TCR

330 Eastern Bypass, Suite Box 309, Richmond, KY 40475

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APR - 2 2014
PUBLIC SERVICE
COMMISSION

TO: Kentucky Public Service Commission
Attention: Executive Director and/or Joel Grugin
211 Sower Blvd
Frankfort, KY 40602

Case No. 2012-00362

March 31, 2014

The following documentation is being submitted by RussMar Logistics, LLC. on behalf of the Tompkinsville Natural Gas System.

Documents Included:

1. Distribution Integrity Management Plan (DIMP) (38 pages)
2. PHMSA Annual Report (2 pages)
3. Cathodic Protection Readings- Mar 2014 (1 page)
4. Service Install- Feb 2014 (1 page)
5. Visual Inspection- Feb 2014 (1 page)
6. Office Chart Clocks: (8 pages)

*A hard copy of the above mentioned documents were mailed to the Kentucky Public Service Commission, Attention Executive Director/Joel Grugin on February 12, 2014 by Joe Orazen of RussMar Logistics, LLC.

Sincerely,
Joe Orazen
606-305-6436

NOTICE: This report is required by 49 CFR Part 191. Failure to report can result in a civil penalty not to exceed 100,000 for each violation for each day that such violation persists except that the maximum civil penalty shall not exceed $1,000,000 as provided in 49 USC 60122.

OMB NO: 2137-0522
EXPIRATION DATE: 01/31/2014

U.S Department of Transportation
Pipeline and Hazardous Materials Safety Administration

Initial Date Submitted:	03/28/2014
Form Type:	SUPPLEMENTAL
Date Submitted:	03/28/2014

ANNUAL REPORT FOR CALENDAR YEAR 2013 GAS DISTRIBUTION SYSTEM

PART A - OPERATOR INFORMATION

(DOT use only) 20142833-21913

1. Name of Operator	TOMPKINSVILLE, CITY OF
2. LOCATION OF OFFICE (WHERE ADDITIONAL INFORMATION MAY BE OBTAINED)	
2a. Street Address	2371 IRVINE ROAD
2b. City and County	RICHMOND,MADISON
2c. State	KY
2d. Zip Code	40475
3. OPERATOR'S 5 DIGIT IDENTIFICATION NUMBER	19530
4. HEADQUARTERS NAME & ADDRESS	
4a. Street Address	MAGNOLIA STREET
4b. City and County	TOMPKINSVILLE
4c. State	KY
4d. Zip Code	42167
5. STATE IN WHICH SYSTEM OPERATES	

PART B - SYSTEM DESCRIPTION

1.GENERAL

	STEEL									
	UNPROTECTED		CATHODICALLY PROTECTED							
	BARE	COATED	BARE	COATED	DUCTILE IRON	COPPER	CAST/ WROUGHT IRON	PLASTIC	OTHER	TOTAL
MILES OF MAIN	0.000	0.000	0.000	47.000	0.000	0.000	0.000	36.000	0.000	83.000
NO. OF SERVICES	0.000	0.000	653.000	0.000	0.000	0.000	0.000	435.000	0.000	1088.000

2.MILES OF MAINS IN SYSTEM AT END OF YEAR

MATERIAL	UNKNOWN	2" OR LESS	OVER 2" THRU 4"	OVER 4" THRU 8"	OVER 8" THRU 12"	OVER 12"	TOTAL
STEEL	0.000	0.000	47.000	0.000	0.000	0.000	47.000
DUCTILE IRON	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COPPER	0.000	0.000	0.000	0.000	0.000	0.000	0.000
CAST/WROUGHT IRON	0.000	0.000	0.000	0.000	0.000	0.000	0.000
PLASTIC PVC	0.000	0.000	0.000	0.000	0.000	0.000	0.000
PLASTIC PE	0.000	0.000	36.000	0.000	0.000	0.000	36.000
PLASTIC ABS	0.000	0.000	0.000	0.000	0.000	0.000	0.000
PLASTIC OTHER	0.000	0.000	0.000	0.000	0.000	0.000	0.000
OTHER	0.000	0.000	0.000	0.000	0.000	0.000	0.000
TOTAL	0.000	0.000	83.000	0.000	0.000	0.000	83.000

3.NUMBER OF SERVICES IN SYSTEM AT END OF YEAR

AVERAGE SERVICE LENGTH: 0

MATERIAL	UNKNOWN	1" OR LESS	OVER 1" THRU 2"	OVER 2" THRU 4"	OVER 4" THRU 8"	OVER 8"	TOTAL
STEEL	0.000	653.000	0.000	0.000	0.000	0.000	653.000
DUCTILE IRON	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COPPER	0.000	0.000	0.000	0.000	0.000	0.000	0.000
CAST/WROUGHT IRON	0.000	0.000	0.000	0.000	0.000	0.000	0.000
PLASTIC PVC	0.000	0.000	0.000	0.000	0.000	0.000	0.000
PLASTIC PE	0.000	435.000	0.000	0.000	0.000	0.000	435.000
PLASTIC ABS	0.000	0.000	0.000	0.000	0.000	0.000	0.000
PLASTIC OTHER	0.000	0.000	0.000	0.000	0.000	0.000	0.000
OTHER	0.000	0.000	0.000	0.000	0.000	0.000	0.000
TOTAL	0.000	1088.000	0.000	0.000	0.000	0.000	1088.000

4.MILES OF MAIN AND NUMBER OF SERVICES BY DECADE OF INSTALLATION

	UNKNOWN	PRE-1940	1940-1949	1950-1959	1960-1969	1970-1979	1980-1989	1990-1999	2000-2009	2010-2019	TOTAL
MILES OF MAIN	83.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	83.000
NUMBER OF SERVICES	1088.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1088.000

PART C - TOTAL LEAKS AND HAZARDOUS LEAKS ELIMINATED/REPAIRED DURING THE YEAR

CAUSE OF LEAK	MAINS		SERVICES	
	TOTAL	HAZARDOUS	TOTAL	HAZARDOUS
CORROSION	64			
NATURAL FORCES	1			
EXCAVATION DAMAGE	1			
OTHER OUTSIDE FORCE DAMAGE	2			
MATERIAL OR WELDS	134			
EQUIPMENT	7			
INCORRECT OPERATIONS	0			
OTHER	0			

NUMBER OF KNOWN SYSTEM LEAKS AT END OF YEAR SCHEDULED FOR REPAIR : 209

PART D - EXCAVATION DAMAGE

NUMBER OF EXCAVATION DAMAGES: 1

NUMBER OF EXCAVATION TICKETS : 44

PART E-EXCESS FLOW VALUE(EFV) DATA

NUMBER OF EFV'S INSTALLED THIS CALENDER YEAR ON SINGLE FAMILY RESIDENTIAL SERVICES: 8

ESTIMATED NUMBER OF EFV'S IN SYSTEM AT THE END OF YEAR: 8

PART F - LEAKS ON FEDERAL LAND

TOTAL NUMBER OF LEAKS ON FEDERAL LAND REPAIRED OR SCHEDULED TO REPAIR: 0

PART G-PERCENT OF UNACCOUNTED FOR GAS

UNACCOUUNTED FOR GAS AS A PERCENT OF TOTAL INPUT FOR THE 12 MONTHS ENDING JUNE 30 OF THE REPORTING YEAR.

INPUT FOR YEAR ENDING 6/30: 18%

PART H - ADDITIONAL INFORMATION

PART I - PREPARER AND AUTHORIZED SIGNATURE

Joe Orazen,Operator
(Preparer's Name and Title)

(859)823-0112
(Area Code and Telephone Number)

jorazen@yahoo.com
(Preparer's email address)

(Area Code and Facsimile Number)

2014

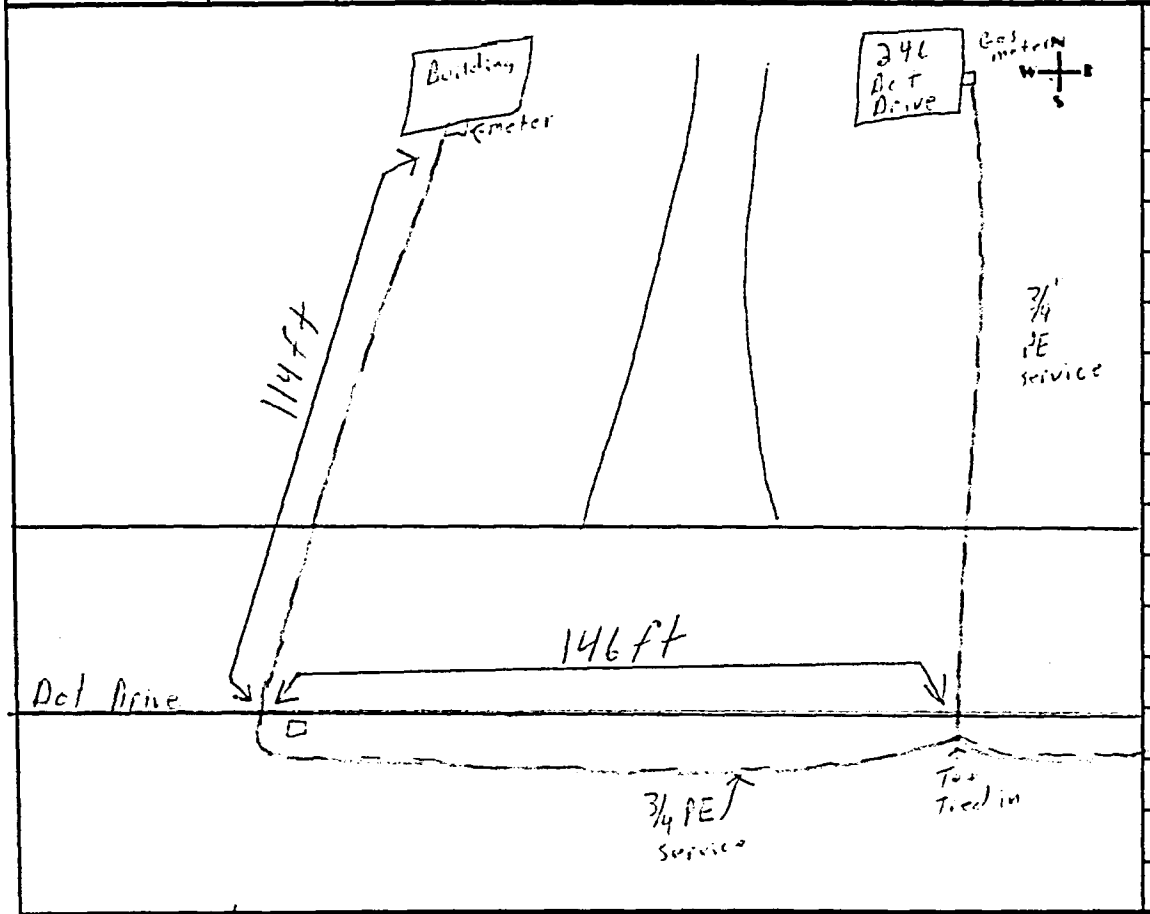
Cathodic Testing

Station Test Points		January	February	March	April	May	June	July	August	September	October	November	December
2" Green Hills				-1,117									
3" Green Hills				-1,020									
2" Inlet Idru				-1,054									
3" Outlet Idru				-1,052									
2" Rocky Query				-1,039									
3" Rocky Query				-1,035									
Town Border													
3" East Inlet				-1,050									
Poplar Log Inlet				-1,246									
Poplar Log Outlet				-1,242									
Sandlick													
Red Line				-1,030									

Mari Anderson

NATURAL GAS MAIN AND SERVICE INSTALLATION RECORDS

Address	246 Dot Drive	Apt#		City	Tompkinsville	Cty	Monroe	Time Received		Date Received	
Customer Name	Kenneth Tooley					Phone#	270-487-0052	Customer Account#			
Installer Name	Casey Chelf + Martin Anderson			Date Received				Date Installed	2-13-14		
Date Tested	2-13-14	Test Pressure psig	90psi	Test Medium	Natural Gas			Properly Purged	Yes ✓	No	
					Comp Air	✓					
					Inert Gas						
Meter Set	Yes ☑ No ☐	Meter Co#		Meter Mfg#	13U701970			Index Reading	0		



Meter Locked	Yes	✓	No		Card Left	Yes		No	

LOCATION

Gas Main Location	West Short St.			
Mainline Valve Installed	Yes		No	✓
Service Location	246 Dot Drive			
Service Valve		Tapping Tee		

REMARKS

We had to tie this service line into the existing service line due to the main being on W. Short St. We had no way of telling where the existing service lined in due to no tracer wire. We laid a total of 260 ft of new service tubing.

Signature	Jason Warner	Date	2-13-14

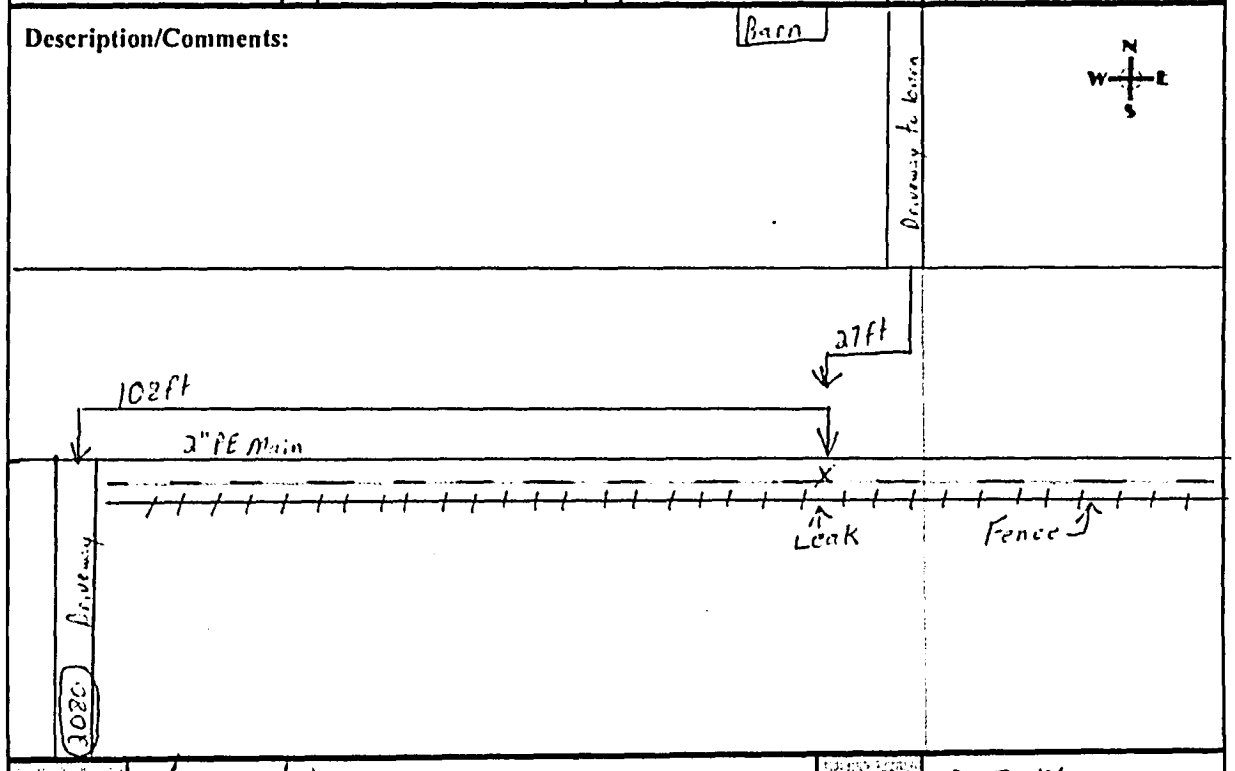
VISUAL INSPECTION OF MAINS AND SERVICE PIPELINES

Address	2020 Stredletown Rd	Location	Tompkinsville, Ky

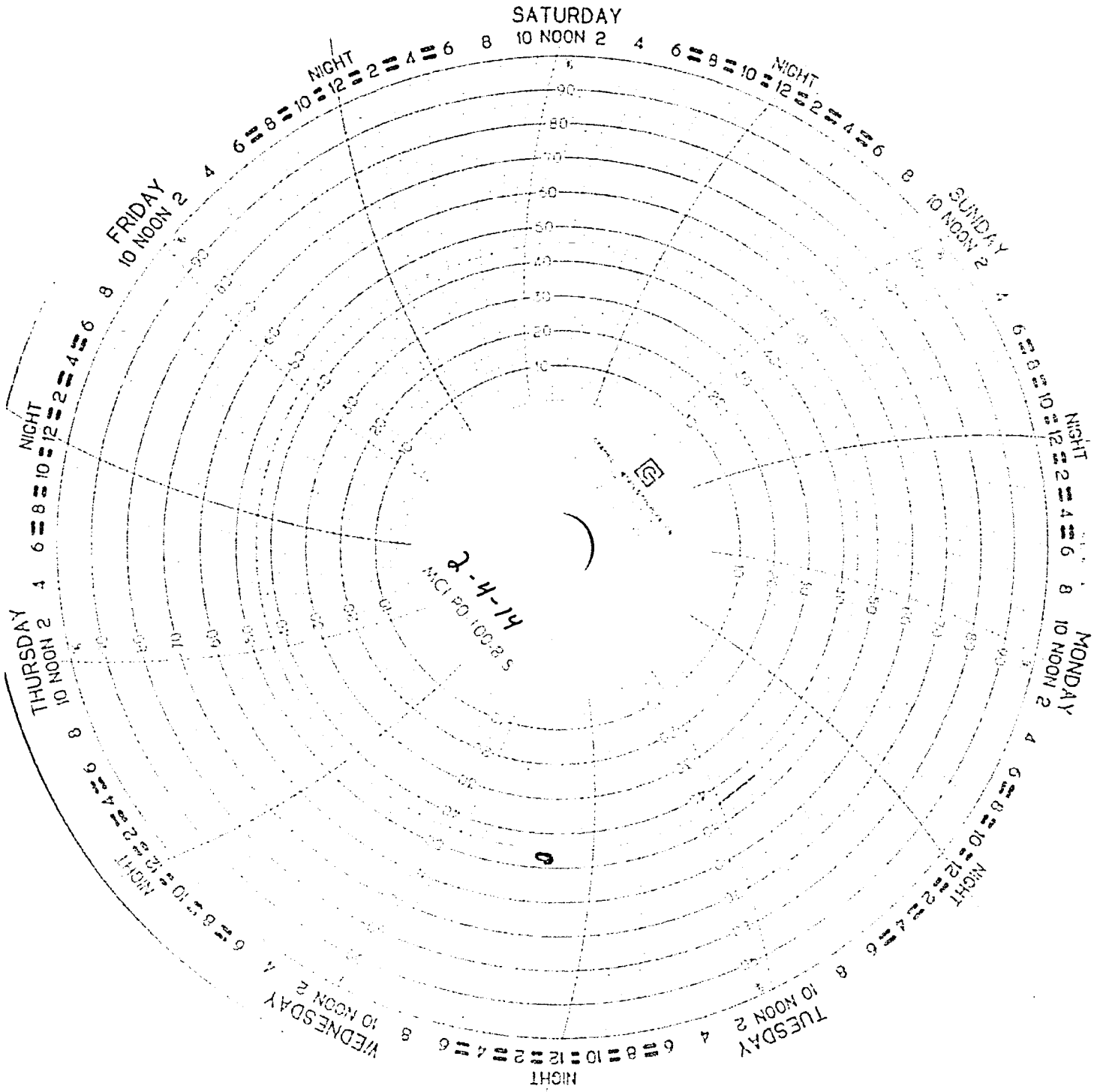
TYPE		CONDITION		CORROSION		COATING TYPE	
Steel		Excellent		Localized		Miliwrap	
PE	✓	Good	✓	General		Enamel	
Cast Iron		Slight Pitting		Other	✓	Roskote	
CSST		Extreme Pitting		Pitting Depth		Oxidemp	
Main		Hole/Voids				Xtrucoat	
Service		Graphitization				Mastic	
Other		Bent				Cold Roll	
		Broken				Hot Wrap	
		Other				Heat Shrink	

COATING CONDITION		SOIL TYPE		SOIL COMPOSITION		EXCAVATION	
Good	✓	Rock		Dry	✓	Main Extension	
Poor		Cinder		Wet/Swampy		Service Tap	
Damaged		Clay	✓	Normal		Leak Repair	✓
Other		Loam		Moister Range (3-5)		Re-routing	
		Sand		Moister Range (5-8)		Third Party	
		Alluvion				Abandonment	
		Other				Deactivation	
						Utility Theft	
						Other	

Description/Comments:



Name	Kasten Warner	Date	2-10-14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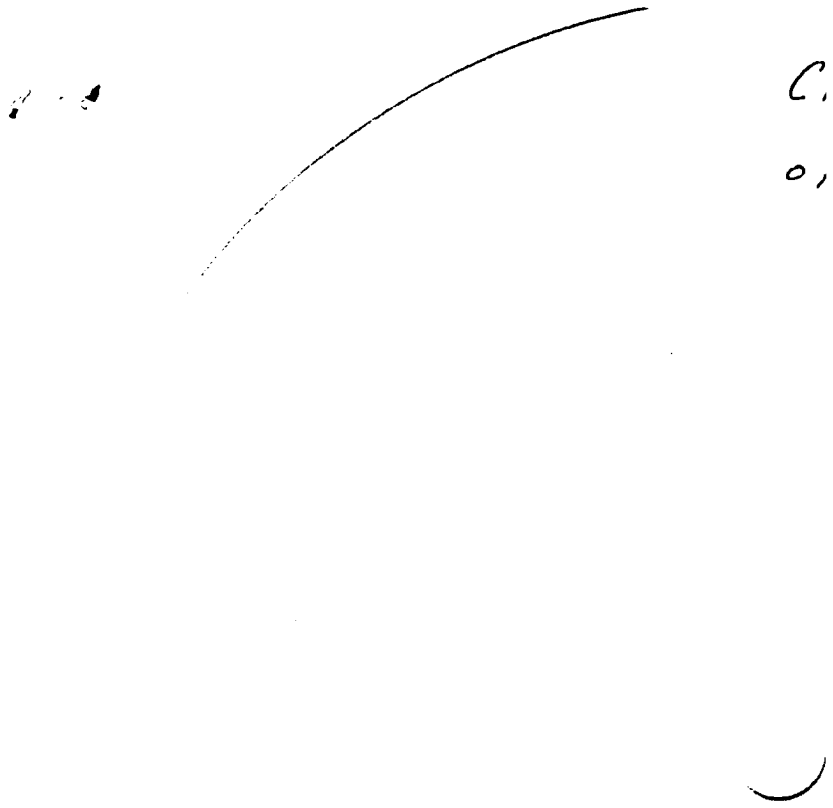

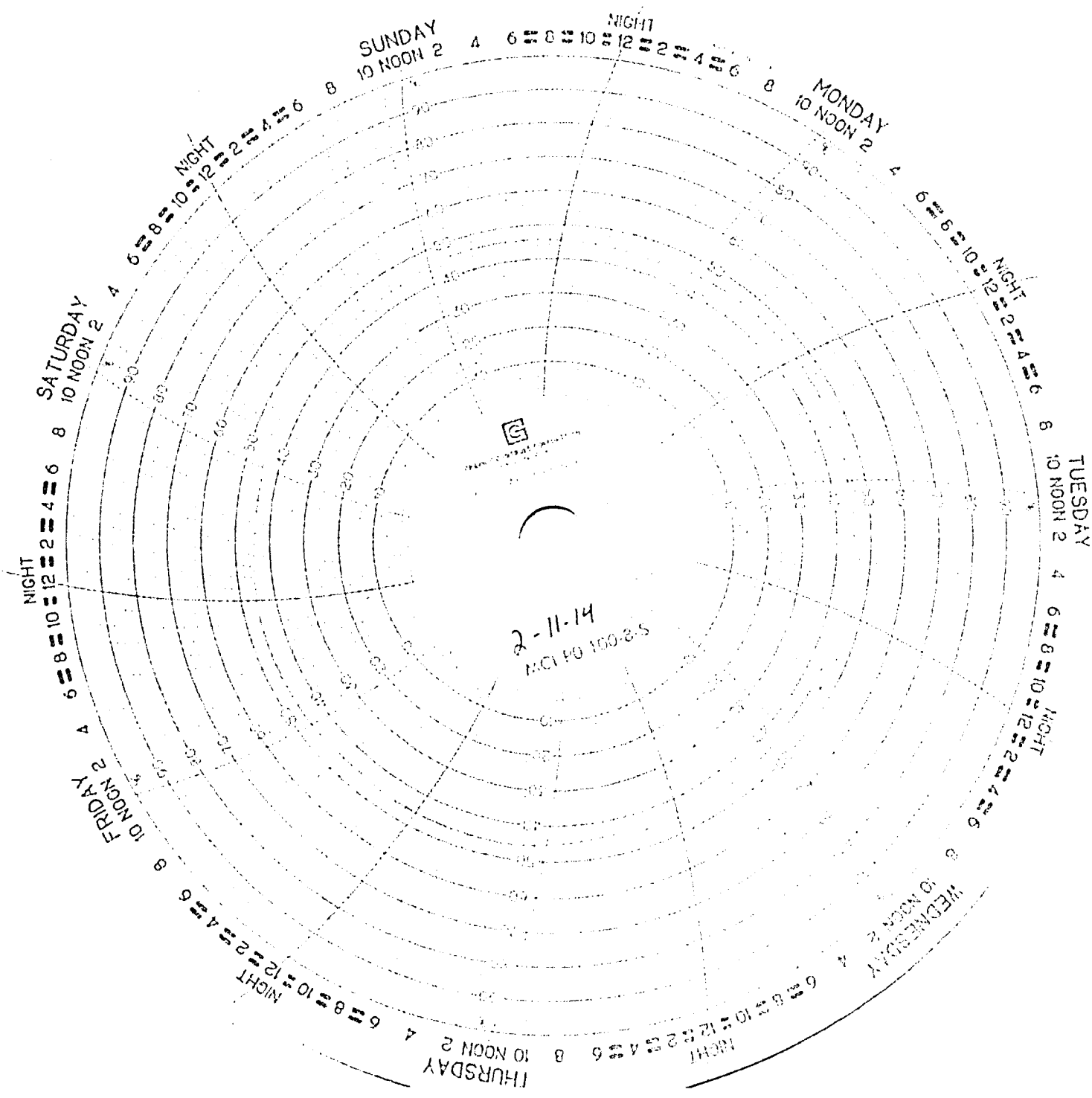
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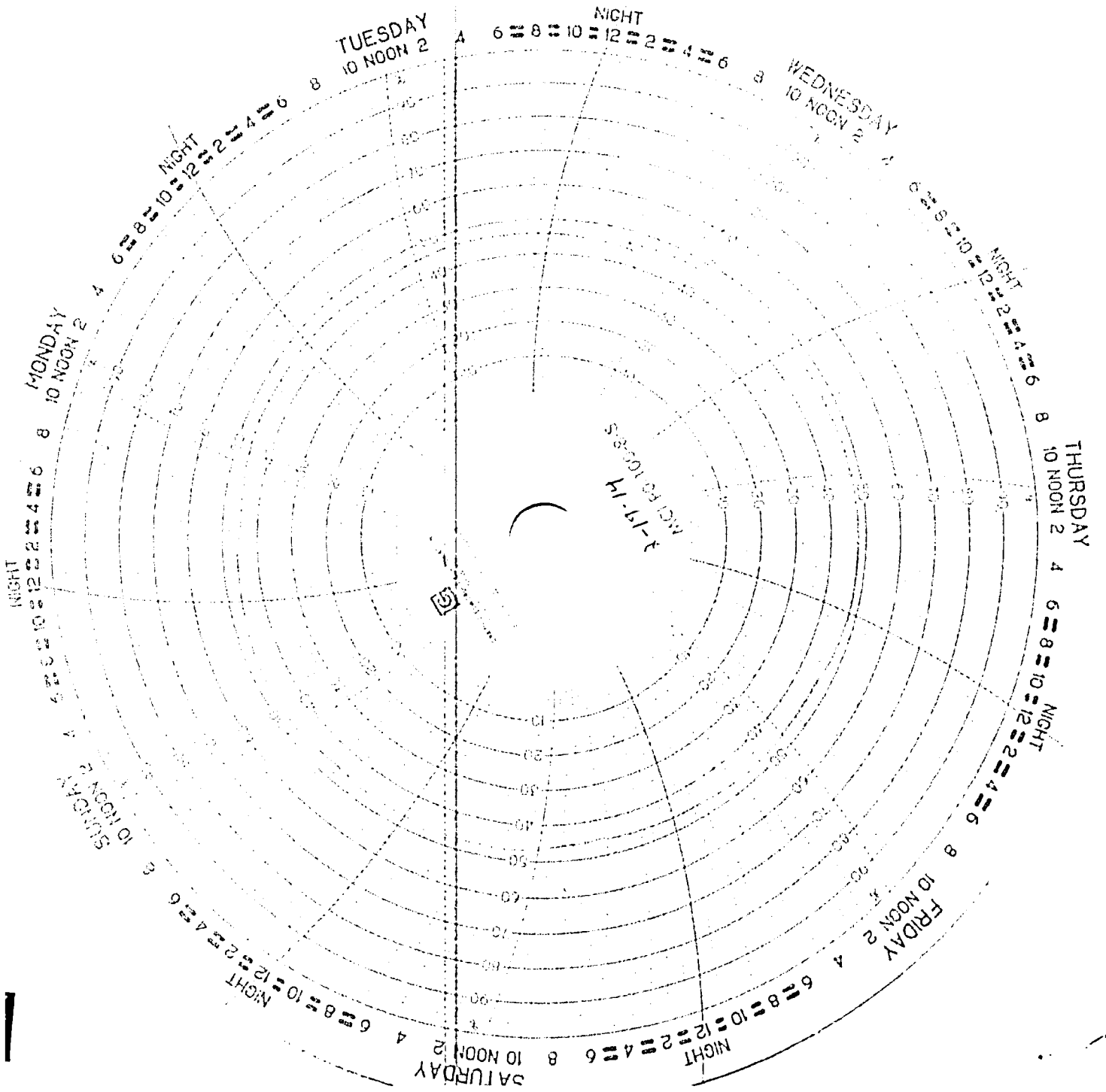
City of Tompkinsville
Office Chair Clerk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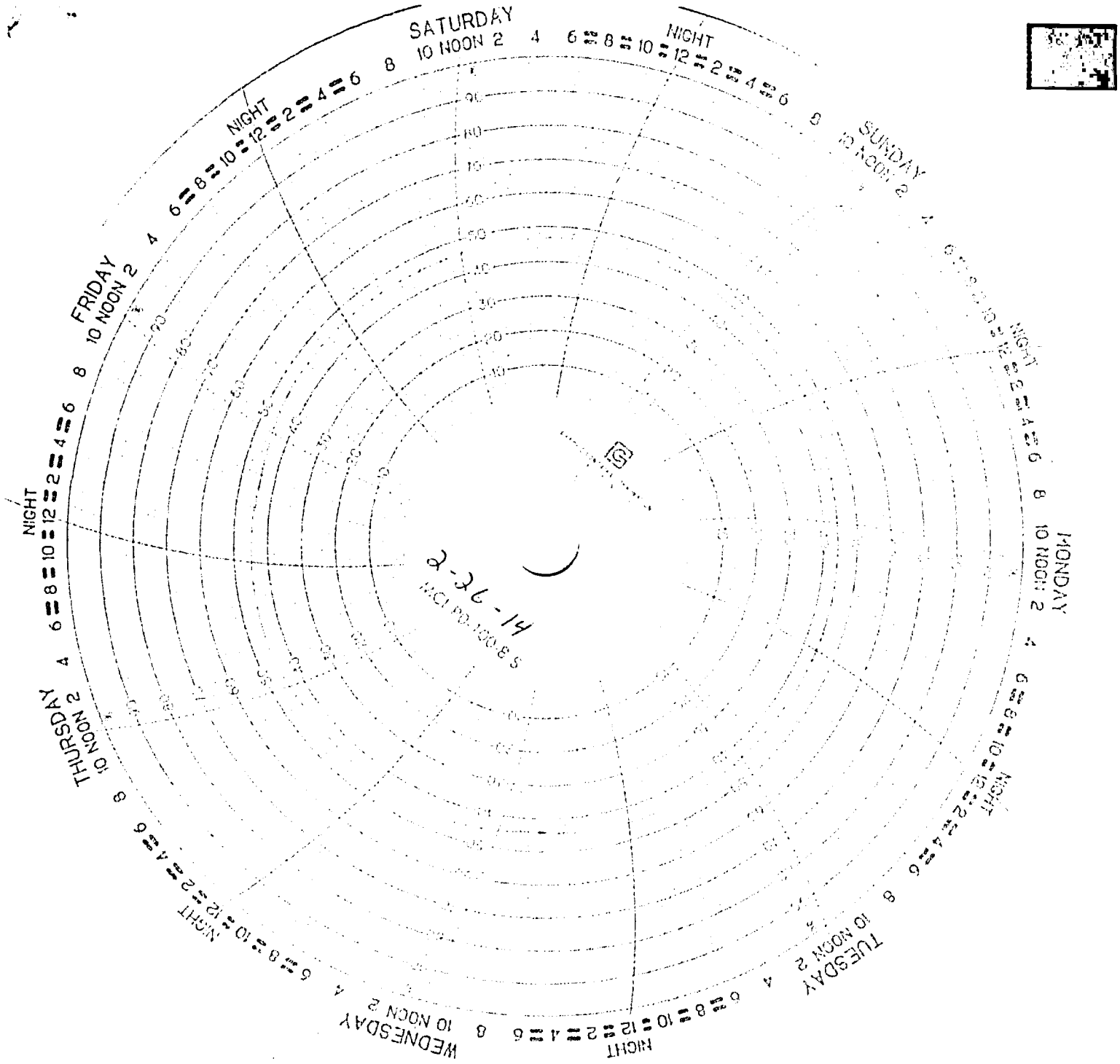
SCALE OF MILES

City of Tompkinsville
Office Chart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City of Tompkinsville
office chief clerk.

Distribution Integrity Management Plan (DIMP)

City of Tompkinsville Gas System

Table of Contents

Tompkinsville Gas System Distribution Integrity Management Plan (DIMP)

1. Purpose and Scope

On December 4, 2009 the U.S. Department of Transportation Pipeline and Hazardous Materials Safety Administration (PHMSA) added Subpart P "Gas Distribution Pipeline Integrity Management" to CFR 49 Part 192. Subpart P was created to require operators of gas distribution pipelines to develop and implement a gas distribution integrity management program (DIMP) that includes a written integrity management plan.

The purpose of the program is to enhance safety by identifying and reducing gas distribution pipeline integrity risks. The rule requires that operators identify risks to their pipelines where an incident could cause serious consequences and focus priority attention in those areas. The rule also requires that operators implement a program to provide greater assurance of the integrity of their pipeline.

This written DIMP Plan addresses the rule which requires operators to develop and implement a program that addresses the following elements:

a. Knowledge of Distribution System
b. Threat Identification
c. Risk Evaluation and Ranking
d. Implementation of Measures to Address Risk
e. Measurement of Performance, Monitoring Results and Evaluating Effectiveness
f. Periodic Evaluation and Improvement, and
g. Reporting Results

Managing the integrity and reliability of gas distribution pipelines is the primary goal for the City of Tompkinsville Gas System, with design, construction, operations and maintenance activities performed in Compliance with CFR 49 Part 192 requirements. The objective of this DIMP Plan is to establish the

requirements to comply with Subpart P, pertaining to integrity management for gas distribution pipelines.

This written DIMP Plan applies to all of the City of Tompkinsville Gas System's distribution pipelines. Pipelines include the associated mains, services, service regulators, customer meters, valves and other appurtenances attached to the pipe such as metering stations, regulator stations and fabricated assemblies.

This plan is effective March 1, 2014. This is the initial plan for the City of Tompkinsville Gas System.

The Plan will be reviewed every year to continually refine and improve the plan.

2. Administration

This section describes how the DIMP Program, including the DIMP written plan, is to be maintained and updated.

A. Responsibilities

Jason Warren, City of Tompkinsville Gas Superintendent, is responsible for implementing, maintaining, updating this DIMP Plan

B. Management Support

City of Tompkinsville is committed to implementing the elements of this Plan in order to ensure the continued safety and reliability of its distribution systems. Jason Warren has the overall responsibility for ensuring the compliance with the plans and procedures associated with this program. The Mayor will commit appropriate personnel, funding and other resources as necessary to successfully execute this plan. Jason Warren's responsibilities include but are not limited to:

1. Ensure periodic evaluations are completed and documented in accordance with Section 10
2. Submit the DIMP plan to Kentucky PSC upon request
3. Conduct a periodic review of the plan to evaluate the effectiveness of the Program and update as needed
4. Monitor regulatory activity and changes in regulation which could precipitate the need to modify the Program
5. Ensure records listed within Section 4 are properly maintained.
6. Submit Annual DOT Report to PHMSA and state commissions
7. Review the Operation and Maintenance Plan and make revisions as necessary as a result of the DIMP.

3. Definitions

DIMP

Distribution Integrity Management Program

Excavation Damage

Any impact that results in the need to repair or replace an underground facility due to a weakening, or the partial or complete destruction of the facility including, but not limited to the protective coating, lateral support, cathodic protection or the housing for line device or facility.

Excavation Ticket

A notification from the one-call notification center to the operator providing information of pending excavation activity for which the Company is to locate and mark facilities

Hazardous Leak

A leak that represents an existing or probable hazard to persons or property and requires immediate repair or continuous action until the conditions are no longer hazardous.

Integrity Management Plan

A written explanation of the mechanisms or procedures the company will use to implement the integrity management program and to ensure compliance with 49 CFR Subpart P.

PHMSA

The U.S. Department of Transportation Pipeline and Hazardous Materials Safety Administration.

NTSB

National Transportation Safety Board

SME

Subject Mater Experts are persons knowledgeable about design, construction, operations or maintenance activities, or the system characteristics of a particular distribution system

4. Recordkeeping

The following records shall be maintained for a minimum of 10 years

a. The DIMP Plan
b. Copies of previous Plans
c. Records of data required to be collected to calculate performance measures
d. Records of mechanical fitting failures
e. Annual DOT Reports
f. DOT Incident Reports
g. Safety Related Condition Reports

5. Knowledge of Distribution System

This section describes the infrastructure of City of Tompkinsville using reasonably available information from past and ongoing design, installation, operations and maintenance activities.

A description of the system will be found in Appendix A.

In order to determine threats and assess risks on its distribution system, City of Tompkinsville Gas System looked at the results of surveys conducted on the system since May 2013. In May 2013, as a result of PSC Case # 2012-00362, RussMar Logistics LLC was hired by the City of Tompkinsville to operate and manage the gas system. Tompkinsville had an extensive history of non-compliance dating back several years. During the years of non-compliance records were not kept or lost so the City has no records to determine threats.

Data collected on piping and appurtenances install within the distribution system after March 1, 2014 will include the location where it is installed and the material of construction. This information will be located in the vault o f City Hall, 206 N. Magnolia Street in Tompkinsville. These records shall include the following information:

a. Material Component (pipe, valve, fittings)
b. Material Type (plastic, Steel
c. Diameter
d. Pipe wall thickness
e. Pipe Grade
f. Manufacturer
g. Person conducting pressure test
h. Test Pressure
i. Test duration
j. Quantity
k. In Service date
l. Location (County, City, Street)

Subject Mater Expert, Jason Warren, expertise was used to identify potential threats that may not be easily deduced from Company records

6. Threat Identification

The purpose of this section is to describe the process used to identify threats and the process by which subject matter expert, Jason Warren, determined if a threat exists.

1. Threat Categories

An overview and discussion of each threat and sub-thread category is provided fellow in Sections 1 though 8.

In addition to the Company's own experiences and information, categories considered are based on the following:

i. Membership or participation in local, regional or national trade associations: including workshops, meeting and other forums where knowledge is shared
ii. Networking with peer companies
iii. Information received from manufacturers of pipeline materials
iv. Information received from relevant government agencies
v. Review of trade journals and magazines that publish material regarding gas distribution
vi. PHMSA Advisory Bulletins
vii. NTSB Reports and Recommendations applicable to natural gas pipelines

Through the periodic evaluation previsions contained with Section 10, the company will periodically review data from internal and external sources, such as those listed above, to determine if other potential threats ought to be considered. Potential threats may include those which are not currently evident based on reasonably available date. Consideration of other potential threats could entail the collection of

additional data such that the existence of such threats can be determined.

1. **Corrosion**
    a. External Corrosion – Corrosion is a process in which metal decomposes, as in the oxidation of iron in the presence of water by an electrolytic process. Metallic pipe depending upon age, soil conditions and other factors may be susceptible to corrosion; External corrosion begins on the exterior surface of certain metallic gas facilities. Significant corrosion may result in the release of gas from gas pipeline facilities.
    b. Internal Corrosion – Corrosion is a process in which metal decomposes, as in the oxidation of iron in the presence of water by an electrolytic process. Metallic pipe depending upon age, soil conditions and other factors may be susceptible to corrosion. Internal corrosion begins in the interior surface of certain metallic gas facilities. Significant corrosion may result in the release of gas from gas pipeline facilities.

2. **Natural Forces**
    a. Earth Movement – This threat is a result of a naturally occurring event (earthquakes, landslides or subsidence) which may cause land shifts which can undermine the construction integrity of pipelines.
    b. Lightning – This threat is a naturally occurring phenomenon. Gas facilities may be damaged and/or catch on fire due to a direct lighting strike. Gas facilities may also be compromised as a secondary effect from a lighting strike in the area. An example of such a secondary effect would be a fire stated by lighting in an area which gas facilities are present that results in damage to a pipeline system asset.

c. Other Storm Damage – This threat category includes heavy rains, floods and mudslides which may undermine the environment supporting the gas facilities and thereby compromise the construction integrity of such gas facilities. It also includes high wind events such as hurricanes and tornadoes.
d. Frost – This broad threat category includes mechanical stress induced in a pipe or component when some or all of its parts are not free to expand or contract in response to changes in temperature or where components become inoperable because of freezing

3. Excavation Damage

a. Excavator Error – This treat may occur whenever the company, its contactors, or entities unrelated to the company fail to employ sage, prudent excavation techniques. This threat also include excavation error when performing dredging or waterways or bodies of water
b. Locator Error – This threat may occur when a person charged with locating gas facilities incorrectly marks or fails to mark an underground gas facility.
c. Poor Records – The threat may occur when an incomplete or inaccurate locate results from incomplete or inaccurate facility records.
d. Failure to notify One Call Center – This threat may occur when the company, it contractors or entities unrelated to the company do not notify the one call system to give notice of intent to excavate

4. **Other Outside Force**
    a. Fire/Explosion Not Caused by Gas – This threat may occur when a fire and/or explosion occur and subsequently results in damage to gas facilities.
    b. Vehicular Damage – This threat may occur when the Company's gas facilities are damaged by motorized vehicles or equipment not engaged in excavation. An example would be damage to a meter set caused by vehicle impact.
    c. Damage Caused by Maritime Vessels – This threat may exist for damage to gas facilities by boats, barges, drilling rigs, or other maritime equipment or vessels set adrift. The threat also may exist for damage to gas facilities caused by impact of maritime equipment or vessels while they are engaged in their normal or routine activities not including excavation activities.
    d. Electrical Arcing from Other Equipment or Facility – This threat may exist whenever electric facilities are in close proximity to the Company's gas facilities. Damage to pipe or coating is possible in certain situations and conditions.
    e. Previous Mechanical Damage – This threat may exist where damage occurred to gas facilities at some time prior to the date it is discovered. It includes prior to the date it is discovered. It includes prior outside force damage of an unknown nature, prior natural force damage, and prior damage from other outside forces.
    f. Intentional Damage – this threat category consists of vandalism, terrorism or theft.

5. Material or Welds

Components in the distribution system may be susceptible to leaks, ruptures or other failures from defects with the material of the pipe components or joins due to faulty manufacturing procedures. Additionally, such defects may result from poor construction/installation practices, and in-service stresses such as vibration, fatigue and environmental cracking.

a. Body of Pipe – This threat may exist from certain plastic pipe installed that may leak depending upon pipe resin, manufacturing and service conditions.
b. Pipe Seam - This threat may exist due to poor weldment of steel pipe during the manufacturing process.
c. Threaded Joint – This threat may occur due to insufficient thread sealant applied or substandard thread tolerances created during manufacture or fabrication.
d. Weld – This threat may exist on poorly-joined weld connections made during construction, installation or fabrication
e. Fusion Joint – This threat may exist when joining plastic pipe to plastic pipe or fitting during construction, installation or fabrication.
f. Cast Iron Bell Joint – A threat may exist due to quality of the bell and spigot joints, the depth of frost in the ground and the freeze and thaw cycles' of the earth surrounding the joints.
g. Mechanical Fitting – A threat may exist for pipe to pullout from mechanical fittings due to pullout forces that could include fatigue from seasonal temperature changes, ground movement, improper installation and deterioration of the fitting. Mechanical fittings may leak though the seal between the fitting and the pipe. Contributing factors may

include a degradation of the seal over time of a change in the gas quality in the distribution system.

h. Repair Device Failure - This threat may exist after the application of a repair device based on deterioration or improper installation of the device.

i. Other Material Failure – This threat category exist for all other material failures not described specifically above.

6. Equipment Failure

a. Malfunction of Pressure Regulating Equipment – This threat may exist due to malfunctions of control and relief equipment. Typically the result of failed regulator components, alarm devices or relief valves.

b. Valve Failure/Leakage – This threat may exist when valves fail to open or close on command or when component failure allows a bleed-through condition.

c. Other Equipment Failure – This threat may exist due to failures on compressors, meters, or regulator stations where the failure resulted from a faulty component not listed above such as nipples, flanges, valve connections, line pipe collar, etc.

7. Incorrect Operations

a. Incorrect Construction/Operation – This threat may occur during installation, operating, maintenance or repair activities. Threats in this category include improper equipment selection or installation, poorly written procedures, not following written procedures, and unintentional ignition of the transported gas during a welding or maintenance activity, and training or judgment errors

8. **Other**
    a. Miscellaneous – This threat category is reserved for threats that are know but cannot be attributed to threats that have been previously described in this section.
    b. Unknown – This threat category is reserved for threats for which the cause in not known.

The City of Tompkinsville Gas System contains both plastic and steel and operates under the same environmental conditions; therefore the system will not be segmented but reviewed as one system.

To classify threats, Subject Matter Expert Jason Warren, will consider reasonably available information relating to the system's design, operation, maintenance, and environmental factors. Sources of data will come from compliance work conducted by RussMar Logistics since May 2012 as indicated under Section 5 page 7.

7. Risk Evaluation and Ranking

Risk analysis is an on going process of understanding what factors affect the risk posed by threats to the gas distribution system and where they are relatively more important than others. The primary objective of ranking risk is to determine what risk poses the greatest threat to life and property.

In order to rank potential risk, the following formula is used.

Probability X Consequence **X** History of Leaks **X** Incident Probability Factor.

Probability

Probability is based on the probability of the potential threat occurring on the operators system. This is determined by the Operator's 'Subject Matter Expert' and will be based on the geographical location of the system, type of material and the history of this threat in the system.

Probability multiplier number will be from 1 to 10

Consequence

Consequence number is based on the potential damage to life and property should this threat occur. This number shall be determined by the Operators 'Subject Matter Expert' using his Knowledge of the System.

Consequence multiplier number will be from 1 to 1.5

History of Leaks

History of Leaks is the percentages of the Operators leaks in the last five years that occurred in this potential threat.

Incident Probability Factor

Incident Probability Factor is the percentage of leaks in each of the threats reported to PHSMA for the last five years of data available. Currently this percentage is as follows

• Corrosion	.28
• Natural Forces	.05
• Excavation	.22
• Other Outside Forces	.02
• Material & Welds	.10
• Equipment Failure	.09
• Incorrect Operations	.02
• Other	.22
	100%

History of Leaks along with tables for ranking of threats will found in Appendix B

History of Leak numbers are taken from City of Tompkinsville Gas System's compliance work conducted since May 2012 by RussMar Logistics.

City of Tompkinsville Gas Company Threats

Based on information from Appendix B

As indicated in Appendix B, Tompkinsville Gas System's top two threats are;

- Corrosion
- Equipment Failure

In Section 5 page 7 information was given regarding the lack of documentation history. With the information obtain by RussMar as they manage and operate the Tompkinsville Gas System as ordered by PSC case #2012-00362 it became clear threats to the system are Corrosion leaks and equipment failure which mainly is a result of mechanical couplings.

In order to reduced these threats, RussMar will conduct leakage surveys within the business district twice a year not to exceed 7 ½ and outside business districts each calendar year not to exceed 15 months. Mechanical fittings will be replaced when discover leaking and mechanical fillings will not be used in the future.

Appendix B Evaluation and Ranking will be used to monitor future results of the accelerated survey and repair to document improvement in the above threats. As indicated on Page 2, this will be reviewed on a yearly basis.

See Section 8 "Implementation of Measures to Address Risks

8. Implementation of Measures to Address Risk

The purpose of this section is to describe how the City of Tompkinsville implements measures aimed at achieving risk management. Risk Management is accomplished by acting to reduce the likelihood of an occurrence, by alleviating the consequences of an occurrence, or both. Appropriate actions are dependent upon the type of threat, occurrence, or both. Appropriate actions are dependent upon the type of threat, magnitude of risk, and the viability of the actions in effectively allocating resources to manage the relevant risk factors. Risk reduction activities can be in the form of high-level programs applied uniformly to a wide group of facilitates or a single, specific activity aimed at a targeted facility.

The sections below describe various measures the Company has selected for the purpose of managing pipeline safety risks associated with the distribution system.

a. Leak Management Program

An effective leak management program includes locating leaks by visual inspection and leak survey equipment, timely response to customer notification of a gas odor and a variety of other means. It involves the use of qualified personnel to perform leak detection activities and the selection of appropriate leak detection equipment

An effective leak management program includes evaluating the severity of leaks according to established classification criteria. These classifications criteria take into consideration the safety posed by the leak. The determination of leak migration is part of the process.

Leaks are classified using the following criteria

Leaks that require immediate action (Grade 1) A leak that represents an existing or probable hazard to persons or

property, and requires immediate repair or continuous until the conditions are no longer hazardous

Leaks scheduled for repair (Grade 2) A leak that is recognized as being non-hazardous at the time of detection, but justifies scheduled repair based on probable future hazard.

Monitored leaks (Grade 3) A leak that is non-hazardous at the time of detection and can be reasonable expected to remain non-hazardous.

I. Act Appropriately

Once a leak has been located and evaluated, City of Tompkinsville takes actions that are consistent with the severity of the leak. This may include temporary or permanent repair, replacement, or other steps that reduce any immediate hazard posed by the leak. This may also include scheduling the leak for repair or periodic monitoring in the case of non hazardous leaks.

II. Keep Records

An effective leak management program includes the collection and recording of data pertinent to a leak to increase City of Tompkinsville Gas System knowledge of the system, measure it performance and comply with regulatory reporting requirements. Leakage information is to be documented on the applicable Company forms.

b. Other Programs to Address Risk

In addition to the leak management program, the City of Tompkinsville Gas System has in place numerous programs and activities aimed at reducing the probability of pipeline failure and mitigating the consequences should a failure occur. The following sections describe some of the programs and the threats which are addressed.

a. Damage Prevention Program

City of Tompkinsville Gas System has in place a program to protect the Company's natural gas distribution infrastructure from external damage, to prevent injury to the public, excavators, and employees; to safeguard property; and to streamline communications related to propose excavations or demolition work near Company facilities.

The details of the program are described in a written plan, titled Damage Prevention Plan. In accordance with this plan, City of Tompkinsville Gas System implements the following measures aimed at achieving risk management.

a. Periodically notifies external parties of program elements and how to learn the location of underground pipelines before excavation activities are begun.
b. Processes information received from the state's one-call center regarding notification of planned excavation activities.
c. Notifies excavators of its underground facilities by marking locations in accordance with the state's one-call regulations
d. Monitors certain excavation activities that may result in a high likelihood of damage consequences, due to historic excavator performance, critical nature of facilities, or type of excavation being performed.
e. If Company has knowledge that blasting will be part of an excavation, the Company verifies the integrity of its facilities
f. Notifies the state one-call center of excavation activities the Company plans to conduct.
g. Uses a quality assurance process to validate the quality of certain locates and markings.

b. Public Awareness Program

City of Tompkinsville Gas System has in place a program to educate the general public, public officials, emergency responders, and excavators on; the presence and purpose of our facilities, the importance of damage prevention and the steps to take in the event of a natural gas emergency.

Providing third parties with knowledge that pipelines may exist in close proximity to excavation activities, and of the hazards that may results, reduces the probability factor associated with the risk of excavation damage. The familiarity with being able to recognize a leak and knowing how to report such an event lessens the consequences of a potential emergency condition. As such, the consequence factor associated with the risk of all threats is reduced.

Some of the objectives of this program include the following

a. Enhance public safety by educating residents on the hazards of natural gas, and how to recognize and react to possible leaks.
b. Raise public awareness of the necessity to call the one call center before digging when doing any kind of excavation work.
c. Raise the awareness of the affected public and stakeholder audiences of the presence of buried natural gas facilities in the communities served
d. Help excavators understand the steps that they should take to prevent damage to the pipeline and to respond properly if the pipeline is damaged.
e. Enhance emergency response coordination by helping emergency response agencies and first responders understand the proper actions to take in response to a pipeline emergency

f. Build trust and better relationships with the public along the pipeline route.

The details of the program are described in a written plan, titled Public Awareness Plan. The administration of the program, monitoring of the program effectiveness and continuous program improvement is the responsibility of Joe Orazen with RussMar Logistics and the Mayor.

The following attributes describing the program are documented with the plan

a. Identification of affected third parties that will be targeted for communications
b. Selection of media and communication options for each target audience
c. Description of the content included in the communications
d. Determination of the frequency of each type of communications
e. Description of a process by which the program is periodically evaluated and improvements are made based on the results of the assessments
f. Establishment of a process by which significant plan changes are recognized, reviewed, approved, communicated and documented.

c. Programs to Address Human Factors

a. Operator Qualification Program

City of Tompkinsville Gas System has developed and implemented an Operator Qualification (OQ) Program. The program was developed in response to the operator qualification rule, the purpose of which is to minimize human error by establishing a verifiable, qualified workforce. In so doing, the Company reduces

the consequences from human error and promotes personnel and public safety. Furthermore, operating and maintenance personnel are qualified to recognize and react to abnormal operating conditions.

The elements of the program are specified in the Company's Operator Qualification Plan. The purpose of the written plan is to develop a unified standard for qualification of pipeline operator and contractor/subcontractor personnel.

The OQ plan includes the following provisions:

a. Identify covered tasks
b. Ensure through evaluation that individuals performing covered task are qualified
c. Allow individuals who are not qualified pursuant to Subpart N to perform a covered task if directed and observed by an individual that is qualified
d. Evaluate an individual if the operator has reason to believe that the individual's performance of a covered task contributed to an incident as defined in Title 49 CFR Part 191
e. Evaluate an individual if the operator has reason to believe that the individual is no longer qualified to perform a covered task
f. Communicate changes that affect covered task to individuals performing those covered tasks
g. Identify those covered task and the intervals at which evaluation of the individuals qualifications is needed

II. Drug and Alcohol Plan

City o f Tompkinsville Gas System has prepared and implemented a Drug and Alcohol Plan in response to the Department of Transportation (DOT) regulations establishing an Anti-Drug and an Alcohol Misuse Prevention Program. Although compliance with these regulations is mandatory, the Company fully supports the efforts of the DOT to make the workplace drug and alcohol free and exhibits further support of this position through its Company Policy, which provides compliance with the Drug Free Workplace Act of 1988. The program ensures public safety and helps prevent accidents by prohibiting certain alcohol-related conduct and requiring drug and alcohol testing, training and education

III. Construction Inspection

City of Tompkinsville Gas System periodically reviews work done by Company or Contract personnel to ensure the work is correctly performed in accordance with appropriate standards.

IV. O&M Manual

City of Tompkinsville Gas System has developed and implemented Operating and Maintenance Procedures (OMP). The OMP sets forth Management's expectations of leadership to ensure compliance with 49 CFR Part 191 and 192 and applicable state regulations pertaining to the distribution of gas. The OMP set forth leadership's expectations of Company employees and contractors as to how certain activities must be performed. The OMP are available to all employees in the Company and are made available to contractors performing such activities on behalf of the Company.

d. **Facility Inspections and Monitoring**

i. Atmospheric Corrosion Monitoring

Inspections of above ground piping and related facilities exposed to the atmosphere are conducted in accordance with 49 CFR Part 192

ii. Patrolling

City of Tompkinsville Gas System has in place a program to patrol distribution systems, where deemed necessary, to observe factors affecting the safe operation of the system and to enable the corrections of potentially hazardous conditions. Conditions which are potentially hazardous may include the following:

a. Visual evidence of leakage
b. Physical deterioration of exposed piping
c. Pipeline spans and structural pipeline supports such as bridges, piling, headwalls, casings, and foundations
d. Deformation of the pipeline or support mechanisms due to expansion and /or contraction
e. Land subsidence, earth slippage, soil erosion, flooding, climate conditions and other natural causes which can result in impressed secondary loads
f. Need for additional repair or replacement of pipeline identification and line markers
g. Inlet and outlet lines of regulator stations subject to movement due to frost
h. Presence of atmospheric corrosion and /or inadequate condition of protective coating on exposed piping

Deficiencies found during the patrol are reported and appropriate action is taken to correct the problem or minimize risk.

To identify segments of a distribution system that will require more frequent observations, consideration is given to the following locations:

a. Bridge crossings
b. Aerial crossings
c. Unstable river banks
d. Exposed water crossings
e. Areas susceptible to earth subsidence, such as mines and landfills
f. Tunnels
g. Railroad crossings
h. Attachments to building or other structures
i. Facilities or support structures which require maintenance until repaired
j. Roof-top mains

iii. Regulator Station Inspections

City of Tompkinsville Gas System has in place a program to inspect and test each pressure limiting station, relief device, and pressure regulating station and its equipment to determine that it is in good mechanical condition, adequate from the standpoint of capacity and reliability of operation for the service in which it is employed, properly installed and protected from dirt, liquid, or other conditions that might prevent proper operation. Regulators are tested to ensure that they operate and control pressure within expected and acceptable limits. Each overpressure protection device is tested to determine if the device is set to operate at the correct pressure. Prompt action is taken to correct deficiencies found during the inspection

iv. Critical Valve Inspections

City of Tompkinsville Gas System has in place a program to inspect critical valves that are designated by the Company deemed necessary for the safe operation of the system. Each valve is checked for adequate lubrication and proper alignment to permit the use of a key, wrench, handle, or other operating device. Where applicable, each valve box or vault is cleared of any debris that may interfere or delay

the operating of the valve. In addition, a sketch, map or other means of identifying and describing the location of the critical valve and other pertinent information must also be maintained. If a valve fails to operate satisfactorily, prompt remedial action is taken.

e. Failure Mitigation Programs

a. Excess Flow Valves

An Excess Flow Valve (EFV) is a cartridge valve inside the pipe that immediately closes (trips) when the flow exceeds its designed limit at a certain pressure. Its intent is to stop the flow when a line ruptures or is damaged, normally severed by an excavator.

Excess flow valves are installed on any new or replaced service lines serving a single-family residence, unless at least one of the following conditions is present;

a. The service line does not operate at a pressure of 10 PSIG or greater throughout the year.
b. The company has prior experience with contaminants in the gas stream that could interfere with the valves operation or cause loss of service to a residence.
c. An EFV could interfere with the necessary operation or maintenance activities, such as blowing liquids from the line.
d. An EFV meeting defined performance standards is not commercially available.

When installed, an EFV should be placed as close to the service tee as possible.

ii. Odor Level Monitoring

City of Tompkinsville Gas System has in place a program to monitor the proper concentration of odorant in the distribution system.

To assure the proper concentration of odorant, trained personnel perform periodic sampling to determine the percentage of gas in air at which the odor becomes readily detectable. Records, including the name of the person conducting the test, the date and location of the test are documented and retained in accordance with the Company record retention procedures.

Sampling points are distributed throughout the system to provide data samples that are representative of the entire distribution system. If insufficient odorant levels are detected in the system, supervision is contacted and appropriate steps are taken to correct the problem.

iii. Relief Valve Capacity Review

Once a year, a review of primary relief valves is performed to verify that their capacity exceeds that of upstream regulation. If regulation characteristics associated with the primary relief valve have changed from the previous review, an evlauati0on of the capacity of the relief valve is done. With the relief valve or the controlling regulation will be changed so that the capacity of the relief valve exceeds the capacity of the control regulation.

iv. Emergency Manual

City of Tompkinsville Gas System maintains an Emergency Manual which contains written procedures aimed at minimizing the hazards resulting from a gas pipeline emergency.

The objectives of the manual are to provide for the appropriate preparation, management, reporting, and review of emergency events as further explained below.

a. Preparation objectives are to establish guidelines to ensure that company personnel are prepared to respond to gas pipeline emergencies in an expedient manner, which protects

the safety of employees and the public, and minimizes the impact of the emergency on the company, its customers, and the community.

b. Management objectives are to pervade a framework for the delegation of responsibility, and the clear establishment of employees roles during emergencies and incidents
c. Reporting objectives are to establish reporting guidelines, and effectively communicate to all levels of management; circumstantially sensitive events or incidents on the Company's pipelines facilities and to provide guidance in submitting telephonic and written reports to DOT and/or State Utility Commissions are required.
d. Review objectives include a facilitated, open process of sharing information about pipeline emergency events/incidents with the desired outcomes being increased learning and improved performance. These outcomes will be achieved in an environment of trust with a non-threatening discussion of actions, the sharing of knowledge, and duplication of successes throughout the organization, the top priority is an increase in the institutional knowledge required to handle pipeline emergency situations.

The written procedures include, but are not limited to, the following

a. Receiving, identifying, and classifying notices of events which require immediate response by the operator
b. Establishing and maintaining adequate means of communication with appropriate fire, police, and other public officials.
c. Prompt and effective response to a notice of each type of emergency
d. Training the appropriate operating personnel to assure that they are knowledgeable of the emergency procedures

e. Reviewing employee activities to determine whether the procedures were effectively followed in each emergency

9. Measurement of Performance, Monitoring Results, and Evaluating Effectiveness

I. The objective of this section of the plan is to establish a process by which performance measures are monitored in order to evaluate the effectiveness of the DIMP Program. Performance measures can assist City of Tompkinsville Gas System in the ongoing evaluation of perceived threats and risk level. The evaluation of performance measures may lead to unexpected results that may include the recognition of threats not previously indentified.

Program evaluations will help the company answer the following questions.

a. Were the DIMP Program objectives accomplished
b. Were pipeline integrity and safety effectively improved through the DIMP Program

City of Tompkinsville Gas System will collect data through their Operations and Maintenance Work Orders and the data used in the future for their DOT Annual Reporting requirements.

The following data will be collected as required by 49 CFR Part 192.1007

a. Number of Hazardous Leaks Either Eliminated or Repaired
b. Number of Excavation Damages
c. Number of Excavation Tickets
d. Total Number of Leaks Either Eliminated or Repaired, Categorized by Cause
e. Number of Hazardous Leaks Either Eliminated or Repaired Categorized by Material

The performance measures listed above are to be collected and documented on an annual basis, and all of the data should reflect the previous calendar year. In accordance with the requirement of Section 10 "Periodic Evaluation and Improvement", the performance measures are analyzed on an annual basis to determine if the goals of the DIMP Program are being achieved.

Leakage performance measures are compared to an established baseline. This is to be the average of 2012 and 2013. Since the previous years were not available, the Company will use what data is available from RussMar Logistics.

10. Periodic Evaluation and Improvement

City of Tompkinsville Gas System will conduct a complete re-evaluation of this Plan every year. Trends in each of the performance measures listed in Appendix B will be reviewed during the re-evaluation. If any performance measures indicate that any of the additional action taken is not effective in reducing the risk it is intended to address, City of Tompkinsville Gas System will consider implementing additional actions to address that risk.

Re-evaluation of the Plan will also occur when changes occur on the system that may significantly change the risk of failure.

Appendix A

Knowledge of System

City of Tompkinsville Gas System serves the city of Tompkinsville in Monroe County located in South Central Kentucky. Monroe County has a population of approximately 10,821 citizens. The City of Tompkinsville has a population of 2320. The Gas System has a total of 1088 customers.

- The City of Tompkinsville Gas System has one point of delivery (POD) located in Monroe County. This POD is owned and operated by Texas Eastern Gas. The outlet operating pressure of this POD is approximately 240 PSIG. Approximately 50 customers are served from this five mile 240 PSIG main that feeds the town. The system contains five district regulators served from the 240 PSIG line. These five district reglulators that serve the city of Tompkinsville. The outlet pressure from these 5 district regulators is between 45 and 50 PSIG. The first cut regulators from the 240 PSIG line have external relief valves and all the service regulators have internal relief valves. Gas supplied by Columbia is pipeline qualify gas, therefore the City of Tompkinsville has not experienced any liquid problems.

The system contains approximately 47 miles of pipe with 36 miles plastic.

The system contains no outstanding environmental factors that would contribute to a threat therefore the entire gas system will be evaluated as one.

Appendix B

Risk Ranking for City of Tompkinsville Gas System

Threat	Probability	Consequence	History	Incident Probability	Ranking
Corrosion	7	1.2	64	0.28	150.528
Natural Forces	2	1.1	1	0.05	0.11
Excavation	1	1.5	1	0.22	0.33
Other Outside Forces	3	1.1	2	0.02	0.132
Material & Welds	5	1.2	134	0.1	80.4
Equipment Failure	4	1.1	7	0.09	2.772
Incorrect Operations	0	1.1	0	0.02	0
Other	0	1.1	0	0.22	0

See Section 7 for definitions of Risk multipliers

Appendix B Section 7 "Risk Evaluation and Ranking"

Threat		2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
1	Corrosion										
	External	46	18								
	Internal										
2	Natural Forces										
	Earth Movement	1	0								
	Lightning										
	Storm Damage										
	Frost										
3	Excavation Damage										
	Excavator Error	1	0								
	Locator Error										
	Poor Records										
	Failure to Notify	0	0								
4	Outside Forces										
	Fire Explosions										
	Vehicular Damage	1	0								
	Electrical Arcing	1	0								
	Previous Mechanical Damage										
	Intentional Damage										
5	Material or Welds										
	Pipe										
	Joint	75	45								
	Weld										
	Mechanical Fitting	9	2								
	Repair Device Failure	3									

Threat			2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
6	Equipment Failure											
		Malfunction of Pressure Reg.	1	3								
		Valve Failure	2	1								
		Other Equipment Failure										
7	Incorrect Operatons		0	0								
8	Other		0	0								