, and 67CN regulators.

Description

The 64 and 67C Series direct-operated regulators (Figure 1) are designed for high-pressure (pounds per square inch) service and can be used on either vapor applications in LP-Gas, Natural Gas, and Air or liquid LP-Gas applications. Depending upon type, outlet pressure ranges from 3 to 135 psig (0,21 to 9,3 bar). Type 64SR can be used as a First Stage LP-Gas regulator–reducing tank pressure to 10 psig (0,69 bar) for a Second Stage regulator. Type 64KB is the only regulator in this series suitable for anhydrous ammonia (NH_3) service. The regulators are normally painted red.

Table 1. Available Configurations

TYPE	DESCRIPTION
64	Basic regulator with four spring ranges from 3 to 100 psig (0,21 to 6,9 bar).
64SR	Internal relief version with three spring ranges from 3 to 35 psig (0,21 to 2,4 bar).
64KB	For use with anhydrous ammonia (NH_3) with handwheel adjustment and five spring ranges from 3 to 100 psig (0,21 to 6,9 bar). Includes a special diaphragm protector.
67CW	Basic regulator with wrench adjustment and four spring ranges from 3 to 135 psig (0,21 to 9,3 bar); no relief.
67CH	Basic regulator with handwheel adjustment.
67CD	Basic regulator with dial cap adjustment.
67CN	Basic regulator, factory set with no field adjustment.

D450128T012

Specifications

Body Sizes, Inlet and Outlet Connection Style
64 Series: 1/2-inch NPT, inlet and outlet
67C Series: 1/4-inch NPT, inlet and outlet

Side Outlet Connection Style (Plugged)
1/4-inch NPT; pressure gauge can be installed

Maximum Inlet Pressure (Body Rating)[1]
250 psig (17,2 bar)

Maximum Emergency Outlet Pressure[1]
64 Series: 220 psig (15,2 bar)
67C Series: 50 psig (3,4 bar) over outlet pressure

Pressure Registration
Internal

Wide-Open Flow Coefficients
64 Series: C_g: 35.6; C_v: 0.36; C_1: 39.0
67C Series: C_g: 11.7; C_v: 0.36; C_1: 32.2

Regulator Temperature Capabilities
64 Series: -20° to 150°F (-29° to 66°C)
67C Series: -20° to 180°F (-29° to 82°C)

Spring Case Vent Location
64 Series: 1/4-inch NPT screened over side outlet tap
67C Series: Aligned with inlet, other positions optional

Approximate Unit Weights
64 Series: 2.25 pounds (1 kg)
67C Series: 1 pound (0,5 kg)

1. The pressure/temperature limits in this Instruction Manual or any applicable standard limitation should not be exceeded.

Table 2. *Outlet Pressure Ranges*

SPRING RANGE, PSIG (bar)[1]	TYPE NUMBER AND FACTORY SETPOINT, PSIG (bar)			
	67CW, 67CD, and 67CH	67CN	64SR	64 and 64KB
3 to 15 (0,21 to 1,0)	----	----	10 (0,69)	10 (0,69)
3 to 20 (0,21 to 1,4)	15 (1,0)	----	15 (1,0)	15 (1,0) 64KB only
5 to 35 (0,34 to 2,4)	20 (1,4)	10 (0,69); 15 (1,0); or 20 (1,4)	20 (1,4)	20 (1,4)
20 to 50 (1,4 to 3,4)	40 (2,8) 67CD only	----	----	----
30 to 60 (2,1 to 4,1)	40 (2,8) 67W and 67CH only	----	----	40 (2,8)
35 to 100 (2,4 to 6,9)	50 (3,4) 67CD only	----	----	50 (3,4)
35 to 135 (2,4 to 9,3)	50 (3,4) 67W and 67CH only	----	----	----

1. All springs can be backed off to 0 psig (0 bar) except Type 67CN. However, for the highest capacity and most accurate control, use the lowest spring that can be adjusted to the required setpoint.

Specifications

Some general 64 and 67C Series ratings and other specifications are given on Specifications section. A spring case label gives the spring range for the regulator as it comes from the factory.

Installation

WARNING

Failure to follow these instructions and warnings could result in personal injury or property damage.

All vents should be kept open to permit free flow of air into and out of the regulator.

Protect openings against the entrance of rain, snow, ice formation, paint, mud, insects, or any other foreign material that could plug the vent or vent lines.

LP-Gas may discharge to the atmosphere through the vent of a Type 64SR. The internal relief valve of the Type 64SR regulator does not provide full overpressure protection, but is designed for minor seat leakage only. An obstructed vent which limits air or gas flow can cause abnormally high outlet pressure. A vent line to a remote, safe location outdoors is required on permanent indoor installations or on installations where there can be a hazardous accumulation of gas.

Never use a 64 or 67C Series (pounds to pounds) regulator on low-pressure (inches of water column) service.

1. Regulator operation within ratings does not preclude the possibility of damage from debris in the lines or from external sources. Regulators should be inspected for damage periodically and after any overpressure condition.
2. Only personnel qualified through training and experience should install, operate, and maintain a regulator. Make sure that there is no damage to or foreign material in the regulator. Also, ensure that all tubing and piping is free of debris.
3. Install the regulator so that flow is from the IN to the OUT connection as marked on the regulator body.
4. Protect the regulator from vehicular traffic or damage from other external sources.
5. Install the regulator high enough above ground level, at least 18-inches (457 mm), so that rain splatter cannot freeze in the vent. Do not install the regulator in a location where there can be excessive water accumulation or ice formation, such as directly beneath a downspout, gutter, or roof line or a building.
6. A regulator installed outdoors without a protective hood must have its vent pointed vertically down to prevent clogging and moisture accumulation. A clogged spring case vent hole may cause the regulator to function improperly. To keep this vent hole from being plugged (and to keep the spring case

from collecting moisture, corrosive chemicals, or other foreign material) orient the vent to the lowest possible point on the spring case or point it vertically down, or install the regulator under a protective cover so that it is protected from the elements. Inspect the vent hole regularly to make sure it is not plugged. Spring case vent hole orientation may be changed by rotating the spring case with respect to the body. A 1/4-inch threaded NPT spring case vent may be remotely vented by installing obstruction-free tubing or piping into the vent. Protect the remote vent by installing a screened vent cap on the remote end of the vent pipe.

7. For use in regulator shutdown, install upstream block and vent valves and downstream block and vent valves (if required), or provide some other suitable means of properly venting the regulator inlet and outlet pressures. Install a pressure gauge to monitor instruments on startup.
8. Apply a good grade of pipe compound to the male pipe threads before making connections, making sure not to get the pipe compound inside the regulator.
9. Install tubing fitting or piping into the NPT inlet and outlet connections on the body.
10. The second 1/4-inch threaded NPT side outlet can be used for a gauge or other use. If not used, it must be plugged.
11. On liquid service, it is recommended that shutoff valves be installed on the inlet side of the regulators. Figure 2 shows a typical installation using the Type 64SR. If other regulator models are used, an external relief valve is required downstream of the regulator and before any shutoff valve. Installations with shutoffs downstream of the regulator can trap liquid between the regulator and the shutoff. The trapped liquid can vaporize, opening the internal or external relief valve. On installations where it is impossible to install the regulator without using shutoffs between the regulator and the burner, either install the regulator in a safe location or run a vent line from the Type 64SR vent or the discharge point of the relief valve to a safe location so that any discharge through the relief valve will not create a hazard.

Overpressure Protection

⚠ WARNING

Personal injury or system damage may result if these regulators are installed without appropriate overpressure protection. If maximum inlet pressure to the 64 and 67C Series exceeds maximum pressure ratings of the downstream equipment or exceeds maximum allowable outlet pressure of the 64 and 67C Series, then additional overpressure protection is required. Outlet pressures greater than Maximum Emergency Outlet Pressure limits may cause damage to regulator parts, leaks in the regulator, or personal injury due to bursting of pressure-containing parts or explosion of accumulated gas.

If these regulators are exposed to an overpressure condition, they must be inspected for damage that may have occurred.

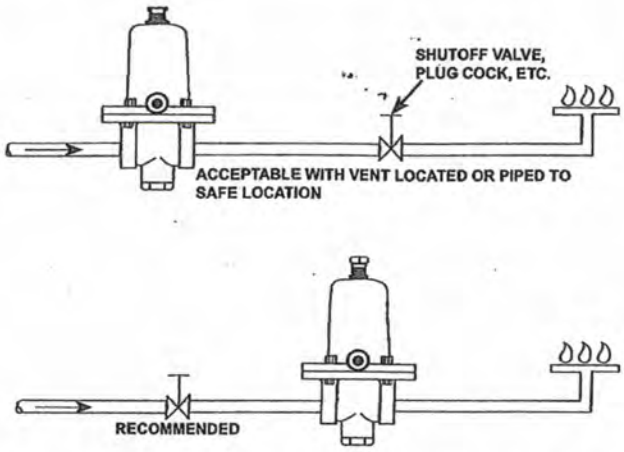


Figure 2. Type 64SR on Liquid Service Requires Care with Downstream Restrictions

Large volumes of gas may discharge through the Type 64SR regulator vent during internal relief valve operation, which can result in fire or explosion from accumulated gas.

A relief valve is required downstream of all these regulator to provide overpressure protection to prevent damage to downstream equipment and systems or when used in liquid service. The Type 64SR has an internal relief valve that opens when downstream pressure reaches approximately 125% to 250% of the setpoint. Gas discharge is through the regulator vent. The Type 64SR gives overpressure protection against excessive buildup resulting from seat leakage due to worn parts or chips of foreign material on the orifice. Additional external relief valves may be required to prevent overpressure damage to downstream equipment or systems.

Startup and Adjustment

1. With proper installation completed and downstream equipment properly adjusted, slowly open the upstream and downstream shutoff valve (when used) while using pressure gauges to monitor pressure.

⚠ WARNING

To avoid personal injury, property damage, or equipment damage caused by bursting of pressure-containing parts or explosion of accumulated gas, never adjust the control spring to produce an outlet pressure higher than the upper limit of the outlet pressure range for that particular spring. If the desired outlet pressure is not within the range of the control spring, install a spring of the proper range according to the Diaphragm Parts Maintenance procedure.

2. If outlet pressure adjustment is necessary, monitor outlet pressure with a gauge during the adjustment procedure. The regulator, except for the Type 67CN which is not field

adjustable, is adjusted by loosening the locknut, if used, and turning the adjusting screw or handwheel clockwise to increase or counterclockwise to decrease the outlet pressure setting. Re-tighten the locknut to maintain the adjustment position.

Shutdown

First, close the nearest upstream block valve and then close the nearest downstream block valve (when used). Next, open the downstream vent valve. Since the regulator remains open in response to the decreasing downstream pressure, pressure between the closed block valves will be released through the open vent valve.

Maintenance

WARNING

To avoid personal injury or equipment damage, do not attempt any maintenance or disassembly without first isolating the regulator from system pressure and relieving all internal pressure.

Regulators that have been disassembled for repair must be tested for proper operation before being returned to service. Only parts manufactured by Emerson Process Management Regulator Technologies, Inc. should be used for repairing Fisher® regulators. Relight pilot lights according to normal startup procedures.

Due to normal wear or damage that may occur from external sources, these regulators must be inspected and maintained periodically. The frequency of inspection and replacement of the regulators depends upon the severity of service conditions or the requirements of local, state, and federal regulations. Even under ideal conditions, these regulators should be replaced after 15 years from date of manufacture or sooner should inspection reveal the need.

Failure to do the following could result in personal injury or property damage. Visually inspect the regulator each time a gas delivery is made for:

1. Improper installation;
2. Plugged or frozen vent;
3. Wrong regulator or no regulator in the system;
4. Internal or external corrosion;
5. Age of the regulator;
6. Any other condition that could cause the uncontrolled escape of gas.

Make sure the regulator vent, vent assembly, or vent tube does not become plugged by mud, insects, ice, snow, paint, etc. The vent screen aids in keeping the vent from becoming plugged, and the screen should be clean and properly installed.

Replace any regulators that have had water in their spring case or show evidence of external or internal corrosion. Checking for internal corrosion may require complete removal of the adjusting screw and shutdown of the gas system. Closely examine regulators directly connected to the container valve by means of a solid POL adaptor (horizontal mounting) for signs of corrosion. Correct any improper installations.

Older regulators are more likely to catastrophically fail because of worn or corroded parts. Replace regulators over 15 years of age; other service or environmental conditions may dictate replacement of the regulator before it becomes 15 years old, refer to Fisher Bulletin LP-32.

Regulator Repair

Regulators that have been disassembled for repair must be tested for proper operation before being returned to service. Only parts manufactured by Emerson Process Management Regulator Technologies, Inc. should be used to repair Fisher regulators. Be sure to give the complete type number of the regulator when corresponding with the factory.

LP-Gas Equipment

Emerson Process Management
Regulator Technologies, Inc.

USA - Headquarters
McKinney, Texas 75069-1872 USA
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For further information visit www.fisherregulators.com/lp

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