# CHAPTER 4

# APPENDIX A

# EXCERPT FROM 2009 AUDIT OF PG&E'S OPERATIONS,

# MAINTENANCE AND EMERGENCY PLANS

STATE OF CALIFORNIA

ARNOLD SCHWARZENEGGER, Governor

PUBLIC UTILITIES COMMISSION 105 VAN HERS AVENIE SLAP FRUNCISCO CA GUIDU-DINE

April 30, 2009

Mr. Glen Carter, Director Gas Engineering (GT&D) Pacific Gas and Electric Company 375 N. Widget Lane, Suite 200 Walnut Creek, CA 94598

SUBJECT: Notice of Violations of General Order 112E - Audit of PG&E's OM&E Plan

### Dear Mr. Carter:

The staff of the Utilities Safety and Reliability Branch (USRB) of the California Public Utilities Commission conducted a General Order 112-E safety audit of Pacific Gas & Electric Company's (PG&E) Operation, Maintenance, and Emergency (OM&E) Plan. The audit, which was conducted on March 2-5, 2009, consisted of a review of PG&E's gas distribution and transmission standards and guidelines which are the basis of, and support, its OM&E Plan. No field inspections were performed as a part of this audit.

During the audit, PG&E staff provided details on the broad effort PG&E has undertaken to meet compliance with 49 CFR, Part 192, Section 192,605. Through this offort, PG&E is utilizing subject matter experts (SMEs) to review its existing standards and guidelines in order to eliminate outdated standards and to re-label, or expand, others to include work procedures that support, and provide more details related to the standards. Based on findings from our previous OM&E audits of PG&E, we believe this effort was much needed and we look forward to seeing the end product during our next audit.

PG&E staff requested clarification from USRB regarding the frequency on which the USRB was expecting SMEs to review the individual standards to which any SME was assigned. The USRB believes that since Section 192,605 requires the OM&E Plan to be reviewed and updated each calendar year, and a frequency not exceeding 15 months, the individual standards, guidelines, work procedures that together form the OM&E will be expected to be reviewed on the same once per calendar year, not to exceed 15 months, basis. This is not to imply that work to revise a document could not cross from one calendar year into the next; however, a review must be performed within the frequency, specified herein, to confirm that procedures within existing documents are still valid and applicable to the work being performed under these documents.

Violations of GO 112-E. Identified by USRB staff during the audil, are ilemized within the Summary of Inspection Findings (Summary) enclosed with this letter. The Summary also contains any Areas of Concern identified during the audit.

By May 31, 2009, please provide a written response indicating the measures taken by PG&E to address the Violations and Areas of Concern noted in the Summary:

If you have any questions, please do not hesitate to contact me at (415) 703-2407.

SB\_GT&S\_0679934

Sincerely,

- 1 .

Sunil K. Shon Utilities Engineer Utilities Safety and Reliability Branch Consumer Protection and Safety Division

Enclosure: Summary of Inspection Findings

Electronic copy:

Ed Chun – PG&E Larry Berg – PG&E Ivan Garcia – CPSD/USRB Steve Artus – CPSD/USRB Terence Eng – CPSD/USRB



A completed Standard Inspection Report is to be submitted to the Director within 60 days from completion of the inspection. A Post Inspection Memorandum (PIM) is to be completed and submitted to the Director within 30 days from the completion of the inspection, or series of inspections, and is to be filed as part of the Standard Inspection Report.

	Inspection Report	Post Inspection Memorandum
Inspector/Submit Da	te: Per	ector/Submit Date: Review/Date: :tor Approval/Date:
*****	POST INSPECTION M	MORANDUM (PIM)
Name of Operator:	Pacific Gas and Electric	OPID #: 15007 & 18608
Name of Unit(s):	Pacific Gas & Electric transmission and Stan	rd Pacific Pipeline (operated by PO&E) Unit H(s);
Records Location:	San Francisco, CA	
Unit Type & Commo	dity:	
Inspection Type:	Audit of OM&E Standards	Inspection Date(s): March 3-5, 2009
PHMSA Representativc(s):	Sunil Shori, Ivan Garcia, Sleve Artus, ar	Terence Eng AFO Days: 3

Summary:

This report is a centralized audit of documents that form Pacific Gas & Electric Company's (PG&E) Operations, Maintenance, and Emergency Plans. This audit examined gas distribution and transmission related standards; however, only transmission related fludings are included in this report (distribution fludings are in another report).

The findings from this audit will be resolved and a template for subsequent audits will be created based on the findings of this audit. The template will be used as the USRB inspection Form for audits of PG&E until PHMSA next revises this form;

Findings:

The findings are as noted throughout this report. A written report noting the findings will be sent to the operator.

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Name of Operator:       Pacific Gas and         OP ID No. <sup>(1)</sup> HQ Address:         HQ Address:       77 Beale Street         San Francisco, CA       San Francisco, CA         Co. Official:       Phone No.:         Fax No.:       Emergency Phone No.:         Persons Interviewed       Lawrence M. Berg         Edward Chun       Brian J. Leary		Unit ID No. <sup>(1)</sup> System/Unit Name & Addro 123 Mission Street San Francisco, CA Activity Record ID No.; Phone No.; Fax No.; Emergency Phone No.;	:55: <sup>[1]</sup>
HQ Address: 77 Beale Street San Francisco, CA Co. Official: Phone No.: Fax No.: Emergency Phone No.: Persons Interviewed Lawrence M. Berg Edward Chun		System/Unit Name & Addre 123 Mission Street San Francisco, CA Activity Record ID No.; Phone No.; Fax No.;	iss: (I)
77 Beale Street San Francisco, CA Co. Official: Phone No.: Fax No.: Emergency Phone No.: Persons Interviewed Lawrence M. Berg Edward Chun		123 Mission Street San Francisco, CA Activity Record ID No.; Phone No.; Fax No.;	and name dage of products and a single state of the state
Co. Official: Phone No.: Fax No.: Emergency Phone No.: Persons Interviewed Lawrence M, Berg Edward Chun		San Francisco, CA Activity Record ID No.; Phone No.; Fax No.;	Ang tanang manang ma
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Persons Interviewed Lawrence M, Berg Edward Chun		E LINERZENCY PRUNE (NO.1-	
Lawrence M, Berg Edward Chun			
Edward Chun		Title	Phone No.
		or Gas Engineer	
Diano, Leary		Senior Gas Engineer andards Manager	
	<u>04\$:51</u>	anuarus manager	
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HMSA Representative(s) " See above p	age Inspecti	on Date(s) 112 March 3-5, 2009	and a second
Company System Maps (Copies for Region		PS OBTAINED DURING AUDIT	
		• •	
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			2011-11-11-11-11-11-11-11-11-11-11-11-11-
Portion of Unit Inspected: (1)			**************************************
Documents related to entire PG&E gas syste	- רווי		
Documents related to entite 1 ofco. Boy syste	• • • • • • • • • • • • • • • • • • •		
		•.	•
<u>( </u>		n	
For gas transmission pipeline inspections, the PHMSA inspections. For those operators, p	procedures do not h spection, or 2) proc	ave to be evaluated for content uni	ess: 1) new or amended regulation inspection. Items in the procedure:

<sup>1</sup> Information not required if included on page 1,

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Unless otherwise noted, all code references are to 49CFR Part 192. S = Satisfactory U = Unsatisfactory N/A = Not Applicable N/C - Not Checked If an item is marked U, N/A, or N/C, an explanation must be included in this report.

49 CFR PART 191									
		REPORTING PROCEDURES	S	UN	/AN/C				
.605(b)(4)	Procedures	for gathering duta for incident'reporting		<u>معن</u> ة بسمنين غير					
	191,5	Telephonically reporting incidents to NRC (800) 424-8802	X						
	191.15(a)	30-day follow-up written report (Form 7100-2)	x						
	191.15(b)	Supplemental report (10 30-day follow-up)	X						
.605(a)	191.23	Reponing safety-related condition (SRCR)	X						
	191.25	Filing the SRCR within 5 days of determination, but not later than 10 days after discovery	X						
	191.27	Offshore pipeline condition reports - filed within 60 days after the inspections		T	X				
.605(d)	Instructions	s to enable operation and maintenance personnel to recognize potential Safety Related Conditions	X						

Comments:

Reporting procedures can be found in UO Standard 4413

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### 49 CFR PART 192

.13(c)		CUSTOMER NOTIFICATION PROCEDURES	S	U	N/A	N/C
		dures for notifying new customers, within 90 days, of their responsibility for those selections of service not maintained by the operator.	x			
.605(8)						
.605(8)	1	NORMAL OPERATING and MAINTENANCE PROCEDURES	S	Ü	N/A	NIČ
.605(8)	.605(a)	NORMAL OPERATING and MAINTENANCE PROCEDURES O&M Plan review and update procedure (1 per year/15 months)	S X	Ŭ	N/A	N/Ċ

	.605(b)(5)	Start up and shut down of the pipeline to assure operation within MAOP plus allowable buildup	X		
	.605(b)(8)	Periodically reviewing the work done by operator's personnel to determine the effectiveness and adequacy of the procedures used in normal operation and maintenance and modifying the procedures when deficiencies are found	:X		
	.605(b)(9)	Taking adequate precautions in excavated trenches to protect personnel from the hazards of unsafe accumulations of vapors or gas, and making available when needed at the excavation, emergency rescue equipment, including a breathing apparatus and a rescue harness and line	ιX,		
	.605(b)(10)	Routine inspection and testing of pipe-type or bottle-type holders	X	j	·
÷.	.605(b)(11)	Responding promptly to a report of a gas odor inside or near a building, unless the operator's emergency proced, under § 192.615(a)(3) specifically apply to these reports.	x		

Comments:

A93.3 Excess Flow Valves voluntary installation program; 192.16 addressed by PG&E WP 5449-04; DCS Standard D-S0423 provides 192.16 notice to customers when work takes place;

192.605(b)(8) being addressed by IQI and PG&E quality assurance program;

WP 4000-02 (cst. 09/2008) addresses review of manuals required by 192.605(a).

192.605(b)(11) is addressed in Company Gas Emergency Plan (CGEP) Parts 1 and 2.

.605(a)

### ABNORMAL OPERATING PROCEDURES

S U N/AN/C

Unless otherwise noted, all code references are in 49CFR Part 192. S-Satisfactory U-Insetisfactory N/A = Not Applicable N/C- Not Checked-If an item is marked U. N/A, or N/C, an explanation must be included in this report.

	ABNORMAL OPERATING PROCEDURES	S	U	N/A	N/C
.605(c)(1)	Procedures for responding to, investigating, and correcting the cause of:		4	ليرجين وال	
1.1.2	(i) Unintended closure of valves or shut downs	X			
	(ii) Increase or decrease in pressure or flow rate outside of normal operating limits	×.	Γ		
	(iii) Loss of communications	X			
	(iv) The operation of any safety device	X			
	(v) Malfunction of a component, deviation from normal operations or personnel error	X			
.605(c)(2)	Checking variations from normal operation after abnormal operations ended at sufficient critical locations	-x			
.605(c)(3)	Notifying the responsible operating personnel when notice of an abnormal operation is received	x			
.605(c)(4)	Periodically reviewing the response of operating personnel to determine the effectiveness of the procedures and taking corrective action where deficiencies are found	X		1	

### Comments:

PG&E Company Gas Emergency Plan, Part 1, Section 2.9 and Part 2.

UO Standard \$4450 (Operator Qualification Program);

DCS D-\$0355 CPUC and DOT Reportable Incidents, Curtailments & Conditions, and Low Pressure System Problem Reporting, Gas Control (PG&E Gas SCADA Alarm limits (policy and procedure);

UO Standard S5351 (District Reg Station Maintenance) and Gas Information Bulletin (GIB) 279

.605(a)		CHANGE In CLASS	LOCATION PROCEDURES	S	U	V/A	V/C
	.609	Class location study		X.			
. " <b>*</b> .	.611	Confirmation or revision of MAOP.	Final Rule Pub. 10/17/08, cff. 12/22/08.	X			

Comments: Standard S4127

Reviewed and confirmed 03/2009

.613		CONTINUING SURVEILLANCE PROCEDURES	S	U	N/A	N/C
-	.613(a)	Procedures for surveillance and required actions relating to change in class location, failures, teakage history, corrosion, substantial changes in CP requirements, and unusual operating and maintenance conditions	x			
	.613(b)	Procedures requiring MAOP to be reduced, or other actions to be taken, if a segment of pipeline is in unsatisfactory condition	(X)			

# Comments

Standard 4127; UO Standard S4111-Patrolling Pipelines & Mains; UO Std S0350/S4110-Leak Survey and Repair; GS&S O-16-Corrosion Control; UO Std S4133-Corrosion Control Distribution and Transmission; UO Std S4133-Corrosion Control Distribution and Transmission; UO Std S4133-Corrosion Control Distribution and Transmission; UO Std S4133-Corrosion Control Distribution and Pipeline Services Reviewed and confirmed same standards 03/2009

.605(0)	T T	DAMAGE PREVENTION PROGRAM PROCEDURES	S	U N/A	N/C
	,614	Participation in a qualified one-call program, or if available, a company program that complies with the following:		ي المراجع المراجع	
		(1) Identify persons who engage in excavating	X.		
1		(2) Provide notification to the public in the Onu Cull area	. X		

Unless otherwise noted, all code references are in 490FR Part 192. N-Satisfactury. U-Unsatisfactury. N/A - Not Applicable N/C - Not Checked If an item is marked U, N/A, or N/C, an explanation must be included in this report.

	DAMAGE PREVENTION PROGRAM PROCEDURES	۶Ţ	U NI	N/C
	(3) Provide means for receiving and recording nutifications of pending excavations	T.		1
ſ	(4) Provide notification of pending excavations to the members	<del>ر</del> آ		
ſ	(5) Provide means of temporary marking for the pipeline in the vicinity of the excavations	T	-	1
	(6) Provides for follow-up inspection of the pipeline where there is reason to believe the pipeline could be damaged	Ċ,		Ī
ſ	(i) Inspection must be done to verify Integrity of the pipeline:	T		
· · [	(ii) After blasting, a leak survey must be conducted as part of the inspection by the operator	T	_	

### Comments:

UO Standard S4412-Protection of Underground Infrastructure; PG&E Manual titled "Protection of Underground Infrastructure"

.615

		EMERGENCY PROCEDURES	\$	v.	N/A	N/C
ł	.615(a)(1)	Receiving, identifying, and classifying notices of events which require immediate response by the operator	X			
ſ	.615(a)(2)	Establish and maintain communication with appropriate public officials regarding possible emergency.	X			
. [	.615(a)(3)	Prompt response to each of the following emergencies:		) <u>}</u>		3
ſ		(i) Gas detected inside a building	X			
1		(ii) Fire located near a pipeline	X		Γ	
Ţ		(iii) Explosion near a pipeline	x			Γ
ľ	<u></u>	(iv) Natural disaster	· X	1		<b></b>
	.615(a)(4)	Availability of personnel, equipment, instruments, lools, and material required at the scene of an emergency.	x			
I	.615(a)(5)	Actions directed towards protecting people first, then property	x			
ĺ	.615(a)(6)	Emergency shuldown or pressure reduction to minimize hazards to life or property	x			
	.615(a)(7)	Making safe any actual or potential hazard to life or property.	<b>X</b> .			Γ
	615(a)(8)	Notifying appropriate public officials required at the emergency scene and coordinating planned and actual responses with these officials	x			
ſ	.615(a)(9)	Instructions for restoring service outages after the emergency has been rendered safe	X			
	.615(a)(10)	Investigating accidents and failures as soon as possible after the emergency	X			
	.615(b)(1)	Furnishing applicable portions of the emergency plan to supervisory personnel who are responsible for emergency action	X			
	.615(b)(2)	Training appropriate employees as to the requirements of the emergency plan and verifying effectiveness of training	x			
	.615(b)(3)	Reviewing activilies following emergencies to determine if the procedures were effective	X			
	.615(c)	Establish and maintain flatson with appropriate public officials, such that both the operator and public officials are aware of each other's resources and capabilities in dealing with gas emergencies	x		·	

### Comments:

PG&E's Emergency Plan consists of 2 parts: (1) Basic Plan (company-wdle) and (2) Appendix which contains the Division-specific portion. Each division or district is responsible for updating their own binders including any changes received on the company-wide plan and the division-specific plan. The Basic Plan/company-wide plan is reviewed by PG&E's SME by 8/31 of each year. Personnel that may be involved in emergency response are required to do an initial and subsequent training and evaluation. Additionally, personnel are required to take a computer-based examination on emergency procedures to stay informed of any recent changes in the plan.

192.615(a)(4) - Availability of equipment addressed in TO&M EG4124 Emergency Pre-tested Transmission Pipe. This is referenced in

Unless otherwise noted, all code references are in 49CFR Part 192. X - Salisfactory U - Unsatisfactory NIA - Not Applicable N/C= Not Checked If an item is marked U. N/A. or N/C. an explanation must be included in this report.

Comments:

the Einer: Plan Section 2.5.1. EG4124 is currently being revised to become a work procedure.

		PUBLIC AWARENESS PROGRAM PROCEDURES. (Also in accordance with API RP 1162)	S	U	N/A	N/C
.605(s)	.616	Public Awareness Program also in accordance with API RP 1162: Arndt 192-99 pub. 5/19/05 eff. 06/20/05.				
	.616(d)	The operator's program must specifically include provisions to educate the public, appropriate government organizations, and persons engaged in excavation related activities on:				
		(1) Use of a one-call notification system prior to excavation and other damage prevention activities;	X			
		(2) Possible hazards associated with unintended releases from a gas pipeline facility:	X		· · · ·	
		(3) Physical indications of a possible release:	x			
		(4) Steps to be taken for public safety in the event of a gas pipeline release; and	X			
:		(5) Procedures to report such an event (to the operator),	X			
	.616(e)	The operator's program must include activities to advise affected municipalities, school districts, businesses, and residents of pipelino facility locations.	X			
	.616(f)	The operator's program and the media used must be comprehensive enough to reach all areas in which the operator transports gas.	x			i
	.616(g)	The program conducted in English and any other languages commonly understond by a significant number of the population in the operator's area?	X			

### Comments:

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PG&E's PAP was reviewed by the USDOT Clearinghouse. The USRB (Sunil Shori) worked with PG&E in 2008 to resolve findings noted by the clearinghouse.

.617	FAILURE INVESTIGATION PROCEDURES	S	U	N/A	N/C
	.617 Analyzing accidents and fallures including laboratory analysis where appropriate to determine cause and prevention of recurrence	<b>X</b> :			

Comments: WP 1465-02 Gas Event and Near Hit Reporting issued 5/2008.

.605

05(a)	MAOP PROCEDURES	S U N/AN/O
	Note: If the operator is operating at 80% SMVS with waivers, the inspector needs to review the sp conditions of the waivers.	pecial
	.619 Establishing MAOP so that it is commensurate with the closs location	X
*	MAOP cannot exceed the lowest of the following:	
	(a)(1) Design pressure of the weakest element, Amdt. 192-103 pub. 06/09/06, eff. 07/10/06	X
	(a)[2) Test pressure divided by applicable factor	X

Unless otherwise noted, all code references are to 49CFR Part 192. S - Satisfactory U-Insatisfactory N/A - Not Applicable N/C - Not Cherked. If an item is marked U. N/A. or N/C, an explanation must be included in this report.

L	MAOP PROCEDURES			S	U	NIA	1
*	(a)(3) The highest actual operating pressure to which the segmer preceding the applicable date in second column, unless the seg- after the applicable date in the third column or the segment we (92-102 pub) $3/15/06$ , eff. $04/14/06$ . For gathering line relate gathering line requirements, refer to Part 192 including this	gment was tested a as uprated according d compliance dea	seconding to .619(a)(2) ng to subpart K. Arndi				The second se
	Pipeline segment	Pressure date	Test date				
	<ul> <li>Onshore gathering line that first became subject to this part tother than \$ 192.612) after April 13, 2006.</li> <li>Onshore transmission line that was a gathering line not subject to this part before March 15, 2006.</li> </ul>		5 years preceding applicable date: in second column.	X	" "	na a la constante de la consta	
	Offshore gathering lines.	July 1, 1976.	July 1, 1971.	]	}		-
	All other pipelines.	July 1, 1970.	July 1, 1965.		1	l	
	haine an ann a fha an Ann Beachard ann an Ann ann ann an Ann ann an Ann ann a			<u> </u>	<u> </u>	ļ	
	(a)(4) Maximum safe pressure determined by operator.			<u>.</u> X	Ĺ	L	
	(b) Overpressure protective davices must be installed if .619(a)(-	4) is applicable		X			
*	(c) The requirements on pressure restrictions in this section du operator may operate a segment of pipeline found to be in operating and maintenance history, at the highest actual opera- subjected during the 5 years preceding the applicable date in the (a)(3) of this section. An operator must still comply with § 19 04/14/06. For gathering, line related compliance dead requirements, refer to Part 192 including this amendment.	n satisfactory con ning pressure to w a second column o (2.611. And: 192	dition, considering its which the segment was I the table in paragraph -102 pub. 3/15/06. cif.	×			
ţ	20 If the pipeline is designed to the alternative MAOP standard in 1 requirements for: • General standards	192.620 does it me	et the additional design	• <b> </b>			
				1		١	
*	<ul> <li>Fracture control</li> <li>Plate and seam quality control</li> <li>Mill hydrostatic testing</li> <li>Coating</li> </ul>			ļ		X	

1970. The form, "Establishing MAOP, exhibit A", and its use needs to be referenced in DCS/GTS Standard D-S0430 In an email from Ed Chung of PG&E, the company has decided that .620 will not be used in establishing MAOP.

.13(c)	PRESSURE TEST PROCEDURES	S	U	N/A	N/C
	.503 Pressure testing	X	L	Ĺ	

### Comments:

GS&S A-34 Piping Design and Test Requirements, Attachment A-Test Requirements, Table A-1

Γ.	.13(c)	UPRATING PROCEDURES	SI	UN	1/AIN	1/0
C			fi			
		.553 Uprating	X.		1	1
L				ins		

Unless otherwise noted, all code references are to 49CFR Part 102. S. Satisfactory U-Unsatisfactory N/A - Not Applicable N/C- Not Checked If an item is marked U, N/A, or N/C, an explanation must be included in this report.

## Comments:

TO&M UO Std S4125 - requires reporting of proposed increase of MAOP to CPUC in accordance to GS&S A34.1; Exhibit 1 is filled out prior to uprating;

QS&S A-34.2 - Low, Semi-high, and High Pressure Uprating Procedure, Table 1-Uprating Matrix: Also requires CPUC notification and developing written procedures for the uprate as specified in 192:553(c).

.605(4)		ODORIZATION of GAS PROCEDURES	S	U	N/A	N/C
	.625(b)	Odorized gas in Class 3 or 4 locations (if applicable) – must be readily detectable by person with normal sense of smell at $V_3$ of the LEL	×	,	-	
	.625(1)	Periodic gas sampling, using an instrument capuble of determining the percentage of gas in air at which the odor becomes readily detectable.	Ŷ			

### Comments:

UO Standard S4350 - Gas Odor Detection at 0.6% gas in air or less. Periodic sampling recorded on Monthly Odorization Report (Form 62-4650)

.605(#)		TAPPING PIPELINES UNDER PRESSURE PROCEDURES	S	U	N/A	N/C
1	.627	Hot taps must be made by a qualified crew		·		
	ţ.	NDT testing is suggested prior to tapping the pipe. Reference API RP 2201 for Best Practices.	X			

,605(s)	T	PIPELINE PURCING PROCEDURES	S	U	N/A	N/C
	.629	Purging of pipelines must be done to prevent entropment of an explosive mixture in the pipeline		23	74	
	[	(a) Lines containing air must be properly purged.	. <b>X</b> :			
		(b) Lines containing gas must be properly purged	X			

### Comments:

GS&S A-38 Procedures for Purging Gas Facilities, Attachment A and B

\*\*PU&E has not examined API RP 2201 for possible use in its practices.\*\*

Work Practice (WP-4100-01), Hot and Cold Work Methods for Natural Gas Transmission Pipeline Shutdown and Tic-in) replaces \$4131; August 2008.

.605(a)		MAINTENANCE PROCEDURES	S	υ	N/A	N/d
	.703(b)	Each segment of pipeline that becomes unsafe must be replaced, repaired, or removed from service	<b>X</b> .			
:	(c)	Hazardous leaks must be repaired promptly	X			

Comments:

192.703(b) - UO Std S4430 CGT Gas Facility Requirements; UO Std S4134 Selection of Steel Gas Pipeline Repair Methods; UO Std S4129 Deactivation of Gas Facilities.

192,703(c) = UO Std S4110/S0350 addresses repairs of hazardous leaks; UO Policy 3-7 Gas and Electric Operations, Maintenance, and Construction; CT&CS S0205 Replacement of Deteriorated or Damaged Facilities; GS&S A-66 Repair of Cost Iron; GS&S A-67 Repair of Copper.

### S4134 and S4100-11

ſ	.605(b)		TRANSMISSION LINES - PATROLLING & LEAKAGE SURVEY PROCEDURES	S	U	N/A	N/C
		.705(a)	Patrolling ROW conditions	X,		:	
L		(b)	Maximum interval between patrols of lines:				

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	TRANSMISSION LINES	- PATROLLING & LEAKAGE SURV	EY PROCEDURES	<u>S</u>	U	N/A	<u> N/1</u>
	Class Location	At Highway and Railroad Crossings	At All Other Places				ľ
	1 and 2	2/yr (7½ months)	1/yr (15 months)				[.
	3	4/yr (4½ months)	2/yr (71/2 months)	X		ŀ	
	4	4/yr (4½ months)	4/yr (41/2 months)			ŀ	1
					<u> </u>	<b>_</b>	Ŀ
.706	Leakage surveys - 1 yea	r/IS months		X	<u> </u>	L	L
	Leak detector equipment	it survey requirements for lines transporting un	-odorized gas				
:	(a) Class 3 locations -	7% months but at least twice each calendar ye	Rr			x	Γ
	(b) Class 4 locations -	4% months but of least 4 times each calendar	vear-			X	Ê

### Comments:

UO Std S4111, Attachment 1 Procedure for Patrolling Pipelines and Mainsy. UO Std S4111, Table 1 Minimum Patrol Frequencies; All transmission and gathering lines are patrolled quarterly UO Std S4110, Table 1 Frequency of Periodic Required Gas Leak Surveys

.605(b)			U	N/A	N/C
	.707 Line markers installed and labeled as required	X			

### Comments:

GS&S L-10 Pipeline Markers Posts;

UO Std S4122, Attachment - Detailed Procedures, Table 1 - Pipeline Marking Requirements;

Appendix A - Pipeline Marker Posts and Signs In GS&S Section L.

.605(b)		RECORD KEEPING PROCEDURES	S	U	N/A	N/C
	.709	Records must be maintained:				: ¢ ا
		(a) Repairs to the pipe - life of system	X			
		(b) Repairs to "other than pipe"-5 years		X		
:		(c) Operation (Sub L) and Maintenauce (Sub M) pairols, surveys, tests - 5 years or until next one	X			

### Comments:

UO Std S4110, Attachment 1 - Leak Survey, Repair, Inspection, and Gas Quarterly Incident Report (Form "A"), Gas Dig-In Report (Form "A") shall be retained for the life of any gas facility plus 1 year.

Oas TS Manual, Gas Information Bulletin, Supervisory Review of Leak Survey Documents-provide clarity to assess Grade 1 leaks. This document ammends Attachment 1 of UO Standard 4110 and will be incorporated into the initial release of Work Procedure WP4110-1

\*\*PG&E needs to add the correct language to answer .709(b), no set procedure defined for repairs to "other than pipe"\*\*

.605(b)	ŀ	FIELD REPAIR PROCEDURES	S	U	N/A	N/C
ι.		Imperfections and Damages		12		
	.713(a)	Repairs of imperfections and damages on pipelines operating above 40% SMYS				
		(1) Cut out a cylindrical piece of pipe and replace with pipe of 2 design strength	X		, i	
1		(2) Use of a reliable engineering method	×			
	.713(b)	Reduce operating pressure to a safe level during the repair	_ <b>X</b>			
		Permanent Field Repair of Welds			١.	4
	.715	Welds found to be unacceptable under § 192.241(c) must be repaired by:				

Unless otherwise noted, all code references are to 49CFR Part 192. S = Satisfactory U = Unsultifactory N/A = Not Appl If an item is marked U, N/A, or N/C, an explanation must be included in this report. NIA - Not Applicable N/C - Not Checked

		FIELD REPAIR PROCEDURES	S	U	N/A	N/C
, ·		(a) If feasible, taking the line out of service and repairing the weld in accordance with the applicable requirements of § 192.245.	X			
		(b) If the line remains in service: the weld may be repaired in accordance with §192.245 if:				
	2000 C	(1) The weld is not leaking	X			
		(2) The pressure is reduced to produce a stress that is 20% of SMYS or less	X			
		(3) Grinding is limited so that 1/2 inch of pipe weld remains	X		T	
		(c) If the weld cannot be repaired in accordance with (a) or (b) above, a full encirclement welded split sleave must be installed	x			
	·	Permanent Field Repairs of Leaks	ŀ			
	.717	Field repairs of leaks must be made as follows:	1		,	
		(a) Replace by cutting out a cylinder and replace with pipe similar or of greater design.	X			
		(b)(1) Install a full encirclement welded split sleeve of an appropriate design unless the pipe is Joined by mechanical couplings and operates at less than 40% SMYS	X			
		(b)(2) A leak due to a corrosion pit may be repaired by installing a bolt on leak clamp	X			
		(b)(3) For a corrosion pit leak, if a pipe is not more than 40,000 psi SMYS, the pits may be repaired by fillet welding a steel plate. The plate must have rounded corners and the same thickness or greater than the pipe, and not more than %D of the pipe size.	<b>. x</b> .:			
		(b)(4) Submerged offshore pipe or pipe in inland navigable waterways may be repaired with a mechanically applied full encirclement split sleeve of appropriate design.		·	x	
		(b)(5) Apply reliable engineering method	<b>X</b> ≤			
		Testing of Repairs	[ ]			
	.719(a)	Replacement pipe must be pressure tested to meet the requirements of a new pipeline	X			
	(b)	For lines of 6-inch diameter or larger and that operate at 20% of more of SMYS, the repair must be nondestructively tested in accordance with §192.241(c)	X			

1

Comments: Transmission field repair procedures are addressed in UO S4134, GS&S A-60, A-60, I, A-60, 2, D-22, A-34, A-64, D-23, B-53, and D-40 (NDT).

T		ABANDONMENT OF DEACTIVATION OF PACILITIES PROCEDURES	S:	U	N/A	N/C
<b>L</b>	.727(6)	Operator must disconnect both ends, purge, and seal each end before abandonment or a period of deactivation where the pipeline is not being maintained. Offshore abandoned pipelines must be filled with water or an inert material, with the ends sealed.	x	- -		
	(¢)	Except for service lines, each inactive pipeline that is not being maintained under Part 192 must be disconnected from all gas sources/supplies, purged, and sealed at each end.	x			
ſ	(d)	Whenever service to a customer is discontinued, do the procedures indicate one of the following:				
÷		(1) The valve that is closed to prevent the flow of gas to the customer must be provided with a locking device or other means designed to prevent the opening of the valve by persons other than those authorized by the operator.			<b>x</b> .	
	and a second	(2) A mechanical device or fitting that will prevent the flow of gas must be installed in the service line or in the meter assembly		 	Ŋ	
ľ		(3) The customer's piping must be physically disconnected from the gas supply and the open pipe ends sealed			X	
	(e)	If air is used for purging, the operator shall ensure that a combustible mixture is not present after purging	X			
	.727 (g)	Operator must lile reports upon abandoning underwater facilities crossing navigable waterways, including offshore facilities: Amdt. 192-103 corr. pub 02/01/07, eff. 03/05/07.	x	- - -		

### Comments:

Unless otherwhe noted, all code references are in 49CFR Part 192. S - Salisfactory U-Unsatisfactory N/A - Not Applicable N/C - Not Checked: If an item is marked U, N/A, or N/C, an explanation must be included in this report.

### Comments:

WP 4100-11 Descrivation of Gas & Electric Facilities issued 10/2008 GS&S A-38 Procedures for Purging Gas Facilities WP 6435-04 Procedures for Discontinuing Gas Service

Transmission districts are not involved in deactivating customer services.

.605(b)	101-11	COMPRESSOR STATION PROCEDURES	S	U	N/A	N/C
	.605(b)(6)	Maintenance procedures, including provisions for isolating units or sections of pipe and for purging before returning to service	x			
	.605(b)(7)	Starting, operating, and shutdown procedures for gas compressor units	X			
*	.731	Inspection and testing procedures for remote control shutdowns and pressure relieving devices (1 per yr/15 months), prompt repair or replacement	x	<u> </u>		
	.735	(a) Storage of excess flammable or combustible materials at a safe distance from the compressor buildings	x			
<b>.</b>		(b) Tank must be protected according to NFPA #30: Amdt 192-103 pub. 06/09/06 eff. 07/10/06.	X			
	.7,16	Compressor buildings in a compressor station must have fixed gas detection and alarm systems (must be performance tested), unless:	- <b>X</b> :			
		<ul> <li>50% of the upright side areas are permanently open, or:</li> </ul>	X			
	1.54	- It is an unattended field compressor station of 1000 hp or less	X			

### Comments:

Compressor station procedures are contained in GS&S A-38, UO S4432, UO S4291, Compressor stations have individual Station Operating and Maintenance Procedures. WP 4430-02, S4431 now address 0.735

505(b)		PRESSURE LIMITING and RE	EGULATING STATION PROCEDURES	S.	υ	N/A	N/C
.73	,739(a)	Inspection and testing procedures for pr stations and equipment (1 per yr/15 mi	essure limiting stations, relief devices, pressure regulating on this)	X			
		(1) In good mechanical condition		X			
-	· · · · · · · · · · · · · · · · · · ·	(2) Adequate from the standpoint of c employed	apacity and reliability of operation for the service in which it is	x			
<b>.</b>	.739(a)	(3) Set to control or relieve at correct p 192-96 pub. 5/17/04, cff.10/8/04	pressures consistent with .201(a), except for .739(b). Amdu				
*		(4) Properly installed and protected fr	om din, liquids, other conditions that may prevent proper oper.	X	ľ.		
	.739(b)	For steel lines if MAOP is determined Amdt. 192-96 pub, 5/17/04, eff.10/8/04	per .619(c) and the MAOP is 60 psi (414 kPa) gage or more				
		If MAOP produces hoop stress that:	Then the pressure limit is:				l
		Is greater than 72 percent of SMYS	MAOP plus 4 percent	X.			
		Is unknown as a percent of SMYS	A pressure that will prevent unsafe operation of the pipeline considering its operating and maintenance history and MAOP				
	.743	Testing of Relief Devices		1			
*	.743	(a) Capacity must be consistent with .2 Amdt, 192-96 pub, 5/17/04, eff. 10	01(a) except for .739(b), and be determined 1 per yr/15 mo. //8/04	X.			-
	.743	(b) If calculated, capacities must be ca	ompared; annual review and documentation are required.	X			
	.743	(c) If insufficient capacity, new or ad	ditional devices must be installed to provide required capacity.	X	·		

Comments:

Unless otherwise noted, all code references are to 49CFR Part 192, S-Satisfactory U-Unsatisfactory N/A-Not Applicable N/C-Not Checked If an item is marked U, N/A, or N/C, an explanation must be included in this report.

Comments:

CES Std C-T & CS-S0351 District Regulator Station Maintenance;

COT Standard 4432 and COT Std S4433 Gas Pressure Relief Devices - Responsibility for Annual Inspection and Verification of Capacity);

G5&S 11-70 Pressure Relief Devices.

COT Std 4431 - Major Gas Facilities

(Note: During an audit; the inspector should ask transmission districts to identify its majore facilities considered per this standard.)

Standards review and confirmad as still apllicable during audit of 03/3009

.605(b)		VALVE AND VAULT MAINTENANCE PROCEDURES	S	UN	AN/C
		Valves			1 j
	.745	<ul> <li>Inspect and partially operate each transmission valve that might be required during an emergency (1 per yr/15 months)</li> </ul>	x		1
	.745	(b) Prompt remedial action required, or designate alternative valve,	X		
		Vaults	1		
	.749	Inspection of vaults greater than 200 cubic feet (1 per yr/15 months)	X		[

.605(b)		PREVENTION of ACCIDENTAL IGNITION PROCEDURES	<b>S</b> .	U	NAN
	.751	Reduce the hazard of fire or explosion by:			37.
		(a) Removal of Ignilion sources in presence of gas and providing for a fire extinguisher	X		
		(b) Prevent welding or cutting on a pipeline containing a combustible mixture	X		:
		(c) Post warning signs	X		-

Comments

Safety Health & Claims procedure 236, WP-4100-01, A-38

192,745-749 • UO Std S4446 Vault Inspection Procedures applies to both Transmission and Distribution; UO Std S4220 and WP S4430-04 Gas Valve Maintenance Requirements, applies to transmission and distribution.

0.1403	14 WHI	DCCDTHQ: M L: 44 14-041

13(c)	T		WELDING AND WELD DEFECT REPAIR/REMOVAL PROCEDURES	S	U	N/A	N/C
*		.225	a) Welding procedures must be qualified under Section 5 of API 1104 (19 <sup>th</sup> ed. 1999, 10/31/0], errata) or Section IX of ASME Boiler and Pressure Cade (2004 ed. including addenda through July 1, 2005) by destructive test. Arndt:192-94 pub. 6/14/04, cll, 7/14/04; Arndt, 192-103 pub 06/09/06, eff. 07/10/06;	×			
	Γ		b) Retention of welding procedure - details and test	X			
	T	Note: Alterna	te welding procedures criteria are addressed in API 1104 Appendix A, section A.3.	Γ			
*		227	a) Welders must be qualified by Section 6 of API 1104 (19 <sup>th</sup> ed. 1999, 10/31/01 errata) or Section IX of ASME Boiler and Pressure Code (2004 ed. Including addenda through July 1, 2005) Sec exception in .227(b). Andt. 192-94 pub. 6/14/04, eff. 7/14/04; Amdt. 192-103 pub. 06/09/06, eff. 07/10/06; Amdt. 192-103 corr. Pub 02/01/07 eff. 03/05/07.	ТХ С			
	ſ		b) Welders may be qualified under section 1 of Appendix C to weld on lines that operate at < 20% SMYS.			X	
	ſ	.329	<ul> <li>To weld on compressor station piping and components, a welder must successfully complete a destructive test</li> </ul>	X			
	ſ		b) Welder must have used welding process within the preceding 6 months	X			
	.[	, ·	c) A welder qualified under 227(a) -				
<b>.</b>		.229(c)	(1) May not weld on pipe that operates at ≥20% SMYS unless within the preceding 6 calendar months the welder has had one weld tested and found acceptable under the sections 6 or 9 of API Standard 1104; may maintain an ongoing qualification status by performing welds tested and found acceptable at least twice per year, not exceeding 7½ months; may not requalify under an earlier referenced edition. Arndr. 192-94 pub. 6/14/04, eff. 7/14/04.	X			

Unless inherwise noted, all code references are to 49CFR Part 192. S. Satisfactory. U. Unsatisfactory N/A. Not Applicable N/C-Not Checked If an item is marked U. N/A; or N/C; an explanation must be included in this report.

.13(c)	WELDING AND WELD DEFECT REPAIR/REMOVAL PROCEDURES	S	U	N/A	N/C
	(2) May not weld on pipe that operates at y 20% SMYS unless is tested in accordance with 229(c)(1) or regualifies under .229(d)(1) or (d)(2).	×			
*	(d) Welders qualified under :227(b) may not weld unless:				
	(1) Requalified within 1 year/15 months. or	x	T		
	(2) Within 712 manths but at least twice per year had a production weld pass a qualifying to:	at X	Γ	1	***
	.231 Welding operation must be protected from weather	X	T		
	.233 Miter joints (consider pipe alignment)	X			
	.235 Welding preparation and joint alignment	X	1		
*	.241 (a) Visual Inspection must be conducted by an individual qualified by appropriate training and experience to ensure: Amdt, 192-94 pub. 6/14/04, eff. 7/14/04	×	Γ		
	(1) Compliance with the welding procedure	X			*
	(2) Weld is acceptable in accordance with Section 9 of API 1104	X	ŀ	1	
	(b) Welds on pipelines to be operated at 20% or more of SMVS must be nondestructively tested in accordance with 192,243 except welds that are visually inspected and approved by a qualitied welding inspector if:	×			
ļ	(1) The nominal pipe diameter is less than 6 inches: or	X	ŀ		
	(2) The pipeline is to operate at a pressure that produces a hoop stress of less than 40% of SMYS and the wolds are so limited in number that nondestructive testing is impractical.	x			
*	.24) (c) Acceptability based on visual inspection or NDT is determined according to Section 9 of AP1 1104. If a girth weld is unacceptable under Section 9 for a reason other than a crock, and if. Appendix A to AP1 1104 applies to the weld, the acceptability of the weld may be further determined under that appendix. Amdt. 192-94 pub. 6/14/04, eff. 7/14/04.	x			
	Note: If the alternative acceptance criteria in API 1104 Appendix A are used, has the operator performed Engineering Critical Assessment (ECA)?	an			
	.245 Repair and Removal of Weld Defects				
	(a) Each weld that is unacceptable must be removed or repaired. Except for offshore pipelines, a weld must be removed if it has a crack that is more than 8% of the weld length.	×			• • •
	(b) Each weld that is repaired must have the defect removed down to sound metal, and the segment to be repaired must be preheated if conditions exist which would adversely affect the quality of the weld repair, After repair, the weld must be inspected and found acceptable.	x			
	(c) Repair of a crack or any other defect in a previously repaired area must be in accordance with a written weld repair procedure, qualified under §192.225	×			
	Note: Sleeve Repairs - use low hydrogen rod (Best Practices -ref. API 1104 App. B, In Service Wetding)				

Comments:

192,231, 192.233 - GS&S D-20 P.2

192.233 - OS&S A-36 P.6

192.241 - Welding, is addressed in GS&S D-40 and D-22.

192,245 - Repair and Removal of Weld Defect, is addressed in UO Std S4134 and GS&S D-30.

GS&S D-30 - Welder Qualification For Under 20% of SMYS

GS&S D-30.2 - Arc Welder Qualification For Working on Pipelines that Operate At Over 20% SMYS

GS&S D-22 Arc Welding Procedure Requirement All Stress Levels

GS&S A-36 Design Construction Requirements

.13(c)	1	NONDESTRUCTIVE-TESTING PROCEDURES	S	U	N/A	N/C
	.243	(a) Nondestructive testing of welds must be performed by any process, other than trepanning, that clearly indicates defects that may affect the integrity of the weld	x			
		(b) Nondestructive testing of welds must be performed:				
		(1). In accordance with a written procedure, and	X			
		(2) By persons trained and qualified in the established procedures and with the test equipment used	×			
		(c) Procedures established for proper interpretation of each nondestructive test of a weld to ensure acceptability of the weld under 192,241(c)	x			į.,

Unless otherwise noted, all code references are to 49CFR Port 192; S - Satisfactory U - Unvatisfactory N/A - Not Applicable N/C - Not Checked. If an item is marked U, N/A, or N/C, an explanation must be included in this report.

	NONDESTRUCTIVE TESTING PROCEDURES	S	U	N/AN/C
. :	(d) When nondestructive testing is required under §192.241(b), the following percentage of each day's field butt welds, selected at random by the operator, must be nundestructively tested over the entire circumference			
N	(1) In Class 1 locations at least 10%	X		
	(2) In Class 2 locations at least 15%	X	f	
	(3) In Class 3 and 4 locations, at crossings of a major navigable river, offshore, and within railroad or public highway rights-of-way, including tunnels, bridges, and overhead road crossings, 100% unless impractical, then 90%. Nondestructive testing must be impractical for each girth weld not tested.	X		
	(4) At pipeline tie-ins, 100%	X	1	
	(c) Except for a welder whose work is isolated from the principal welding activity, a sample of each welder's work for each day must be nondestructively tested, when nondestructive testing is required under §192.241(b)	X	1	
	(f) Nondestructive testing – the operator must retain, for the life of the pipeline, a record showing by mile post, engineering station, or by geographic feature, the number of welds nondestructively tested, the number of welds rejected, and the disposition of the rejected welds.	x	<b>1</b>	

### Comments:

US&S D-40 Weld Inspection

GS&S D-31 Standard of Acceptability for Welding; Non-dostructive and Destructive Testing

192.243(d)(1) - PG&E tests a minimum of 20% instead of 10% 192.243(d)(2) - PG&E tests a minimum of 20% instead of 15%

.273(b)			JOINING OF PIPELINE MATERIALS	S	U	N/A	N/C
	.281		loining of plastic pipe	F	<del>terente</del> Ae	, ,	
	<b></b>	ÿ	Type of plastic used	X			
	[		Proper markings in accordance with §192.63	X		1.	
		é	Manufactorer	X		:	
		*	Type of joint used	×		Ì	
*	.283		Qualified joining procedures for plastic pipe must be in place Amdt. 192-94 pub. 6/14/04. eff. 7/14/04; Amdt. 192-103 pub. 06/09/06, eff. 07/10/06.	x			ľ
: <b>*</b> .	,285		Persons making joints with plastic pipe must be qualified Amdt 192-94 pub. 6/14/04, eff. 7/14/04	X			
\$	.287		Persons inspecting plastic joints must be qualified Amdt 192-94 pub. 6/14/04, eff. 7/14/04	X			

### Comments:

OS&S A-90 Plastic Main and Service Installation

GS&S A-93 Polyethylene Pipe Specifications and Design Considerations

GS&S A93.1 Plastic Gas Distribution System Construction and Maintenance

GS&S D-34 Qualifications For Joining Plastic Pipes

GS&S D-21 Joining of Polyethylene Pipe

Reviewed and confirmed during 03/2009 audit that existing standards are still applicable.

.605(b)	T-	CORROSION CONTROL PROCEDURES	S	U	N/A	N/C
	.453	Are corrosion procedures established and carried out by or under the direction of a qualified person for:	1			*
	)	Design:	X			·
		• Operations	X			
	1	Installation	X			
`		Maintenance	X			
	.455	<ul> <li>(a) For pipelines installed after July 31, 1971, huried segments must be externally coated and</li> <li>(b) cathodically protected within one year after construction (see exceptions in code)</li> </ul>	x			

STANDARD INSPECTION REPORT OF A GAS TRANSMISSION PIPELINE Unless otherwise noted, all code references are to 490FB Part 192. S-Satisfactory U-Unsatisfactory N/A-Not Applicable N/C-Not Applicable N/C-Not C If an item is marked U, N/A, or N/C, an explanation must be included in this report. N/C - Not Chreked

		CORROSION CONTROL PROCEDURES	S	U	N/A	N/¢
1		(c) Aluminum may not be installed in a buried or submerged pipeline if exposed to an environment with a natural pH in excess of 8 (see exceptions in code).			x	
	.457	(a) All effectively obtained steel transmission pipelines installed prior to August 1, 1971, must be cathodically protected.	×			
		(b) If installed before August 1, 1971, eathodic protection must be provided in areas of active corrosion for: bare or ineffectively coated transmission lines, and bare or coated e/a, regulator sta, and meter stat piping.	. <b>X</b> .			
	.459	Examination of buried pipeling when exposed if corrosion is found, further investigation is required	X			
	.461	Procedures must address the protective coating requirements of the regulations. External coating on the steel pipe must meet the requirements of this part.	x			
	,463	Cathodic protection level according to Appandix D criteria	X			
	.465	(a) Pipe-to-soil monitoring (1 per yr/15 months) or short sections (10% per yenr, all in 10 years)	X			·
		(b) Rectificr monitoring (6 per yr/2 /2 months)	X		1	
		(c) Interference bond monitoring (as required)	X.			
		(d) Prompt remedial action to correct any deficiencies indicated by the monitoring	X			<b>—</b>
	.465	(e) Electrical surveys (closely spaced pipe to soil) on bare/unprotected lines, cathodically protect active corrosion areas (1 per 3 years/39 months).	X			
	.467	Electrical isolation (include casings)	X			
	,469	Sufficient test stations to determine CP adequacy	X			
	.471	Test leads	X			
	,473	Interference currents	X	1	1	
	.475	(a) Proper procedures for transporting corrosive gas?	1 2	1	X	F
		(b) Removed pipe must be inspected for internal corrosion. If found, the adjacent pipe must be inspected to determine extent. Certain pipe must be replaced. Steps must be taken to minimize internal corrosion.	x			
¥,	.176	Systems dusigned to reduce internal corrosion Final Rule Pub. 4/23/07. cft. 5/23/07. (a) New construction	X			
		(b) Exceptions - offshore pipeline and systems replaced before \$/23/07			X	
		(c) Evaluate impact of configuration changes to existing systems	X			
	.477	Internal corrosion control coupon (or other suit. Means) monitoring (2 per yr/7% months)	X			[
	.479	(a) Each exposed pipe must be cleaned and coaled (see exceptions under 479(c))	x	Ī	1	Γ
		Offshore splush zones and soil-to-air interfaces must be coated	x	Γ		Γ
		(h). Coating material must be suitable	X	1		Γ
		Coating is not required where operator has proven that corresion will:	1	<b>A</b>		
		(c) (1) Only be a light surface oxide, or	X	1	T	Γ
		(2) Not affect safe operation before next scheduled inspection	x	1	1	Γ
	.481	<ul> <li>(a) Atmospheric corrosion control monitoring (1 per 3 yrs/39 months onshore; 1 per yr/15 months offshore)</li> </ul>	x	1		
	.481	(b) Special attention required at solVair interfaces, thermal insulation, under distonded coating, pipe supports, splash zones, deck penetrations, spans over water.	x			
	.481	(c) Protection must be provided if atmospheric corrosion is found (per §192.479).	X			L
	.483	Replacement pipe must be coated and cathodically protected (see code for exceptions).	X			
	.485	(a) Procedures to replace pipe or reduce the MAOP if general corrosion has reduced the wall thickness?	x			
		(b) Procedures to replace/repair pipe or reduce MAOP if localized corrosion has reduced wall thickness (unless reliable engineering repair method exists)?	x	 		
		(c) Procedures to use Rstreng or B-31G to determine remaining wall strength?	X	L	ļ	l.
	.491	Corrosion control maps and record retention (pipeline service life or 5 yrs)	X		ľ	l

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Commentat

SB\_GT&S\_0679950

STANDARD INSPECTION REPORT OF A GAS TRANSMISSION PIPELINE Unless otherwise nuted, all code references are in 49CFR Part 192. S - Satisfactury U-Unsatisfactory N/A - Not Applicable N/C - Not O N/C - Not Cherked If an item is marked U, N/A, or N/C, an explanation must be included in this report.

### Comments:

Overall corrosion control procedures are contained in GS&S O-16, US S 4133, O-10 & A34, GS&S E-27, UO Std S4134, and UO Std S4126. Associated Stds D-10. D-10.1

.605(b)	ι ι	INDERWATER INSPECTION PROCEDURES - GULF of MEXICO and INLETS	S	U	NA	N/C
	,612(a)	Operator must have a procedure prepared by August 10, 2005 to identify pipelines in the Gulf of Mexico and its inlets in waters less than 15 feet (4.6 meters) deep that are at risk of being an exposed underwater pipeline or a hazard to navigation? Amdt. 192-98 pub. 8/10/04, eff. 9/9/04			x	
*	.612(h)	Operator must conduct appropriate periodic underwater inspections based on the identified risk Amdt. 192-98 pub.8/10/04, eff. 9/9/04			x	ŀ
	.612(c)	Do procedures require the operator to take action when the operator discovers that a pipeline is exposed on the scabed, or constitutes a hazard to navigation:			x	
	·	(1) Promptly, within 24 hours, notify the National Response Center of the location of the pipeline?			X	
		(2) Promptly, but not later than 7 days after discovery, mark the location of the pipeline in accordance with 33 CPR Part 64 at the ends of the pipeline segment and at intervals of not over 500 yards long, except that a pipeline segment less than 200 yards long need only be marked at the center?			₹.	
		(3) Place the pipeline so that the top of the pipe is 36 inches below the seabed for normal excavation or 18 inches for rock excavation within 6 months of discovery or not later than November 1 of the following year if the 6 month period is later than November 1 of the year the discovery is made? See code re: engineering alternatives, PHMSA notification.			x	

ſ	.801-	Subpart N — Qualification of Pipeline Personnel Procedures SUN	AN/C
	1047	Refer to Operator Qualification Inspection Forms and Protocols (OPS web site)	
*			,

.901-	Subpart O — Pipeline Integrity Management SUVNAN	<i>i</i> q
	This form does not cover Gas Pipeline Integrity Management Programs	

Subparts	PART 199 - DRUG and ALCOHOL TESTING REGULATIONS and PROCEDURES	sΰ	N/A N/C
A-C	Drug & Alcohol Testing & Alcohol Misuse Prevention Program - Use PHMSA Form # 13. PHMSA	×.	
	2008 Drug and Alcohol Program Check.		5. j

### Comments:

	PIPELINE INSPECTION (Field)		S	U	N/A	UN/C
.179	Valve Protection from Tampering or Damage		1	I	14	1
.463	Cathodic Protection		·.			
.465	Rectifiers				Π	
.476	Systems designed to reduce internal corrosion		ľ			
.479	Pipeline Components Exposed to the Atmosphere					
.60\$	Knowledge of Operating Personnel		ľ			· ·
612 (c) (2)	Pipelines exposed on seabed (Gulf of Moxico and Inlets): Marking			1		
613(b), 703	Pipeline condition, unsatisfactory conditions, hazards, etc.	1.2				
.707	ROW Markers, Road and Railroad Crossings		I			
.719	Pre-pressure Tested Pipe (Markings and Inventory)					
.7397.743	Pressure Limiting and Regulating Devicus (spot-check field installed equipment vs. inspection records)				17	

SB\_GT&S\_0679951

STANDARD INSPECTION REPORT OF A GAS TRANSMISSION PIPELINE. Unless otherwise noted, all code references are to 49 CFR Part 192. S. Satisfactory U-Umalisfactory N/A - Not Applicable N/C-Not C If an item is marked U, N/A, ar N/C, an explanation must be included in this report. N/C - Not Checked

	PIPELINE INSPECTION (Field)	S	U	N/A	N/C
.745	Valve Maintennace			¥	
.751	Warning Signs		T	T	[
801 - 809	Operator Qualification - Use PHMSA Form 15 Operator Qualification Field Inspection Protocol Purm			4	1.1

# Commentst

	COMPRESSOR STATIONS INSPECTION (Field) (Note: Facilities may be "GrandFathered")	8.	υ	N/A	N/(
.163 (c)	Main operating floor must have (at least) two (2) separate and unobstructed exits			4	
	Door latch must open from inside without a key	<b>†</b>		T	
	Duors must swing outward				
(d)	Each fence around a compressor station must have (at least) 2 gates or other facilities for emergency exit			1	
	Each gate located within 200 ft of any compressor plant building must open nutward	1		1	
	When accupied, the door must be opened from the inside without a key				
(e)	Does the equipment and wiring within compressor stations conform to the National Electric Code, ANSI/NFPA 70?		1		
165(a)	If applicable, are there liquid suparator(s) on the intuke to the compressors?				
165(b)	Do the liquid separators have a manual means of removing liquids?			1	
	If slugs of liquid could be carried into the compressors, are there automatic dumps on the separators, Automatic compressor shutdown devices, or high liquid level alarms?			.1	
167(8)	ESD system musti			· · ·	
e`	- Discharge blowdown gas to a safe location			4	
	- Block and blowdown the gas in the station				1.
	<ul> <li>Shut down gas compressing equipment, gas fires, electrical facilities in compressor building and near- gas headers</li> </ul>				, ,
	Maintain necessary electrical circuits for emergency lighting and circuits needed to protect     equipment from damage			.3	
	ESD system must be operable from at least two locations, each of which is:				
	- Outside the gas area of the station	L	<u> </u>	6	
	- Not more than 500 feet from the limits of the station				l
	- ESD switches near emergency exils?	L	<u> </u>		
167 (6)	For stations supplying gas directly to distribution systems, is the ESD system configured so that the LDC will not be shut down if the ESD is activated?		l	·Ļ	
167(c)	Are ESDs on platforms designed to actuate automatically by		e.	ė	· •
	- For unattended compressor stations, when:	1	<u>ر.</u>	·	- ا
	<ul> <li>The gas pressure equals MAOP plus 15%?</li> </ul>		L	*	L
	<ul> <li>An uncontrolled fire occurs on the platform?</li> </ul>	<u> </u>	L	7	[:
	For compressor station in a building, when				
	An uncontrolled fire occurs in the building?			F	
	<ul> <li>Gus in air reaches 50% or more of LEL in a building, with a source of ignition (facility conforming to NEC Class 1, Group D is not a source of ignition)?</li> </ul>				
.171(a)	Does the compressor station have adequate fire protection facilities? If fire pumps are used, they must not be affected by the ESD system.				
(b)	Do the compressor station prime movers (other than electrical movers) have over-speed shutdown?				
(c)	Do the compressor units alarm or shutdown in the event of inadequate cooling or lubrication of the unit(s)?	1		$ \mathcal{X} $	

STANDARD INSPECTION REPORT OF A GAS TRANSMISSION PIPELINE Unless otherwise auted, all code references are to 490CFB Purt 192; S - Satisfactory U - Uncalisfactory N/A - Not Applicable N/C - Not C N/C - Not Checked If an item is marked U. N/A. or N/C. on explanation must be included in this report-

	COMPRESSOR STATIONS INSPECTION (Field) (Note: Facilities may be "Grandfathered")	S	U	NÏÂ	N/C
(b)	Are the gas compressor units equipped to automatically stop fuel flow and vent the engine if the engine is stopped for any reason?			$\varphi$	
(*)	Are the mufflers equipped with vents to vent any trapped gas?				
,173	Is each compressor station building adequately ventilated?	T		Π	
.457	Is all buried piping cathodically protected?				
,481	Atmospheric corrosion of aboveground facilities	1	1	Π	
.603	Does the operator have procedures for the start-up and shut-down of the station and/or compressor units?	1		П	
	Are facility inaps current/up-to-date?	1	1	T	
.615	Emergency Plan for the station on site?	1			
,707	Markers	1		T	
.731	Overpressure protection - reliefs or shutdowns	1			
.73 \$	Are combustible materials in quantities exceeding normal daily usage, stored a safe distance from the compressor building?				
	Are aboveground oil or gasoline storage tanks protected in accordance with NFPA standard No. 30?			1	<i></i>
.736	Gas detection - location	[		4	

## Comments:

	CONVERSION TO SERVICE PERFORMANCE and RECORDS	S	U	NIA	N/C
.14 (a)(2)	Visual inspection of right of way, aboveground and selected underground segments	1	Τ	4	
(a)(3)	Correction of unsafe defects and conditions		1	11	
(a)(4)	Pipeline testing in accordance with Subpart J				1
(b)	Pipeline records: investigations, tests, repairs, replacements, alterations (life of pipeline)			Nr	·

	REPORTING PERFORMANCE and RECORDS		S	U	N/A	N/C
191 5	Telephunic reports to NRC (800-424-8802)		1	T	142	Τ
191 15	Written incident reports; supplemental incident reports (DOT Form RSPA F 7100.2)		1	t	Ħ	
191.17 (a)	Annual Report (DOT Form RSPA F 7100.2-1)		1	1		1
191,23	Safety related condition reports			ľ		T
191 27	Offshore pipeline condition reports				T	T
192.727 (8)	Abandoned facilities offshore, onshore crossing commercially navigable waterways reports		T	T	1.1-	1

	CONSTRUCTION PERFORMANCE and RECORDS			U	N/A	N/C
225	fest Results in Qualify Welding Procedures				$\boldsymbol{\gamma}_{i}$	
221	Welder Qualification				$\mathbf{r}$	Γ
241 (8)	Visual Weld Inspector Training/Experience					
243 (h)(2)	Nondestructive Technician Qualification					
(c)	NDT procedures				1	
(1)	Total Number of Girth Welds.	· · · · · · · · · · · · · · · · · · ·				
(1)	Number of Welds Inspected by NDT					ļ
(1)	Number of Welds Rejected				7	

STANDARD INSPECTION REPORT OF A GAS TRANSMISSION PIPELINE. I'nless otherwise noted, all code references are to 1900'R Part 192. S. Sutisfactory. U-Unsatisfactory. N/A - Not Applicable. N/C - Not C If an item is marked U. N/A, or N/C, an explanation must be included in this report. N/C - Not Checked

	CONSTRUCTION PERFORMANCE and RECORDS		U	N/A	N/C
(1)	Disposition of each Weld Rejected			x	
303	Construction Specifications			3	
325	Underground Clearance	1		f	
.327	Amount. Location, Cover of each Size of Pipe Installed	1	1	1	·
.328	If the pipeline will be operated at the alternative MAOP standard calculated under 192,620 (80% SMYS) does it meet the additional construction requirements for: Quality assurance, Girth welds, depth of cover, initial strength testing, and interference currents?				
.455	Cathodic Protection	T	1	<i>'</i> '	·

	OPE	RATIONS and MAINTENANCE PERFORM	ANCE and RECORDS	S	U	N/A	N/C
16		Customer Notification (Verification - 90 days - and Elements)				4	
603(b)	.605(a)	Procedural Manual Review - Operations and Mainter	rocedural Manual Review - Operations and Maintenance (1 per yr/15 months)				
603(b)	.605(c)	Abnormal Operations				Π	
603(b)	.605(b)(3)	Availability of construction records, maps, operating	lability of construction records, maps, operating history to operating personnel				T
603(b)	.605(b)(8)	Periodic review of personnel work - effectiveness of	normal O&M procedures			n –	1
603(b)	.605(c)(4)	Periodic review of personnel work - effectiveness of	odic review of personnel work - effectiveness of abnormal operation procedures				t
709	.609	Class Location Study (If Applicable)	**************************************			11	1
603(b)	.612(b)	Gulf of Mexico/inlets: Periodic underwater inspection	ns based on the identified risk			<b></b>	
709	.614	Damage Prevention (Miscellaneous)			<u> </u>	╞╬╾	1
603(b)	.615(b)(1)	Location Specific Emergency Plan	and the second		┝──	1	┢
603(b)	.615(b)(2)	Emergency Procedure training, verify effectiveness o	f tealistate		┟────		+
<u></u>					<u> </u>	$\vdash$	<u> </u>
603(b)	.615(b)(3)	Eniployee Emergency activity review, determine if p	roccaures were lollowed.		<u> </u>		┨──
603(b)	.615(c)	Liaison Program with Public Officials	ىرىمىيە يېرىمىيە يېرى		<u> </u>	<u> </u>	<u> </u>
603(b)	.616 .616(e & f)	Public Awateness Program Documentation properly and adequately reflects impl	ementation of operator's Public Awareness.		r –	ŀ	T.
		emergency responder, public officials, school superi	atondanta menaram augliintinae ato 1 Capitak			1	1
		below: API RP 1162 Baseline* Recommende	ed Message Deliveries		L	<u>l,</u>	Ļ
		below; API RP 1162 Baseline* Recommende Stakeholder Audience (Natural Gas Tran	ed Message Deliveries similation Line Operators)			<b>I</b> ,	<u> </u>
4	Res	below: API RP 1162 Baseline* Recommende	ed Message Deliveries ismission Liae Operators) Baseline Message Frequency			<b>I</b>	
<i>2</i> ,-		below: API RP 1162 Baseline* Recommende Stakeholder Audience (Natural Gas Tran dents Along Right of Way and Places of Congregation	ed Message Deliveries ismission Line Operators) Baseline Message Frequency (starting from effective date of Plan)			<b>I</b>	<b>I</b>
\$÷	Ems	below: API RP 1162 Baseline* Recommende Stakeholder Audience (Natural Gas Tran dents Along Right-of-Way and Places of Congregation rgency Officials	ed Message Deliveries ismission Liae Operators) Baseline Message Frequency		1.	<b>I</b>	•
÷	Eme	below: API RP 1162 Baseline* Recommende Stakeholder Audience (Natural Gas Tran dents Along Right of Way and Places of Congregation	ed Message Deliveries ismission Line Operators) Baseline Message Frequency (starting from effective date of Plan) 2 years		· · · · · · · · · · · · · · · · · · ·	<u> </u>	•
ан	Eme Pub Exc	below: <u>API RP 1162 Baseline* Recommende</u> <u>Stakeholder Audience (Natural Gas Tran</u> dents Along Right-of-Way and Places of Congregation rgency Officials ic Officials	ed Message Deliveries ismission Line Operators) Baseline Message Frequency (starting from effective date of Plan) 2 years Annual				
÷.	Eine Pub Exc: One	below: API RP 1162 Baseline* Recommende Stakeholder Audience (Natural Gas Tran dents Along Right of Way and Places of Congregation rgency Officials lic Officials swator and Contractors -Call Centers takeholder Audience (Cathering Line Operators)	d Message Deliveries smission Line Operators) Baseline Message Frequency (starting from effective date of Plan) 2 years Annual 3 years Annual As required of One-Call Center				
ан	Eme Pub Exc Onc S Res	below: API RP 1162 Baseline* Recommende Stakeholder Audience (Natural Gas Tran dents Along Right of Way and Places of Congregation rgency Officials ic Officials ivator and Contractors -Call Centers takeholder Audience (Gathering Line Operators) dents and Places of Congregation	d Message Deliveries smission Line Operators) Baseline Message Frequency (starting from effective date of Plan) 2 years Annual 3 years Annual As required of One-Call Center Baseline Message Frequency				
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۵.	Ems Pub Exc: Onc S Resi Emt Pub	below: API RP 1162 Baseline* Recommende Stakeholder Audience (Natural Gas Tran dents Along Right of Way and Places of Congregation rgency Officials ic Officials ivator and Contractors -Call Centers takeholder Audience (Gathering Line Operators) dents and Places of Congregation rgency Officials ic Officials	d Message Deliveries smission Line Operators) Baseline Message Frequency (starting from effective date of Plan) 2 years Annual 3 years Annual As required of One-Call Center Baseline Message Frequency Annual Annual				
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STANDARD INSPECTION REPORT OF A GAS TRANSMISSION PIPELINE Unless utherwise nuted, all code references are to 490 CFR Part 192. S - Satisfactory. U-Unsatisfactory. N/A - Not Applicable N/C = Not C If an item is marked U, N/A, or N/C, an explanation must be included in this report. N/C = Not Checked

	OPERATIONS and MAINTENANCE PERFORMANCE and RECORDS						NIA	N/C
553(h)		Uprating		an disk yn gelyn gan gan gan gan gan gan gan gan gan ga	T	T	X	
709	.6197.620	Maximum Allowable (	Operating Pressure (MAOP)		1	T	fΤ	
709	.625	Odorization of Gas	**************************************		1	T	TΤ	
.709	,705	Patrolling (Refer to Th	nble Below)		1		1.1	
*	<u> </u>	Class Location	At Highway and Railroad Crossings	At All Other Places	1			
	1	l and 2	2/yr (7% months)	l/yr (15 months)	<u></u> . т			
		3	4/yr (41/2 months)	2/yr (7% months)				
	Ĺ	4	4/yr (4% months)	4/yr (41/2 months)	}	,-		
,109	.706	Leak Surveys (Refer 1	o Table Below)				3	Ĺ
		Class Location	Required	Not Exceed	1			
		I and 2	l/yr	15 months	-			
		3	2/yr*	7½ months	1			
	-	4	4/98*	4% months				
	Leak	detector equipment su	rvey required for lines transporting un-odorized ga	\$				
.709	.731(a)	Compressor Station R	clicf Devices (1 per yr/15 months)		T	T	K	T
.709	.731(c)	Compressor Station Er	mergency Shutdown (1 per yr/15 months)	,	1	T	11	
.709	.736(c)	Compressor Stations.	Detection and Alarms (Performance Test)		1.	T	TT	1
709	739	Pressure Limiting and	Regulating Stations (1 per yr/15 months)		1	ŀ	11	
.709	.743	Pressure Limiting and	Regulator Stations - Capacity (1 per yr/15 month	iś) ·	1	t	Ħ	
.709	.745	Valve Maintenance (1	per yr/15 months)		1	$\square$	TT	1
.709	.749	Vault Maintenance (2	200 cubic feet)(1 per yr/15 months)		1	1	$\mathbf{t}$	+
.603(b)	.751	Prevention of Acciden	tal Ignition (hot work permits)		T		Ti	1
.60.Hb)	.225(b)	Welding - Procedure			T	T	Π	T
603(h)	.227/.229	Welding - Welder Qu	alification		T	T	T	T
.603(b)	.243(b)(2)	NDT - NDT Personne	l Qualification	an a stand and a stand a st	1	T.	TT	T.
.709	.243(t)	NDT Records (Pipeli)	ne Lile)		T	T	Π	T
.709	Repair: pipe	(Pipeline Life): Other 1	nan pipe (5 years)	······································	1	T	V	1
			۵۰۰۰ - ۲۰۰۰ -					
Comment	5:							
			×					

		CORROSION CONTROL PERFORMANCE and RECORDS	S	.U	N/A	N/C
.453	CP procedu	ires (system design, installation, operation, and maintenance) must be carried out by qualified personnel			4	<b>[</b>
491	.491(a)	Maps or Records			Π	
491	.459	Examination of Buried Pipe when Exposed			T.	
491	.465(a)	Annual Pipe-to-soil Monitoring (1 per yr/15 months) or short sections (10 % per year, all in 10 years)				
491	.465(b)	Reclifier Monitoring (6 per yr/21/2 months)				
.491	.465(c)	Interference Bond Monitoring - Critical (6 per yr/21/2 months)	Π		i	
491	.465(c)	Interference Bond Monitoring - Non-critical (1 per yr/15 months)				
.491	.465(d)	Prompt Remedial Actions			i	
.491	.465(c)	Unprotected Pipeline Surveys. CP active corrosion areas (1 per 3 cal yr/39 months)	1		14	<u> </u>

STANDARD INSPECTION REPORT OF A GAS TRANSMISSION PIPELINE Unless otherwise moted, all code references are to 49CFR Part 192. S - Satisfactory D-Unsatisfactory N/A - Not Applicable N/C - Not C If an item is marked U, N/A, or N/C, an explanation must be included in this report. N/C - Not Cheeked

;		CORROSION CONTROL PERFORMANCE and RECORDS	S	υ	NI	AN/C
.491	.467	Electrical (solation (Including Casings)			×	
491	.469	Test Stations - Sufficient Number			T	
.491	.471	Test Leads	*****		Π	
.491	473	Interference Currents	i		Π	T
491	.475(a)	Internal Corrosion; Corrosive Gas Investigation	•		Π	
.491	.475(b)	Internal Corrosion: Internal Surface Inspection: Pipe Replacement				
-491:	.476 (d)	Internal Corrosion; New system design; Evaluation of impact of configuration changes to existing systems			Π	
491	.477	Internal Corrosion Control Coupon Monitoring (2 per yr/71/2 months)			Π	
,491	.481	Atmospheric Corrosion Control Monitoring (1 per 3 cal yr/39 months onshore; 1 per yr/15 months offshore)			Π	
491	.483/.485	Remedial: Replaced or Repaired Pipe: coated and protected; corrosion evaluation and actions			1	

Comments:

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Leave this list with the operator.

# Recent PHMSA Advisory Bulletins (Last 2 years)

Number	Date	Subject
ADB-07-01	April 27, 2007	Pipeline Safety: Senior Executive Signature and Certification of Integrity
	· · · · · · · · · · · · · · · · · · ·	Management Program Performance Reports
ADB-07-02	September 6, 2007	Pipeline Safety: Updated Notification of the Susceptibility to Premature
		Brittle-Like Cracking of Older Plastic Pipe
ADB-07-02	February 29, 2008	Correction - Pipeline Safety: Updated Notification of the Susceptibility to
		Premature Brittle-Like Cracking of Older Plastic Pipe
ADB-08-01	May 13, 2008	Pipeline Safety - Notice to Operators of Gas Transmission Pipelines on the
	* . *	Regulatory Status of Direct Sales Pipelines
ADB-08-02	March 4, 2008	Pipeline Safety - Issues Related to Mechanical Couplings Used in Natural Gas
		Distribution Systems
ADB-08-03	March 10, 2008	Pipeline Safety - Dangers of Abnormal Snow and Ice Build-Up on Gas
		Distribution Systems
ADB-08-04	June 5, 2008	Pipeline Safety - Installation of Excess Flow Valves into Gas Service Lines
ADB-08-05	June 25, 2008	Pipeline Safety - Notice to Hazardous Liquid Pipeline Operators of Request for
		Voluntary Adv Notification of Intent To Transport Biofuels
ADB-08-06	July 2, 2008	Pipeline Safety - Dynamic Riser Inspection, Maintenance, and Monitoring
	<b>₹</b> ∢ %8	Records on Offshore Floating Facilities

For more PHMSA Advisory Bulletins, go to http://ops.dot.gov/regs/advise.htm

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Form 1 Standard Inspection Report of a Gas Transmission Pepeline (Rev. 03/23/09 through Final Rule of 1G January 2009)



A completed Standard Inspection Report is to be submitted to the Director within 60 days from completion of the inspection. A Post Inspection Memorandum (PIM) is to be completed and submitted to the Director within 30 days from the completion of the inspection, or series of inspections, and is to be filed as part of the Standard Inspection Report.

Inspection Report	Post Inspection Memoran	ıdum
Inspector/Submit Date:	Inspector/Submit Date: Peer Review/Date: Director Approval/Date:	
POST INSPECT	TION MEMORANDUM (PIM)	
Name of Operatori Pacific Gas and Electric Company		OPID #: 15007
Name of Unit(s): All PO&E Distribution and Transmi	śsion	Unit #(s):
Records Location: San Francisco, California		
Unit Type & Commodity: Distribution with some transn		·····
Inspection Type:		arch 3-5, 2009
PHMSA Sunil Shori, Ivan Garcia, Steve Representative(s):	Artus, and Terence Eng	AFO Days: 3

### Summary:

This report is a centralized audit of documents that form Pacific Gas & Electric Company's (PQ&E) Operations, Maintenance, and Emergency Plans. This audit examined gas distribution and transmission related standards; however, only distribution related findings are included in this report (transmission findings are in another report).

The findings from this audit will be resolved and a tempelate for subsequent audits will be created based on the findings of this audit. The template will be used as the USRB inspection Form for audits of PG&E conducted until PHMSA next revises this form.

**Findings**:

The findings are as noted throughout this report. A written report noting the findings will be sent to the operator.

From 2 Standard Incontining Report of a Oas Distribution Operator (Rev. 03/23/09 through Final Rule of 16 January 2009)

Nume of Operator:	Pacific Gas and Electric Comp	pany	
DP ID No. <sup>(1)</sup>		Unit ID No. <sup>(I)</sup>	
IQ Address:		System/Unit Name &	& Address: (1)
77 Beale Street		123 Mission Street	•
San Francisco, CA	1	San Francisco, CA	
Co. Official:		Activity Record ID.	Nó.:
Phone No.:	x	Phone No.:	
Fax No.t		Fax No.:	
Emergency Phone No.:	·	Emergency Phone N	10.:
Persons Interview		Title	Phone No.
Lawrence M. Be	78	Senior Gas Engineer	
Edward Chun	Consi	Iting Senior Gas Engineer	
Brian J. Leary		ias Standards Manager	
· · ·			
·			
·			
PHMSA Representative(s	) <sup>(I)</sup> Ins	spection Date(s) (1)	
Company System Maps (C		MAPS OBTAINED DURING	AUDIT

Unit Description

Documents related to entire PG&E gas system

Portion of Unit Inspected: <sup>(1)</sup> Documents related to entire PG&E gas system

For gas transmission and distribution pipeline inspections, the attached evaluation form should be used in conjunction with 49CFR Parts 191 and 192.

Information not required if included on page 1.

2

Farm & Standard Incometion Research of a Clar Distribution Concessor (Dec. 03/03400 Electrol, First Public of 16 January 2000)

Unless otherwise noted, all code references are in 49CFR Part 192. S-Satisfactury U-Unsatisfactory N/A - Not Applicable N/C - Not Checked If an item is marked U, N/A, or N/C, an explanation must be included in this report.

	GAS SYSTEM OPERATION	IS			,
Gas Supplier N/A	Date;	· · · · · · · · · · · · · · · · · · ·			
Unaccounted for Gast	Servicent	Residential	Conunercial	Industrial	Other
Operaling Pressure(s):	MAOP (Within last year)		Actual O	perating Pressing of the section of	ure
Feeders	al				
Toivn:	<u>1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -</u>		······	//	
Other:	erranı ya wa da sheka Grayan ya ya ka ya ka	·	·····		
Does the operator have any transmission pipelines?				, <b>19. (* 18</b> 14), 19. (* 19. (* 19. (* 19. (* 19. (* 19. (* 19. (* 19. (* 19. (* 19. (* 19. (* 19. (* 19. (* 19	
For compressor station inspections, use Attachment 4.					

## 49CFR PART 191

	REPORTING PROCEDURES	Ś	.U	N/AN/C
.605(b)(4)	Procedures for gathering data for incident reporting		n gewinnen	
	191.5 Telephonically reporting incidents to NRC (800) 424-8802	X	T	
	191.15(a) 30-day follow-up written report (Form 7100-2)	X		
	191,15(b) Supplemental report (to 30-day follow-up)	X		
.605(a)	191.23 Reporting safety-related condition (SRCR)	X		
	191.25 Filing the SRCR within 5 days of determination, but not later than 10 days after discovery	X		
.605(d)	Instructions to enable operation and maintenance personnel to recognize potential Safety Related Conditions	X	T	

Comments:

PG&E's reporting procedures are addressed in UO Std S4413,

### 49CFR PART 192

.13(c)		CUSTOMER AND EFV INSTALLATION NOTIFICATION PROCEDURES	S	U	N/A	N/C
	.16	Procedures for notifying new customers, within 90 days, of their responsibility for those selections of service lines not maintained by the operator.	X			
	.381	If EFVs are installed, they must meet the performance requirements of § 192.381	X	· · ·		· ·
	.383	If the operator has a voluntary installation program for excess flow valves, the program must meet the requirements outlined in § 192.383.	x			
	.383	If the operator does not have a voluntary program for EFV installations, customers must be notified in accordance with §192 383.	11		x	

.605(a)		NORMAL OPERATING and MAINTENANCE PROCEDURES	S	UN	IA	N/C
	.605(a)	O&M Plan review and update procedure (1 per year/15 months)	X		Ť	·
	,605(b)(3)	Making construction records, maps, and operating history available to appropriate operating personnel	X			
	.605(b)(5)	Stort up and shut down of the pipeline to assure operation within MAOP plus allowable buildup	X		T	
	.605(b)(8)	Periodically reviewing the work done by operator's personnel to determine the effectiveness and adequacy of the procedures used in normal operation and maintenance and modifying the procedures when deficiencies are found	X			
	.603(b)(9)	Taking adequate precautions in excavated trenches to protect personnel from the hazards of unsafe accumulations of vapors or gas, and making available when needed at the excavation, emergency rescue equipment, including a breathing apparatus and a rescue harness and line	x			

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	NORMAL OPERATING and MAINTENANCE PROCEDURES	S	U	N/A	N/C
•	.605(b) '0) Routine inspection and testing of pine-type or bottle-type holders	X			
	.605(b)(11) Responding promptly to a report of a gas odor inside or near a building, unless the operator's	x			
	emergency proced under § 192.615(a) specifically apply to these reports.	L	L.	أستحرا	

### Comments:

Procedures for 192.16 are in WP 5449-04. DCS Std D-S0423, which provides 192.16 notice to customers when work takes place, superceded by WP 5449-02. Standard A-93.3 disallows EPVs for 1/4" CTS because no EFV available for 1/4" (e-mail provided noting this fact).

192,605(a) WP 4000-02 established in 09/2008, 192,605(b)(3)--UO Standard S0470 192,605(b)(5) -- S4125 192,605(b)(8) 1Q1 and PO&E's Quality Assurance Program 192,605(b)(9) -- WP 4414-04 & S4415 192,605(b)(10) -- S4345, S4414-04, and S4411

S0470 (Design & Construction Standards) GS&S A93.3 Excess Plow Valves voluntary installation program;

192.605(b)(11) addressed in Company Gas Emergency Procedures (CGEP) Part 1 Section 5.8

.605(#)		CHANGE IN CLASS LOCATION PROCEDURES	S	U	N/A	N/C
	.609	Class location study	X			
	.611	Confirmation or revision of MAOI	X			

### Comments:

UO Stondard 4127 (This was shown as S4126 in Brian Leary's spreadsheet)-

.613	l .	CONTINUING SURVEILLANCE PROCEDURES	S	U	N/A	N/C
	.613(a)	Procedures for surveillance and required actions relating to change in class location, failures, leakage history, corrosion, substantial changes in CP requirements, and unusual operating and maintenance conditions	×			•
	.613(b)	Procedures requiring MAOP to be reduced, or other actions to be taken, if a segment of pipeline is in unsatisfactory condition	x			L

### Comments:

UO Std S4127; UO Std S4111 Patrolling of Pipelines and Mains; UO Std S 03 50/S4110 Leak Survey and Repair; GS&S O-16 and UO Std S4133 Corrosion Control Distribution and Transmission Pipelines; UO Std S2333 Material Problem Reporting; UO Std S4413 CPUC Curtailments; UO Std S0353 Physical Inspection of Mains and Pipeline Services; GS&S A93.1 Plastic Gas Distribution System Construction and Maintenance.

192,613(b) - UO Std S4134 (DM-Tab A) -- Raviewed during 03/2009 audit and confirmed that same standards apply; These may change as PG&E completees review of standard and transitions to new format.

.605(a)	DAMAGE PREVENTION PROGRAM PROCEDURES	S	U N/AN/
	.614(c) Participation in a qualified one-call program, or if available, a company program that complies with the following:	Ĺ	
	(1) Identify persons who engage in excavating	X	,

### 4 :

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	DAMAGE PREVENTION PROGRAM PROCEDURES	S	U	N/A	N/C
	(2) Provide notification to the public in the One Call area	X			
	(3) Provide means for receiving and recording notifications of pending excavations	X		1	
	(4) Provide notification of pending excavations to the mombers	X		T	
	(5) Provide means of temporary marking for the pipeline in the vicinity of the excavations	X		ľ	
· .	(6) Provides for follow-up inspection of the pipeline where there is reason to believe the pipeline could be damaged	X			
	(i) Inspection must be done to verify integrity of the pipeline	X			
	(ii) After blatting, a leak survey must be conducted as part of the inspection by the operator	X		ŀ	

### Comments:

UO Standard S4412 Protection of Underground Infrastructure PG&E Manual titled "Protection of Underground Infrastructure" UO-S4412 (TS); UO S4114 (DM-Tab A) addresses leak survey requirement following blasting. Gas Information Bulletin 151 - Rev. 2 addresses 192.614(c)(6)

.615		EMERGENCY PROCEDURES	S.	U	N/A	N/C
	.615(a)(1)	Receiving, identifying, and classifying notices of events which require immediate response by the operator	X.			
615	.615(a)(2)	Establish and maintain communication with appropriate public officials regarding possible emergency	X			
	.615(a)(3)	Printipl response to each of the following emergencies:				
		(i) Gas detected inside a building.	X			
		(ii) Fire located near a pipeline	X			
		(iii) Explosion near a pipeline	x			ļ
		(iv) Natural disaster	x		<b>[</b>	
	615(a)(4)	Availability of personnel, equipment, instruments, tools, and material required at the scene of an emergency	x			
	.615(a)(5)	Actions directed towards protecting people first, then property.	X			
	.615(a)(6)	Emergency shutdown or pressure reduction to minimize hazards to life or property	, <b>X</b>			
	.615(a)(7)	Making safe ony actual or potential hazard to life or property.	X			1
	.615(a)(8)	Notifying appropriate public officials required at the emergency scene and coordinating planned and actual responses with these officials	x			
	.615(a)(9)	Instructions for restoring service outages after the emergency has been rendered safe	X			
	.615(a)(10)	Investigating accidents and failures as soon as possible after the emergency	X			ŀ
	.615(b)(1)	Furnishing applicable portions of the emergency plan to supervisory personnel who are tesponsible for emergency action	X			
	,615(b)(2)	Training appropriate employees as to the requirements of the emergency plan and verifying effectiveness of training	X		:	
	.615(b)(3)	Reviewing activities following emergencies to determine if the procedures were effective	X			
	.615(c)	Establish and maintain liaison with appropriate public officials, such that both the operator and public officials are aware of each other's resources and capabilities in dealing with gas emergencies	x			

### Comments:

PG&E's Emergency Plan consists of 2 parts: (1) Basic Plan (company-wide) and (2) Appendix which contains the Division-specific portion. Each division or district is responsible for updating their own bindets including any changes received on the company-wide plan and the division-specific plan. The Basic Plan/company-wide plan is reviewed by PG&E's SME by 8/31 of each year. Personnel that may be involved in emergency response are required to do an initial and subsequent training and evaluation. Additionally, personnel are required to take a computer-based examination on emergency procedures to stay informed of any recent changes in the

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Unless otherwise noted, all code references are to 49CFH Part 192. S - Satisfactory, U - Unsatisfactory N/A - Not Applicable N/C - Not Checked If an item is marked U, N/A, or N/C, an explanation must be included in this report.

### Comments: plan.

UO Std S6434 Gas Leak and Odor Response contains PG&E standards for investigating leak and odor complaints within a customer's premises.

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		PUBLIC A WARENESS PROGRAM PROCEDURES (Also in accordance with API RP 1162)	6	U	N/A	Ŋ/C
.605(a)	.616	Public Awareness Program also in accordance with API RP 1162 (Amdt 192-99 pub. 5/19/05 eff. 06/20/05 and Amdt 192-not numbered pub 12/13/07 eff. 12/13/07).	1			
e.	.616(d)	The operator's program must specifically include provisions to educate the public, appropriate government organizations, and persons engaged in excavation related activities on:				
		(1) Use of a one-call notification system prior to excavation and other damage prevention activities;	Υ.			
		(2) Possible bazards associated with unintended releases from a gas pipeline facility:	S.			
		(3) Physical indications of a possible release:	- <b>X</b> .			
•		(4) Steps to be taken for public safety in the event of a gas pipeline release: and	X			
		(5) Procedures to report such an event (to the operator).	×.			
	.616(e)	The operator's program must include activities to advise affected municipalities, school districts, businesses, and residents of pipeline facility locations.	S			
<b>1</b> .	.616(f)	The operator's program and the media used must be comprehensive enough to reach all areas in which the operator transports gas.	x			1
	.616(g)	The program must be conducted in finglish and any other languages commonly understood by a significant number of the population in the operator's area?	N.	·		
	.616()}	Operators of a master meter or petroleum gas systems (unless the operator transports gas as a primary activity) must develop/implement a written procedure to provide its customers public awareness messages twice annually that includes. (1) A description of the purpose and reliability of the pipeline: (2) An overview of the hazards of the pipeline and prevention measures used: (3) Information about damage prevention: (4) How to recognize and respond to a leak; and (5) How to get additional information.			X	
		(See this subpart for requirements for master meter or petroleum gas system operators not located on property controlled by the operator.)				

### Comments:

PG&E's submitted its PAP into the USDOT Clearinghouse. The USRB received the results of the Clearinghouse's review and has worked with PG&E to resolve the issues noted by the Clearinghouse. Safety, Health, and Claims 103 addresses PO&E's PAP. Mastermeter section (616(j) is not applicable to PG&E since it does not opearte master-meter systems.

617	· .	FAILURE INVESTIGATION PROCEDURES	S	U	N/A	N/C
	.617	Analyzing accidents and follures including laboratory analysis where appropriate to determine cause and prevention of recurrence	×			ļ.
Commi WP 14		vent and Near Hit Reporting issued 3/2008.				<u>Ensteinikkeren</u>
Firm ) Sec	nderd to consultance	6.				haf di <sup>sa</sup> la di sa

Unless otherwise noted, all code references are to 49 CFR Part 192. S - Sulisfactory II - Unsathifactory N/A Not Applicable N/C - Not Checked If an item is marked U, N/A; or N/C, an explanation must be included in this report.

.605(a)		MAOP PROCEDURES			S	Ü	N/A	N/C
	.619	Establishing MAOP so that it is commensurate with the class loc	ation		X	[	1	1
		MAOP cannot exceed the lowest of the following:			1	<b>.</b>		
		(a)(1) Design pressure of the weakest element	· · · ·		X	T <sup>ar</sup>	ľ	T
j05(a)		(a)(2) Test pressure divided by applicable factor		den erden er an ander an	X		1	
÷		(a)(3) The highest actual operating pressure to which the segmen years preceding the applicable date in second column, unless the .619(a)(2) after the applicable date in the third column or the seg K.	segment was les	ted according to				
		Pipeline segment	Pressure date	Test date		{		
<b>,</b> ,		ore transmission line that was a gathering line not subject to this part: re March 15, 2006.	March 15, 2006, or date line becomes subject to this part, whichever is later;	S years preceding applicable date in second column.	×		service and the service of the first of an and the descent processing service and the service of the	Na da se
	All oth	er pipelines.	July 1, 1970.	July 1, 1965.				
		(a)(4) Maximum safe pressure determined by operator.		<del></del>	X		<del> </del>	<u></u>
		(b) Overpressure protective devices must be installed if .619(a)(4)	is applicable	10. Muunuu uu u	X		1	T
		(c) The requirements on pressure restrictions in this section do a operator may operate a segment of pipeline found to be in operating and maintenance history, at the highest octual operati subjected during the 5 years preceding the applicable date in the (a)(3) of this section. An operator must still comply with § 192.61	satisfactory con ng pressure to w second column ut	dition, considering its high the segment was	. <b>X</b> 12			-
š	.621	MAOP - High Pressure Distribution Systems Note: New PA-11 design criterin is incorporated into 192.121 & 2008)	& .123. (Final Ri	lle Pub. 24 December.	X			
	.623	Max/Min. Allowable Operating Pressure - Low Pressure Distrib	ution Systems	·	X			

### Comments:

DCS Standard D-S0430, GTS Std S4125, GS&S A-34,

For low pressure distribution systems installed prior to July 1, 1970 MAOP is established as 150% of Standard Delivery Pressure of 7 inches w.c., the MAOP is 10-1/2 inches w.c. The form, "Establishing MAOP, exhibit A", and its use needs to be referenced in DCS/GTS Standard D-S0430

.13(c)	PRESSURE TEST PROCEDURES	S	U	N/A	N/C
	.S03 Pressure testing	 x	,		

### Comments:

GS&S A-34 Piping Design and Test Requirements, Attachment A - Test Requirements, Table A	<b>-</b> ].
--	-------------

.605(a)		ODORIZATION of GAS PROCEDURES	S	U	N/A	N/C
	.625(a)	Distribution lines must contain odorized gas must be readily detectable by person with normal sense of smell at "s of the LEL.	X			
	.625(b)	Odorized gas in Class 3 or 4 locations (if applicable).	X	[	Γ	ľ
	.625(1)	Periodic gas sampling, using an instrument capable of determining the percentage of gas in air at which the odor becomes readily detectable.	X			

Comments:

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Unluss otherwise noted, all code references are to 49CPR Part 192, S - Salisfactury G - Vessatisfactory N/A - Not Applicable N/C - Not Checked If on item is marked U, N/A, or N/C; an explanation must be included in this report.

### Comments:

UO Std S4350, Gas odor detection at 0.6% gas in air or less.

Periodic sampling is done monthly and recorded on Monthly Odorization Report (Form 62:4650).

.605(a)		TAPPING PIPELINES UNDER PRESSURE PROCEDURES	8	U	N/A	N/C
	.627	Hot taps must be made by a qualified crow-				
		NDT testing is suggested prior to topping the pipe. Reference API RP 2201 for Best Practices.	X			

### Comments:

GS&S C-38 Plastic Lateral Connection, Hot Tap Procedure.

\*\*PG&E has not examined API RP 2201 for possible use in its practices \*\*

.605(a)	PIPELINE PURGING PROCEDURES	S	U	NIA	N/C
	.629 Purging of pipelines must be done to prevent entrapment of an explosive mixture in the pipeline				
	(a) Lines containing air must be properly purged.	x			
	(b) Lines containing gas must be properly purged	X			1

### Comments

GS&S A-38 Procedure for Purging Gas Facilities, Attachment A and B.

Work Practice (WP 4100-01), Hot and Cold Work Methods for Natural Gas Transmission Pipeline Shutdown and Tie-in) replaces S4131. August 2008.

.605(a)	:	MAINTENANCE PROCEDURES	S	U	N/A	N/C
		Each segment of pipeline that becomes unsafe must be replaced, repaired, or removed from service	X			
	(¢)	Hazardous leaks must be repaired promptly	×		·	

### Comments:

192.703(b) & UO Standard S4430 CGT Gas Facility Requirements (This standard is under review (last review done 10/01/2001); UO Std S4134 Selection of Steel Gas Pipeline Repair Methods; UO Std S4129 Deactivation of Gas Facilities; 192.703(c) - UO Std S4110-/S0350 addresses repair of hazardous leaks; UO Policy 3-7 Gas and Electric Operations, Maintenance and

Construction; CT&CS-S0205 Replacement of Deteriorated or Damaged Facilities; GS&S A-66 Repair of Cast Iron; GS&S A-67 Repair of Copper and Gas Bulletin 246. Also, S4100-11.

.605(h)	T	RANSMISSION LINES	- PATROLLING & LEAKAGE SURV	EY PROCEDURES	S	υ	VAN/C
	.705(a)	Patrolling ROW conditio	ńś		x		
	(b)	Maximum interval betwe	en patrols of lines:			i T	
		Class Location	At Highway and Railroad Crossings	At All Other Places			
	.]	i and 2	2/yr (7% months)	1/yr (15 months)			
		3	4/yr (41/2 months)	2/yr (7% months)	X		
		4	4/yr (4½ months)	4/yr (41/2 months)			
	.,706	Leakage surveys - 1 yea	r/15 months	er trete tr <sub>ett</sub> , i <sub>n</sub> t <sub>e</sub> ngegennen,	×	+	
	1	Leak detector equipmer	it survey requirements for lines transporting un	•odorized gas	X	Π	
		(a) Class 3 locations - 71/2 months but at least twice each calendar year					
		(b) Class I locations -	41/2 months but at least 4 times each calendar	year	1		x

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Indess otherwise noted, all code references are to 49CFR Part 192. S - Satisfactory 11- Unsatisfactory N/A - Not Applicable. N/C - Not Checked If an item is marked U. N/A, or N/C, an explanation must be included in this report.

Comments: UO Std S4111, Attachment 1, Procedure for Patrolling Pipelines and Mains. UO Std S4111, Table 1, Minimum Patrol Frequencies; All transmission and gathering lines are patrolled quarterly. UO Std S4110, Table 1, Frequency of Periodic Required Oas Leak Surveys.

.605(b)	DIST	TRIBUTION SYSTEM PATROLLING & LEAKAGE SURVEY PROCEDURES	S	.U	N/A	N/C
	.721(a)	Frequency of patrolling mains must be determined by the severity of the conditions which could cause failure or leakage (i.e., consider cast from, weather conditions, known slip areas, etc.)	X			
	.721(b)	Mains in places or on structures where anticipated physical movement or external loading could cause failure or leakage must be patrolled				
	(b)(1)	In business districts at intervals not exceeding 4% months, but at least four times each calendar year; and	X			
	(b)(2)	Outside business districts at intervals not exceeding 71/2 months, but at least twice each calendar year	X	1	1	T
	.723(a) & (b)	Periodic leak surveys determined by the nature of the operations and conditions.	X			1
	(b)(1)	In business districts as specified, 1/yr (15 months)	X	•		T
	(b)(2)	Outside of husiness districts as specified, once every 5 calendar years/63 mos.; for unprotected lines subject to .465(c) where electrical surveys are impractical, once every 3 years/39 mos.	X			

### Comments:

UO Std S4111, Attachment I, Procedure for Patrolling Pipelines and Mains; (5) Frequency, Table 1 - Minimum Patrol Frequencies. UO Sid S4110 Leak Survey and Repair of Gas Transmission and Distribution Facilities, Table 1 - Frequency of Periodic Required Gas Leak Surveys.

New Work Procedure (WP 4110-01), Leak Survey and Repair Procedures for .723(a) & (b), (b)(1), and (b)(2).

	605(b)	LINE MARKER PROCEDURES	S	NU	/AN/C	
L		.707 Line markers installed and labeled as required	X			4

Comments:

GS&S L-10 Pipeline Markers Posts.

UO Std S4122, Attachment - Detailed Procedures, Table 1 - Pipeline Marking Requirements Appondix A - Pipeline Marker Posts and Signs in GS&S Section L.

.605(b)	,	TRANSMISSION RECORD KEEPING PROCEDURES	S	U	NA	N/C
<b>.</b>	.7(19	Records must be maintained	X	[		
		(a) Repairs to the pipe - life of system	X			
		(b) Repairs to "other than pipe" - 5 years		Ϋ́Χ.		
		(c) Operation (Sub L) and Maintenance (Sub M) patrols, surveys, tests - 5 years or until next one	X			

### Com ments:

UO Std S4110, Attachment 1 Leak Survey, Repair, Inspection, and Gas Quarterly Incident Report (Form "A"), Gas Dig-In Incident Report (Form "A1") shall be retained for the life of any gas facility, plus I year.

\*\*PG&E needs to add the correct language to answer .709(b); no set procedure defined for repairs to "other than pipe"\*\*

114, 164 1.16 18

.605(b)		TRANSMISSION FIELD REPAIR PROCEDURES	S U N/AN/C
		Imperfections and Damages	
	.713(a)	Repairs of imperfections and damages on pipelines operating above 40% SMVS	
		(1) Cut out a cylindrical piece of pipe and replace with pipe of 3 design strength	X
Unless otherwise noted, all code references are to 49CFR Part 192. S-Satisfactory U-Unsatisfactory N/A-Not Applicable N/C-Not Checked If an item is marked U, N/A, or N/C, an explanation must be included in this report.

***	TRANSMISSION FIELD REPAIR PROCEDURES	S	TI	N/A	NI
			Ľ	11/2	
mail t.	(2) Use of a reliable engineering method	X X	<u> </u>	<u>.</u>	ļ
713(6)	Reduce operating pressure to a safe lovel during the repolit	<b>X</b> :	L	<u> </u>	L
	Permanent Field Repair of Welds	1			
715	Welds found to be unacceptable under § 192.241(c) must be repaired by:	Í.			
	(a) Taking the line out of service and repairing in accordance with §192.245:	X		<u> </u>	L
	<ul> <li>Cracks longer than 8% of the weld length (except offshore) must be removed</li> </ul>	X			
	<ul> <li>For each weld that is repaired, the defect must be removed down to clean metal and the pipe preheated if conditions demand it</li> </ul>	X			
	<ul> <li>Repairs must be inspected to ensure acceptability</li> </ul>	X	[		
	<ul> <li>Crack repairs or defect repairs in previously repaired areas must be done in accordance with qualified written welding procedures</li> </ul>	x			
	(b) If the line remains in service, the weld may be repaired in accordance with §192.245 if	X			
	(1) The weld is not leaking	X			
	(2) The pressure is reduced to produce a stress that is 20% of SMYS or less	X	2		
	(3) Grinding is limited so that 1/4 inch of pipe weld remains	X			
	(c) If the weld cannot be repaired in accordance with (a) or (b) above, a full encirclement welded split sleeve must be installed	<b>. X</b>			
÷	Permanent Field Repairs of Leaks				
,717	Field repairs of leaks must be made as follows:	]			
	(a) Replace by cutting out a cylinder and replace with pipe similar or of greater design	<b>X</b> -	1 S		ŀ
	(b)(1). Install a full encirclement wolded split sleeve of an appropriate design unless the pipe is joined by mechanical couplings and operates at less than 40% SMYS	X			
	(b)(2) A leak due to a corrosion plt may be repaired by installing a bolt on leak clamp	X			
	(b)(3) For a corrosion pit leak, if a pipe is not more than 40,000 pai SMYS, the pits may be repaired by fillet welding a steel plate. The plate must have rounded corners and the same thickness or greater than the pipe, and not more than ND of the pipe size.	x			
	(b)(4) Submerged offshore pipe or pipe in inland navigable waterways may be repaired with a mechanically applied full encirclement split sleeve of appropriate design	×			
	(b)(5) Apply reliable engineering method	X			L
	Testing of Repairs.				
.719(a)	Replacement pipe must be pressure tested to meet the requirements of a new pipeline		۱.		-
(b)	For lines of 6-inch diameter or larger and that operate at 20% of more of SMVS, the repair must	X	ſ	1	

#### Comments:

Transmission field repair procedures are addressed in GS&S A-60, A-60.2, A-64, D-22, A-34, and UO Std S4134.

.605(b)

 TEST REQUIREMENTS FOR REINSTATING SERVICE LINES
 S
 U
 N/A

 .725(a)
 Except for .725(b), disconnected service lines must be tested the same as a new service line.
 X
 X

 .(b)
 Service lines that are temporarily disconnected must be tested from the point of disconnection, the same as a new service line, before reconnect. See code for exception to this.
 X
 X

Comments: GS&S A-34 and A-93.1

10

STANDARD INSPECTION REPORT OF A GAS DISTRIBUTION OPERATOR Entess otherwise noted, all code references are to 49CFR Part 192. S-Sudisfactory U-Unsatisfactory N/A-Nut Applicable N/C-Not Ch If an item is marked U, N/A, or N/C, an explanation must be included in this report. N/C- Not Checked

.605(b)		ABANDONMENT or DEACTIVATION of FACILITIES PROCEDURES	S	U	N/A	N/C
.727	.727(b)	Operator must disconnect both ends, purge, and seal each end before abandonment or a period of deactivation where the pipoline is not being maintained. On shore abandoned pipelines must be filled with water or an inert material, with the ends sealed	x			
	(c)	Except for service lines, each inactive pipeline that is not being maintained under Part 192 must be disconnected from all gas sources/supplies, purged, and sealed at each end.	x			ŀ
	(d)	Whenever service to a customer is discontinued, do the procedures indicate one of the following:	1			
	· · · · · · · · · · · · · · · · · · ·	(1) The valve that is closed to prevent the flow of gas to the customer must be provided with a locking device or other means designed to prevent the opening of the valve by persons other than those authorized by the operator	X	-		
		(2) A mechanical device or fitting that will prevent the flow of gas must be installed in the service line or in the meter assembly	X			
		(3) The customer's piping must be physically disconnected from the gas supply and the open pipe ends sealed	x			
•	(e)	If air is used for purging, the operator shall ensure that a combustible mixture is not present after - purging	X			
	.727(8)	Operator must file reports upon abandoning underwater facilities crossing navigable waterways, including offshore facilities.	x			

, **.**...

#### Comments

WP 4100-11 Descrivation of Gas & Electric Facilities issued 10/2008,

GS&S A-38 Procedures for Purging Gas Facilities

WP6435-04 Procedures for Discontinuing Gas Service.

(b)		PRESSURE LIMITING and RI	EGULATING STATION PROCEDURES	S	U	N/A	N/C	
	.739(a)	Inspection and testing procedures for pu stations and equipment (1 per. yr/15 m	ressure limiting stations, relief devices, pressure regulating onths)	X				
		(1) In good mechanical condition		X				
	(2) Adequate from the standpoint of capacity and reliability of operation for the service in which it is employed							
		(3) Set to control or relieve at correct	pressures consistent with .201(a), except for .739(b).	X			:	
	oper.	(4) Properly installed and protected	from dirt, liquids, and other conditions that may prevent proper	X				
	.739(b)	For steel lines if MAOP is determined	per .619(c) and the MAOP is 60 psi (414 kPa) gage or more a same		·			
		If MAOP produces hoop stress that	Then the pressure limit is:				l	
		Is greater than 72 percent of SMYS	MAOP plus 4 percent	X			ĺ	
		Is unknown as a percent of SMYS	A pressure that will prevent unsafe operation of the pipeline considering its operating and maintenance history and MAOP					
	.741 Telemetering or Recording Gauges					Lainnin		
	[	(a) In place to indicate gas pressure in	n the district that is supplied by more than one regulating station	X	1			
		(b) Determine the need in a distributi	on system supplied by only one district station	X	[ <u> </u>	[		
		<ul> <li>(c) Inspect equipment and take correct pressure</li> </ul>	tive measures when indications of abnormally high or low	X.	-			
	.743	Testing of Relief Devices						
	.743	(a) Capacity must be consistent with .2	Ul(a) except for ,739(b), and be determined 1 per yr/15 mo.	X		Γ		
	······	(b) If calculated, capacities must be concerning the required.	impared; annual review and documentation are	<b>.</b> X				
	·	(c) If insufficient capacity, new or ad	ditional devices must be installed to provide required capacity.	X				

### Comments:

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Stanadrd S4430 (with WPs under that) will address what is currently addressed by Standard S5351, CES Standard C-T&CS-S0351 District Regulator Station Maintenance; and DCS Standard D-S0456, Recording Pressures in Distribution Systems, (this is found in DM - Tab H).

For transmission, CGT Standard 4432, CGT \$4433 Gas Pressure Relief Devices - Responsibility For Annual Inspection and Verification of Capacity, GS&S H-70 Pressure Relief Devices. CGT Standard 4431, Major Gas Facilities. (Note: Inspector should ask transmission district to Identify its major gas facilities considered per this standard, during the audit.)

.605(b)		VALVE AND VAULT MAINTENANCE PROCEDURES	S	U	NA	N/C
		Transmission Valves	T			
	.745	<ul> <li>(a) Inspect and partially operate each transmission valve that might be required during an emergency (1 per yr/15 months)</li> </ul>	x			
	.745	(b) Prompt remedial action required, or designate alternative valve.	X	1		
		Distribution Valves	Γ			
	.747.	<ul> <li>(a) Check and service each valve that may be necessary for the safe operation of a distribution system (1 per yr/15 months)</li> </ul>	x			
		(b) Prompt remedial action required, or designate alternative valve	x			-
		Vaults				
	.749	Inspection of vaults greater than 200 cubic feet (1 per yr/15 months)	X	Γ		

.605(b)	:	PREVENTION of ACCIDENTAL IGNITION PROCEDURES	S	UN	AN/C
	.751	Reduce the hazard of lire or explosion by:			
		(a) Removal of ignition sources in presence of gas and providing for a fire extinguisher	X		
		(b) Prevent welding or cutting on a pipeline containing a combustible mixture	X		
		(c) Post warning signs	X	1. 1. 1.	

Comments:

Comments:

192,751 - Prevention of accidental ignition procedures are contained in DM -Tab K and in OS&S D-20 and D-23; Rules 1305, 1308, 1309; UO Std S4832; UO Std S4461; GS&S A-93.1; Code of Safe Practices Section 13.

192,745-749 - UO Std S4220 and WP 4430-04 for valves; and S4446 for values; Vault Inspection Procedure applies to distribution and transmission (found in DM - Tab K); UO Std S4220, Gas Valve Maintenance Requirements, applies to distribution and transmission (found in DM - Tab F).

.603(b)	1	CAULKED BELL AND SPIGOT JOINTS PROCEDURES	S	U	NA	N/C
	,753	Cast-iron caulked bell and spigot joint repair:	1		وحبابهميان	
		(a) When subject to more than 25 psig, sealed with mechanical clamp, or scaled with material/device which does not reduce flexibility, permanently bonds, and seals and bonds as prescribed in §192.753(a)(2)(iii)	x			-
		(b) When subject to 25 psig or less, joints, when exposed for any reason, must be sealed by means other than caulking.	×			
.605(b)	14	PROTECTING CAST-IRON PIPELINE PROCEDURES	s	U	N/A	N/C
	.755	Operator has knowledge that the support for a segment of a buried cast-from pipeline is disturbed must provide protection.	.*	•		
	An other and the second second second	(a) Vibrations from heavy construction equipment, trains, trucks, buses or blasting?		-	·····	

Other foreseeable outside forces which might subject the segment of pipeline to a bending stress

.12
.1.4

Vana & Blandar Hamerican Domas with Ann Diardinston Ownerster (Dav. BHASTA) dansiels Vinget Bab. +6.35 (1700) as MAAS

Impact forces by vehicles?

Earth movement?

(b)

(c)

(d)

X

х

STANDARD INSPECTION REPORT OF A GAS DISTRIBUTION OPERATOR Unless otherwise noted, all code references are to 49 CFR Part 192. S - Satisfactory U - Unsatisfactory N/A - Not Applicable N/C - Not Ch If an Item Is marked U, N/A. or N/C, an explanation must be included in this report. N/C - Not Checked

	<u>.</u>	(e) Provide permanent protection for the disturbed section as snon as feasible	X		
13(c)		WELDING AND WELD DEFECT REPAIR/REMOVAL PROCEDURES	s	u	N/AN
	.225	(a) Welding procedures must be qualified under Section 5 of API 1104 (19 <sup>th</sup> ed. 1999, 10/31/01 errata) or Section IX of ASME Boiler and Pressure Code (2004 ed. Including addenda through July 1, 2005 ) by destructive test.	X	1	
		(b) Retention of welding procedure - details and test	X		
	.227	<ul> <li>(a) Welders must be qualified by Section 6 of API 1104 (19<sup>th</sup> ed. 1999, 10/3 1/01 errata) or Section (X of ASME Boller and Pressure Code (2004 ed. Including addenda through July 1, 2005) Sce exception in .227(b).</li> </ul>	x		
	:	(b) Welders may be qualified under section 1 of Appendix C to weld on lines that operate at < 20% SMYS.			X
	.229	<ul> <li>(a) To weld on compressor station piping and components, a welder must successfully complete a destructive test</li> </ul>	x		
		(b) Welder must have used welding process within the preceding 6 months	x		
		(c) A welder qualified under .227(a)-	1		
<b>₽</b> ,	.229(c)	(1) May not weld on pipe that operates at ≥ 20% SMYS unless within the preceding 6 calendar months the welder has had one weld tested and found acceptable under the sections 6 or 9 of API Standard 1104; may maintain an ongoing qualification status by performing welds tested and found acceptable in least twice per year, not exceeding 7% months; may not requalify under an earlier referenced edition.	i X <sup>∈</sup>		
		(2) May not weld on pipe that operates at < 20% SMYS unless is tested in accordance with .229(c)(1) or regualities under .229(d)(1) or (d)(2).	X		
		(d) Welders qualified under .227(b) may not weld unless:			
		(1) Requalified within 1 year/15 months, or	X	Γ	
		(2) Within 71/2 months but at least twice per year had a production weld pass a qualifying tost.	X	T	
	.231	Welding operation must be protected from weather	X		
:	.233	Miter Joints (consider pipe alignment)	X	1	
	.235	Welding preparation and joint alignment	x	1	<u> </u>
	.241	(a) Visual inspection must be conducted by an individual qualified by appropriate training and experience to ensure:	x	l	
		(1) Compliance with the welding procedure:	X		
	-	(2) Weld is acceptable in accordance with Section 9 of API 1104	X	1	
		(b) Welds on pipelines to be operated at 20% or more of SMYS must be nondestructively tested in accordance with 192.243 except welds that are visually inspected and approved by a qualified welding inspector if:	×.	- -	
		(1) The nominal pipe diameter is less than 6 Inches, or	X	1	
		(2) The pipeline is to operate at a pressure that produces a hoop stress of less than 40% of SMYS and the welds are so limited in number that nondestructive testing is impractical	×		
	,241	(c) Acceptability based on visual inspection or NDT is determined according to Section 9 of API 1104. If a girth weld is unacceptable under Section 9 for a reason other than a crack, and if Appendix A to API 1104 applies to the weld, the acceptability of the weld may be further determined under that appendix.	×		
		Repair and Removal of Weld Defects	I		
	.245	(a) Each weld that is unacceptable must be removed or repaired. Except for offshore pipelines, a wold must be removed if it has a crack that is more than 8% of the weld length	x		
		(b) Each weld that is repaired must have the defect removed down to sound metal, and the segment to be repaired must be preheated if conditions exist which would adversely affect the quality of the weld repair. After repair, the weld must be inspected and found acceptable.	X:		
		(c) Repair of a crack or any other defect in a previously repaired area must be in accordance with a written weld repair procedure, qualified under §192.223 Note: State Repair Procedure, and the state repaired area and the state repaired area area.	X.		
	<u> </u>	Note: Sleeve Repairs – use low hydrogen rod (Dest Practices –ref. API 1104 App. D. In Service Welding)	<u> </u>	-	

Comments:

From 2 Standard Inspection Report of a Clas Distribution Operator (Rev. 03/03)/09 (househ Flaal Bule of 16 January 2009)

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#### Comments:

192,753 - Caulked Bell and Spigot Joints Procedures. The code requirements are addressed in GS&S A-39, B-51.2, and B-50.1 192,755 - Protecting Cast Iron Pipelines Procedures. The code requirements are addressed in GS&S A-39 and UO Std S4412. 192,225 - GS&S D-20 Oxyacetylene Weld Procedure; GS&S D-22 Arc Welding Procedure Requirement All Stress Levels. 192,231, 192,235 - GS&S D-20 P:2 192,233 - GS&S A-36 P.6

192,241 - Welding: Addressed in GS&S D-31, D-30, D-40 (Inspection).

192,245 - Repair and Removal of Weld Defects is addressed in UO Std S4134 - this is the governing documents that tabulates methods of repair for different conditions. GS&S D-31 Repair or Removal of Defects (for Production Welds).

OS&S D-30 Welder Qualification For Under 20% of SMYS

GS&S D-30.2 Arc Welder Qualification For Working on Pipelines That Operate At Over 20% SMYS

GS&S A-36 Design and Construction Requirements

.13(c)		NONDESTRUCTIVE TESTING PROCEDURES	S	U	N/A	NIC
	.243	(a) Nondestructive testing of welds must be performed by any process, other than trepanding, that obcarly indicates defeats that may affect the integrity of the weld	x	1 1 1		
		(b) Nondestructive testing of welds must be performed:		* ×		
-		(1) In accordance with a written procedure, and	x		T	Ţ.
		(2) By persons trained and qualified in the established procedures and with the test equipment used	X			
		(c) Procedures established for proper interpretation of each nondestructive test of a weld to ensure acceptability of the weld under 192,2410	×	1 1 7		
		(d) When nondestructive testing is required under § 192.241(b), the following percentage of each day's field butt welds, selected at random by the operator, must be nondestructively tested over the entire circumference.		i i,	- - -	si Z si
		(1) In Class 1 locations at least 10%	X	i.	T .	
		(2) In Class 2 locations at least 15%	X		1	
<b>N</b>		(3) In Class 3 and 4 locations, at crossings of a major navigable river, offshore, and within railroad or public highway rights-of-way, including tunnels, bridges, and overhead road crossings, 100% unless impractical, then 90%. Nondestructive testing must be impractical for each girth weld not tested.	x			
		(4) At pipeline ile-ins, 100%	X			
	254	(c) Except for a welder whose work is isolated from the principal welding activity, a sample of cach welder's work for each day must be nondestructively tested, when nondestructive testing is required under §192.241(b)	x			
		(f) Nondestructive testing - the operator must retain, for the life of the pipeline, a record showing by mile post, engineering station, or by geographic feature, the number of welds nondestructively tested, the number of welds rejected, and the disposition of the rejected welds.	×			

Comments:

GS&S D-40 Weld Inspection

GS&S D-31 Standard of Acceptability for Welding: Non-destructive and Destructive Testing

Per D-40: 192.243(d)(1) - PG&E tests a minimum of 10%; and 192.243(d)(2) - PG&E tests a minimum of 15%

.273(b)	·		JOINING OF PIPELINE MATERIALS	S	U	N/A	N/C
		(a)	A plastic pipe joint that is joined by solvent cement, adhesive, or heat fusion may not be disturbed until it has properly set. Plastic pipe may not be joined by a threaded joint or miter joint.	x			
		(b)	Each solvent cement joint on plastic pipe must comply with the following:				
			(1) The mating surfaces of the joint must be clean, dry, and free of material which might be detrimental to the joint.			X	
	-	,	(2) The solvent coment must conform to ASTM Designation: D 2513,	1	[	X	
		······	(3) The joint may not be lieuted to accelerate the setting of the coment.		[	X	
		(c)	Each heat-fusion joint on plastic pipe must comply with the following:	1	********	- <b>2</b>	h

Fore 3 Standard Inversion Report of a Cast Distribution Operator (Rev. 03173809 Using the First Rule of 16 Anno 2009).

STANDARD INSPECTION REPORT OF A GAS DISTRIBUTION OPERATOR. Unless otherwise noted, all code references are to 49CFR Part 192. S - Satisfactory U - Unsatisfactory N/A - Not Applicable. N/C - Not Checked If an item is marked U, N/A, or N/C, an explaination must be included in this report.

	JOINING OF PIPELINE MATERIALS	S	U	NIA	N/C
	(1) A but heat-fusion joint must be joined by a device that holds the heater element square to the ends of the piping, compresses the heated ends together, and holds the pipe in proper alignment while the plastic hardens.	X			-
	(2) A socket heat-fusion joint must be joined by a device that heats the mating surfaces of the joint uniformly and simultaneously to essentially the same temperature.	X.			
	(3) An electrofusion joint must be joined utilizing the equipment and techniques of the fittings manufacturer or equipment and techniques shown, by testing joints to the requirements of § 192.283(a)(1)(iii), to be at least equivalent to those of the fittings manufacturer.	X			
	(4) Heat may not be applied with a toreit or other open flame.	X			
(b)	Each adhesive joint on plastic pipe must comply with the following:		,	)	
······································	(1) The adhesive must conform to ASTM Designation: D 2517.			X	
· · ·	(2) The materials and adhesive must be compatible with each other.			x	
(c)	Each compression type mechanical joint on plastic pipe must comply with the following:		L		
	(1) The gasket material in the coupling must be compatible with the plastic.	x			
······································	(2) A rigid internal tubular stiffener, other than a split tubular stiffener, must be used in	x			
·····	conjunction with the coupling.		L.		
.283 (a)	Before any written procedure established under § 192.273(b) is used for making plastic pipe joints by a heat fusion, solvent cement; or adhesive method, the procedure must be qualified by subjecting specimen joints made according to the procedure to the following tests:		ð1		
	(1) The burst test requirements of-	<u> </u>			
	(i) Thermoplastic pipe: paragraph 6.6 (sustained pressure test) or paragraph 6.7 (Minimum Hydrostatic Burst Test) or paragraph 8.9 (Sustained Static pressure Test) of ASTM D2513	x			
	(ii) Thermosetting plassic pipe: paragraph 8.5 (Minimum Hydrostatic Burst Pressure) or paragraph 8.9 (Sustained Static Pressure Test) of ASTM D2517; or			X.	
	(iii) Electrofusion fittings for polyethylene pipe and tubing: paragraph 9.1 (Minimum Hydraulic Burst Pressure Test), paragraph 9.2 (Sustained Pressure Test), paragraph 9.3 (Tensile Strength Test), or paragraph 9.4 (Joint Integrity Tests) of ASTM Designation F1055.	x			
	(2) For procedures intended for lateral pipe connections, subject a specimen joint made from pipe sections joined at right angles according to the procedure to a force on the lateral pipe until failure occurs in the specimen. If failure initiates outside the joint area, the procedure qualifies for use; and,	x			
	(3) For procedures intended for non-lateral pipe connections, follow the tensile test requirements of ASTM D638, except that the test may be conducted at ambient temperature and humidity if the specimen elongates no less than 25 percent or failure initiates outside the joint area, the procedure qualifies for use.	x			
(b)	Before any written procedure established under §192.273(b) is used for making mechanical plastic pipe joints that are designed to withstand tensile forces, the procedure must be qualified by subjecting five specimen joints made according to the procedure to the following tensile test:				
	(1) Use an apparatus for the test as specified in ASTM D 638 (except for conditioning).	x	İ	T	<b>—</b>
	(2) The specimen must be of such length that the distance between the grips of the apparatus and the end of the stiffener does not affect the joint strength.	X	[	<del> </del>	f.,
	(3) The speed of testing is 0.20 in. (5.0 mm) per minute, plus or minus 25 percent.	x.	<b> </b>	<u>†</u>	
· ·	(4) Pipe specimens less than 4 inches (102 mm) in diameter are qualified if the pipe yields to an clongation of no less than 25 percent or failure initiates outside the joint area.	X			
	(5) Pipe specimens 4 inches (102 mm) and larger in diameter shall be pulled until the pipe is subjected to a tensile stress equal to or greater than the maximum thermal stress that would be produced by a temperature change of 100° F (38° C) or until the pipe is pulled from the fitting. If the pipe pulls from the fitting, the lowest value of the five test results or the manufacturer's rating, whichever is lower must be used in the design calculations for stress.			X	
	(6) Each specimen that fails at the grips must be retested using new pipe	X	Γ	Γ	
	(7) Results pertain only to the specific outside diameter, and material of the pipe tested, except that testing of a heavier wall pipe may be used to qualify pipe of the same material but with a lessor wall thickness.			×.	
(c)	A copy of each written procedure being used for joining plastic pipe must be available to the persons making and inspecting joints.	x			
(b)	Pipe or fittings manufactured before July 1, 1980, may be used in accordance with procedures that the manufacturer certifies will produce a joint as strong as the pipe.			X	

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Form 2 Standard Inspection Report of a Clas Fluentiation Constant (Roy: DV23/09 through Final Rule of 16 busines 2009)

Unless otherwise nisted, all code references are to 1905 R Part 192. S + Satisfactory. U- Unsatisfactory N/A - Not Applicable N/C - Not Checked If an item is marked U, N/A, or N/C, an explanation must be included in this report.

		JOINING OF PIPELINE MATERIALS	S	U	N/A	N/C
.285	(a)	No person may make a plastic pipe joint unless that person has been qualified under the applicable joining procedure by:				
		(1) Appropriate training or experience in the use of the procedure; and	X	[		
		(2) Making a specimen joint from pipe sections joined according to the procedure that passes the inspection and test set forth in paragraph (b) of this section.	x			
	(b)	The specimen joint must be:	1			
		(1) Visually examined during and after assembly or joining and found to have the same appearance as a joint or photographs of a joint that is acceptable under the procedure; and	x			
		(2) In the case of a heat fusion, solvent coment, or adhesive joint;	x			
		<ul> <li>(i) Tested under any one of the test methods listed under \$192.283(a) applicable to the type of joint and material being tested;</li> </ul>	x	[		
		(ii) Examined by ultrasonic inspection and found not to contain flaws that may cause failure; or	Ţ		X	
·		(iii) Cut into at least three longitudinal straps, each of which is:	1	•••••••	ليستنشبها	
		(A) Visually examined and found not to contain voids or discontinuities on the cut surfaces of the joint area; and	×	{	·	
		(B) Deformed by bending, torque, or impact, and if failure occurs, it must not initiate in the joint area.	x			
·	(c)	A person must be requalified under an applicable procedure, if during any 12-month period that person:				
		(1) Dues not make any joints under that procedure: or	X			
		(2) Has 3 joints or 3 percent of the joints mode, whichever is greater, under that procedure that are found unacceptable by losting under §192.513.	x			
	(d)	pipelines in the operator's system is qualified in accordance with this section.	X			
.287.	19	person may carry out the inspection of joints in plastic pipes required by §§192.273(c) and 2.285(b) unless that person has been qualified by appropriate training or experience in evaluating acceptability of plastic pipe joints made under the applicable joining procedure.	×			

#### Commentst

192.281 PG&E Standards and Spees D-21 (pg 2-4/17);

192.283 (a)(1)(i) (PO&E 10/02/89 TES);

192.283 (a)(1)(ii) not used by PG&E;

192,283(a)(1)(iii) (PG&E 03/87 TES);

192:283 (a)(2) and (3) (PG&E 10/02/89 TES);PG&E does not use thermosetting plastic pipe.

192.2833 (b)(1-4) (PG&E 01/17/06 Southwest High Density and 05/21/90 Medium density;

192.283(b)(5) PG&E doesn't perform mechanical joints for diameters greater than 4-inch;

192.283(b)(7) (PO&E tested same wall as size being used);

192.283(c) (PG&E D-21); 192.283(d) (PG&E does not have anything of that vintage);

192.285(b)(2)(i) (PG&E D-34);

192.285(b)(2)(ii) (PG&E does not utilize ultrasonic on plastic);

192.285(b)(11)--192.287 (addressed by PG&E D-34). Standards reviewed and confirmed as applicable during 03/2009 audit \*\* 192.283 (a) and ((b) -- PG&E does not have a procedure requiring that joining procedures be qualified.\*\*

,605(b)	1	CORROSION CONTROL PROCEDURES	s	U	N/AN/
<b>*</b> :	.453	Are corrosion procedures established and carried out by or under the direction of a qualified person for:			
		• Design	X		
		• Operations	X		
		Installation	X		
· ·		• Mainichance	X		
	.455	<ul> <li>(a) Por pipelines installed after July 31, 1971, buried segments must be externally coated and</li> <li>(b) cathodically protected within one year after construction (see exceptions in code)</li> </ul>	x		
		(c) Aluminum may not be installed in a buried or submerged pipeline if exposed to an environment with a natural pH in excess of 8 (see exceptions in code)			×

Form 2 Standard Inspectant Report of a Gas Distribution Operator (Rev. 0.92300) through Final Rule of 16 January 2009)

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STANDARD INSPECTION REPORT OF A GAS DISTRIBUTION OPERATOR Unless otherwise noted, all rode references are to 49CFR Part 192. S - Satisfactory U - Unastisfactory N/A - Not Applicable N/C - Not Ch If an item is marked U, N/A, or N/C, an explanation must be included in this report. N/C - Not Checked

	CORROSION CONTROL PROCEDURES	S	U	NIA	
.457	(a) All effectively coated steel transmission pipelines installed prior to August 1, 1971, must be enthodically protected.	X			
	(b) If installed before August 1, 1971, cathodic protection must be provided in areas of active corrosion for: bare or ineffectively coated transmission lines, and bare or coated c/s, regulator sta., meter sta. piping, and (except for cast iron or ductile iron) bare or coated distribution lines.	x			•
.459	Examination of buried pipeline when exposed: if corrosion is found, further investigation is required	X	ľ	Γ	
.461	Procedures must address the protective coating requirements of the regulations. External coating, on the steel pipe must meet the requirements of this part.	X	   	-	
.463	Cathodic protection level according to Appendix D criteria	X	ŀ		
.465	(a) Pipe-to-soil monitoring (1 per yr/15 months) or short sections (10% per year, all in 10 years)	X			
	(b) Rectifier monitoring (6 per yr/21/2 months)	X	Γ	<u> </u>	
	(c) Interference band monitoring (as required)	X		1	
	(d) Prompt remedial action to correct any deficiencies indicated by the monitoring	X.	ſ		
.465	(c) Electrical surveys (closely spaced pipe to soil) on bare/unprotected lines, cathodically protect active corrosion areas (1 per 3 years/39 months).	x	1		
.467	Electrical isolation (include casings)	X			
.469	Sufficient test stations to determine CP adequacy	X		T	
.471	Test lead maintenance	X	1	1	
	Interference currents	X	1	1	
.475	(a) Proper procedures for transporting corrosive gas?	-	1	X	
	(b) Removed pipe must be inspected for internal corrosion. If found, the adjacent pipe must be inspected to determine extent. Certain pipe must be replaced. Steps must be taken to minimize internal corrosion.	X			
.476	Systems designed to reduce internal corrosion Arndt 192-(no number) Pub. 4/23/07, eff. 5/23/07 (a) New construction	X			
	(b) Exceptions - offshore pipeline and systems replaced before 5/23/07	X			
	(c) Evaluate impact of configuration changes to existing systems	X			
.477	Internal corrosion control coupon (or other suit. Means) monitoring (2 per yr/71/2 months)	X			
479	(a) Each exposed pipe must be cleaned and coated (see exceptions under .479(c))	x			
	Offshore splash zones and soil-to-air interfaces must be chated	X			
	(b) Coating material must be suitable	x	1	1	
	Coating is not required where operator has proven that corrosion will;	1	*	- (	
	(c) (1) Only be a light surface oxide, or	X	Т	Τ	
	(2) Not affect safe operation before next scheduled inspection	T x	t	T	
.481	<ul> <li>(a) Atmospheric corrosion control monitoring (1 per 3 yrs/39 months anshore; 1 per yr/15 months offshore)</li> </ul>	x	1		
.481	(b) Special attention required at soil/air interfaces, thermal insulation, under disconded coaling, pipe supports, splash zones, deck penetrations, spans over water	X			
.481	(c) Protection must be provided if atmospheric corrosion is found (per §192.479)	<u> </u>	<u> </u>	<u> </u>	
.483	Replacement and required pipe must be coated and cathodically protected (see code for exceptions)	×		1	
.485	(a) Procedures to replace pipe or reduce the MAOP if general corrosion has reduced the wall (hickness?)	×.	ļ.,	ļ	
ļ	(b) Procedures to replace/repair pipe or reduce MAOP if localized corrosion has reduced wall thickness (unless reliable engineering repair method exists)?	<u>x</u>		ļ.,	
	(c) Procedures to use Rstreng or B-31G to determine remaining wall strength?	-l'			
.487	Remedial measures (distribution lines other than cast iron or ductile iron)	- X			
.489	Remedial measures (cast iron and ductile iron pipelines)		ļ	<u> </u>	
.491	Corrosion control maps and record retention (pipeline service life or 5 yrs)	X		L	

Comments:

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From 2 Standard Inspection Report of a Gas Distribution Oversion (Res. 03/23/09 through Final Rule of 16 January 2009) --- · · ·

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Unless otherwise noted, all code references are to 49CFH Part 192. S - Satisfactory U - Unsatisfactory N/A - Not Applicable If an item is marked U, N/A, or N/C, an explanation must be included in this report. N/C - Not Cherked

#### Comments:

Overall corrosion control program is contained in GS&S O-16. GS&S E-27, UO Std S4134, UO Std S4133, and UO Std S4126 S5467 contains CPA assessment and reassessment procedures. Cased pipelines are contained in O-16. Measurment for corrosive gas is described in S4300. See also WP4330-02. Note: For 192.465(a), monitoring is done 6 times per year. For 192.465(b), monitoring is performed annually per CPUC Resoluton RU-39, for distribution and local transmission piping.

,801- ,809	Subpart N — Qualification of Pipeline Personnel Procedures	S U N/AN/C
	Refer to Operator Qualification Inspection Forms and Protocols (OPS web site)	

.901- .951	Subpart O — Pipeline Integrity Management	S U NAN/C
	This form does not cover Gas Pipeline Integrity Management Programs	

Subpart A - C	PART 199 - DRUG and ALCOHOL TESTING REGULATIONS and PROCEDURES	S U NAN/C
10.2	Drug & Alcohol Testing & Alcohol Misuse Prevention Program - Use PHMSA Form # 13, PHMSA	
- <b>1</b>	2008 Drug and Alcohol Program Check.	

Comments:

on Report of a Clar Distribution Omerator (Rev. AUDIOA Natural Final Rule of 14 Instance 2004)

linless otherwise noted, all code references are to 49CFR Part 192. S - Satisfactory U - Unsulisfactory N/A - Not Applicable N/C - Not Checked If an item is marked U, N/A, or N/C, an explanation must be included in this report.

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nanga Madala da ang kanakanakanakanakanakanakanakanakanakan	PIPELINE INSPECTION (Fleid)		S	U	NI	N/C
,179	Valve Protection from Tampering or Damago	****		1	X	-
.463	Cathodic Protection	**************************************	<b></b>	1	T	· ·
.465	Recifiers				IT	
.476	Systems designed to reduce internal corrosion		·			
.479	Pipeline Components Exposed to the Atmosphere					
.605	Knowledge of Operating Personnel					
.707	ROW Markers, Road and Railroad Crossings				ŀ i	
.719	Pre-pressure Tested Pipe (Markings and Inventory)			ľ		
.,741	Telemetering, Recording gauges			I.		
.739/.743	Pressure Limiting and Regulating Devices (spot-check field installed equipment vs. inspection records)	· · ·				
.745	Valve Maintenance					
.751	Warning Signs		1			1.
.803809	Operator Qualification - Use PHMSA Form 15 Operator Qualification Field Inspection Protocol Form				1.1	

Comments:

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REGULATORY REPORTING PERFORMANCE AND RECORDS			UN	V/A	N/C
191.5	Telephonic reports to NRC	1	1	12	
191.15	Written incident reports; supplemental incident reports (Form F 7100.2)			TT	
191	Annual Reports (Forms 7100.1-1, 7100.2-1)			T	
191.23	Safety related condition reports			Ħ	
192.16	Customer Notification (Verification - 90 days - and Elements)		T	TT	142310 P
192.727 (g)	Abandoned facilities offshore, onshore crossing commercially navigable waterways reports		T	ন্দ	

	CONSTRUCTION PERFORMANCE AND RECORDS	S	U	N/A	N/C
.225	Test Results to Qualify Welding Procedures		I	$\overline{\mathbf{x}}$	1
.227	Welder Qualification		1	11	t
.241 (a)	Visual Weld Inspector Training/Experience	1	ţ	T	1
.243 (b)(2)	Nondestructive Technician Qualification			Π	
(c)	NDT procedures	1.	1	Π	
(1)	Total Number of Oirth Welds		1	IT	
(1)	Number of Welds inspected by ND1		1	Π	
(1)	Number of Welds Rejected	i.		T	
(1)	Disposition of each Weld Rejected		[	Π	
273/.283	Qualified Joining Procedures Including Test Results	1		Π	
285	Personnel Joining Qualifications	1	1	Π	
287	Joining Inspection Qualifications		1		-
.303	Construction Specifications	1	<b> </b>	Π	
.325	Underground Clearance		1	1.2	1

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Form 7 Standard Lemantion Given of a flar Dissibution Charaterford Atrit Bit charach times U.d. at 16 Interest 10045

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STANDARD INSPECTION REPORT OF A GAS DISTRIBUTION OPERATOR Unless otherwise noted, all code references are to 49CPR Part 192. 8 - Subspectory U = Unsubfactory N/A = Not Applicable N/C = Not Ch If an Item is marked U, N/A, or N/C, an explanation must be included in this report. N/C - Nat Cheeked

CONSTRUCTION PERFORMANCE AND RECORDS					
.327	Amount. Location, Cover of each Size of Pipe Installed			*	
383(c)	EFV customer notification			T	
.455	Cathodic Protection	1			

517 (a) 517 (b) .603(b) .709	.605(a) .605(b)(3) .605(b)(8) .605(c)(4) .614	Periodic review of personnel work - effect	g. service lines, plastic lines) - 5 years			Ť	+
603(6)	.605(b)(3) ,605(b)(8) .605(c)(4)	Procedural Manual Review - Operationa Availability of construction records, maps Periodic review of personnel work - effect	and Maintenance (1 per yr/15 months)				–
· · · · · ·	.605(b)(3) ,605(b)(8) .605(c)(4)	Availability of construction records, maps Periodic review of personnel work - effect					
709	.605(b)(8) .605(c)(4)	Periodic review of personnel work - effect	s, operating history to operating personnel		L		1
709	.605(c)(4)						
709			tiveness of normal O&M procedures				T
709	.614	Periodic review of personnel work - effect	tiveness of abnormal operation procedures			T	T
3		Damage Prevention (Miscellaneous)		1		$\square$	$\mathbf{T}$
	.609	Class Location Study (If Applicable)	๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛		<b>†</b>	H	+
603(b)	.615(b)(1)	Location Specific Emergency Plan	<u>,</u>		<u> </u>		1
	.615(b)(2)	Emergency Procedure training, verify effe	anticonase of sectors			H	+
,			and a second	-			<u>+</u>
	.615(b)(3)	Employee Emergency activity review, de	iermine il procedures were tollowed.	-{`			<u></u>
	.615(c)	Liaison Program with Public Officials		<u> </u>		Y	<u> </u>
	.616 .616(c & f)	Public Awareness Program	effects implementation of operator's Public Awareness			<b>.</b>	÷
		method and frequency, supplemental enl mailing rosters, postage recelpts, return i	dience identification, message type and content, delivery hancements, program evaluations, etc. (i.e. contact or receipts, audience contact documentation, etc. for chool superintendents, program evaluations, etc.). See table			ý	
	<u></u>		commended Message Deliveries	- <b>-</b>	l	Ļ	
	S	takeholder Audience (Natural Gas	Baseline Message Frequency	ŀ			
		Transmission Line Operators)	(starting effective date of Plan)	1			
	Residen Congreg	is Along Right-of-Way and Places of atton	2 years:				
		ncy Officials	Annual	1		*	
	Public C		3 years	ſ			
	5 Sunday manufacture	or and Contractors	Annual		1.4		
	f	ll Centers	As required of One-Call Center	ł			
	SI	ikeholder Audlence (Gathering Line Operators)	Baseline Message Frequency (starting from effective date of Plan)	.			
	Residen	ts and Places of Congregation	Annual	1			
		ncy Officials	Annual				
	Public (	Ificials	3 years				
		ors and Contractors	Annual				
	One-Ca	II Centers	As required of One-Call Center				
		Stakeholder Audience (LDCs)	Baseline Message Frequency (starting from effective date of Plan)			2	
	1 Summannan and and a state of the	ts Along Local Distribution System	Annual				
		islomers	Twice annually				
		ney Officials	Annuat				
	I Immentation	Officials	3 years				
	f }	or and Contractors	Ainual As required of One-Call Center	1			
		Il Centers		1			
		to API RP 1162 for additional requirement iental requirements, record keeping; prograf	s, including general program recommendations.	1			
	,616(g)	The program must be conducted in Egalish	h and any other languages commonly understood by a		[	7	<b>T</b>

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STANDARD INSPECTION REPORT OF A GAS DISTRIBUTION OPERATOR Unless otherwise noted, all code references are to 49CFR Part 192. S - Satisfactory. U - Unsatisfactory N/A - Not Applicable N/C - Not Cr If an item is marked U, N/A, or N/C, an explanation must be included in this report. N/C - Not Checked

	OPE	RATIONS and MAINT	TENANCE PERFORMANCE AND REC	ORDS	S	U	NA	N/
	.616(j)	<ul> <li>616(j) Operators of a master meter or petroleum gas systems - public awareness messages 2 times annually:</li> <li>(1) A description of the pirpose and reliability of the pipeline;</li> <li>(2) An overview of the hazards of the pipelise and prevention measures used:</li> <li>(3) Information about damage prevention;</li> <li>(4) How to recognize and respond to a leak; and</li> <li>(5) How to get additional information:</li> </ul>					×	
.517	· · · · · · · · · · · · · · · · · · ·	Pressure Testing					T	t-
,709		3 Maximum Allowable O	perating Pressure (MAOP) corporated into 192.121 & .123. (Final Rule Pub.	24 December, 2008)				
	.625	Odorization of Gas	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~					L
	.705	Pairolling (Refer to Tal	le Below)				<u> </u>	L
					•			
		Class Location	At Ilighway and Railroad Crossings	At All Other Places				
		1 and 2	2/yr (7½ months)	1/yr (15 months)				
		3	4/yr (4½ months) 4/yr (4½ months)	2/yr (7% months) 4/yr (4% months)	Į.			
	Ļ	ېرىنى ئەرىپىغ ئەر يېرىنى ئەرىپىغىنىيە بىسىسىم ئىستىپىدىنىيە بىرىپىغىنىيە بىرىپىيە بىرىپىيە بىرىپىيە بىرىپىيە بى يېرىپىغى ئەرىپىغى ئەرى			<u>[</u>			
.709	.706	Leak Surveys (Refer to	Table Below)	****			Ľ	
	(	Class Location	Required	Not Exceed	Ĩ			
	<u>}.</u>	1 and 2	1/yr	15 months	ł			
	Ì	3	2/yr*	7% months	1	•		
		4	4/yr.*	4½ months .	1			
	* Leak	detector equipment surv	ey required for lines transporting un-odorized ga	internet in the second se				
.603(b)	.721(b)(1)	Patrolline Business Dist	rict (4 per yr/4% months)		1	<b> </b>	1.6	Г
	.721(b)(2)		tess District (2 per yr/?% months)		<u> </u>		1.1	+
	.723(b)(1)		ess District (1 per yr/15 months)		+			+
	.723(b)(2)	Leakage Survey	contributer ( ) print meaning		+	ļ	L	1
		Outside Business E	Serrict / Svegre ):			ľ	X	T
4	· ·····		tected distribution lines (3 years)				ĥ	
	.725	Tests for reinstating ser		<b></b>		<u> </u>	H	÷
.6031V.727g	.727		Inderwater Facility Reports				++-	$\vdash$
.709	.739		cgulating Stations (1 per yr/15 months)	****	+		╟─	+
11.242	.743		egulator Stations - Capacity (1 per yr/15 month		+		╫─	┢─
	.745	•	nimission Lines (1 per yr/15 months)		1.		<u>+</u> +	<u> </u>
.603(b)	747		ribution Lines (1 per yr/15 months)		+			┢
.709	.749		0 cubic feet)(1 per yr/15 months)		1		Ħ	T
.603(b)	.751		I Ignition (hot work permits)	Age (d. duige), a bei an dui an	• <b> </b>			t
	.755	Caulked Bell and Spigo			1		Ť <b>I</b> -	T
	.225(b)	Welding - Procedure			1		<u>†</u> †-	T
	.227/.229	Welding - Welder Qual	ification	<b></b>	1			$\mathbf{T}$
	.243(b)(2)	NDT NDT Personnel			1	İ	$\square$	T
	283	Joining - Procedures	۱۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰		1		$\mathbf{H}$	T
	.285	Jaining - Personnel Qua	lifications		1			t
	,287	Joining - Inspector Qua			1			1-
	1			······································	•	ļ	++	1
.709	.243(1)	NDT Records (Pipeline	Life		1			1

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STANDARD INSPECTION REPORT OF A GAS DISTRIBUTION OPERATOR Valess otherwise noted, all code references are to 49CFR Part 192. S-Sanisfactory U=Unsatisfactory N/A=Not Applicable N/C=Not Ch If no Item is marked U, N/A, or N/C, an explanation must be included in this report. N/C - Not Checked

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Comments:

		CORROSION CONTROL PERFORMANCE AND RECORDS	S	U	N/A	N/C
.491	.491(a)	Maps or Records	1		X	
.491	.459	Examination of Buried Pipe when Exposed	T		Π	
.491	.465(a)	Annual Pipe-to-soil Monitoring (1 per yr/15 months) for short sections (10% per year; all in 10 years)			Π	
.491	.465(b)	Rectifier Monitoring (6 per yr/2% months)	T		Π	
.491	.465(c)	Interference Bond Monitoring - Critical (6 per yr/2% months)			Π	
.491	.465(c)	Interference Bond Moniforing - Non-critical (1 per yr/15 months)			Π	
.491	.465(d)	Prompt Remedial Actions			T.	
.491	.465(e)	Unprotected Pipeline Sulveys, CP active corrosion areas (1 per 3 eal yr/39 months)				ŀ
.491	467	Electrical isolation (Including Casings)			T	
.491	.469	Test Stations Sufficient Number				
.491	.47.1	Test Lead Maintenance			T	
.491	.473	Interference Currents	1		ľ	
.491	.475(a)	Internal Corrosion; Corrosive Gas Investigation				
.491	.475(b)	Internal Corrosion; Internal Surface Inspection; Pipe Replacement:	1			
491	.476 (d)	Internal Corrosion: New system design; Evaluation of Impact of configuration changes to existing systems				
.491	.477	Internal Corrosion Control Coupon Monitoring (2 per yr/71/2 months)			ľ	
.491	.481	Atmospheric Corrosion Control Monitoring (1 per 3 cal yr/39 months anshare: 1 per yr/15 manths affshare)				
.491	.483/.485	Remedial: Replaced or Repaired Pipe; coated and protected; corrosion evaluation and actions			Ψ	

Comments:

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## Attachment 1

Distribution Operator Compressor Station Inspection Unless otherwise noted, all code references are to 49CFR Part 192. S.-Satisfactury U-Unsatisfactory N/A - Not Applicable If an item is marked U, N/A, or N/C, an explanation must be included in this report. N/C - Not Checked

.605(b)		COMPRESSOR STATION PROCEDURES	S	U	N/A	N/C
	.605(b)(6)	Maintenance procedures, including provisions for isolating units or sections of pipe and for parging before returning to service		· · · · ·	×	
	.6115(6)(7)	Starting, operating, and shutdown procedures for gas compressor units	-		TT	
5	.731	Inspection and testing procedures for remote control shutdowns and pressure relieving devices (1 per yr/15 months), prompt repair or replacement				
	.735	<ul> <li>(a) Storage of excess flammable or combustible materials at a safe distance from the compressor buildings</li> </ul>		Ť	Π	
		(h) Tank must be protected according to NFPA #30			Π	
	.736	Compressor buildings in a compressor station must have fixed gas detection and alarm systems (must be performance tested), unless:				
		<ul> <li>50% of the upright side areas are permanently open, or</li> </ul>		ŀ.,	Π	
	T	It is an unattended field compressor station of 1000 hp or less			14	1

Comments:

		COMPRESSOR STATIONS INSPECTION (Field) (Note: Focilities may be "Grandfathered")	S	U	N/A	N/C
163	(c)	Main operating floor must have (at least) two (2) separate and unobstructed exits		· ·	×	
		Door latch must open from inside without a key			1	Γ
		Doors must swing outward				
	(d)	Each fence around a compressor station must have (at least) 2 gates or other facilities for emergency exit			Π	
		Each gate located within 200 ft of any compressor plant building must open outward	Τ		Π	
		When occupied, the door must be opened from the inside without a key			T	
	(r)	Does the equipment and wiring within compressor stations conform to the National Electric Code, ANSI/NFPA 707				
	(a)	If applicable, are there liquid separator(s) on the intake to the compressors?				
	(b)	Do the liquid separators have a manual means of removing liquids?				
	•	If slugs of liquid could be carried into the compressors, are there automatic dumps on the separators. Automatic compressor shutdown devices, or high liquid level alarms?		, 	$\downarrow$	Ł
167	(4)	ESD system must:	L			
		Discharge blowdown gas to a sale location			8	
		- Block and blowdown the gas in the station				
		<ul> <li>Shut down gas compressing equipment, gas flice, electrical facilities in compressor building and near gas headers</li> </ul>				
		Maintain necessary electrical circuits for emergency lighting and circuits needed to protect     cquipment from damage			$  \mathbf{v}  $	
		ESD system must be operable from at least two lucations, each of which is:			<b>.</b>	
		· Outside the gas area of the station	L	i	X	
		· Not more than 500 feet from the limits of the station			Ц	
		ESD switches near emergency exits?				Ŀ
	(b)	For stations supplying gas directly to distribution systems, is the ESD system configured so that the LDC will not bu shut down if the ESD is activated?			1	
	(c)	Are ESDs on platforms designed to actuate automatically by	]			•
		For unatlended compressor stations, when:	L			
		· The gas pressure equals MAOP plus 15%?			X	

Forn 2 Standard Inspection Report of a Gas Distribution Operator (Rev. 03/23/09 through Final Ruly of 16 January 2009)

## Attachment 1

Distribution Operator Compressor Station Inspection Unless otherwise noted. All code references are to 49CFR Part 192, S-Satisfactory U:- Unsatisfactory N/A - Not Applicable If an item is marked U, N/A, or N/C, an explanation must be included in this report.

N/C - Not Checked

		COMPRESSOR STATIONS INSPECTION (Field) (Note: Facilities may be "Grandfathered")	S	U	N/A	N/C
	******	An uncontrolled fire occurs on the platform?	1	1	×	
		+ For compressor station in a building, when	1	<b>E</b>	چە <u>مىسىلىرد.</u>	
		An uncontrolled fire occurs in the building?	1		4	T
		<ul> <li>Gas in air reaches 50% or more of LEL in a building with a source of ignition (facility conforming to NEC Class 1, Group D is not a source of ignition)?</li> </ul>			Π	
.171	(ð)	Does the compressor station have adequate fire protection facilities? If fire pumps are used, they must not be affected by the ESD system.			Π	
	(6)	Do the compressor station prime movers (other than electrical movers) have over-speed shutdown?				
	(c)	Do the compressor units alarm or shutdown in the event of inzdequate cooling or lubrication of the unit(s)?		1.164		
	(d)	Are the gas compressor units equipped to automatically stop fuel flow and yeat the engine if the engine is stopped for any reason?				
	(e)	Are the mufflers equipped with vents to vent any trapped gas?				
-,173		Is each compressor station building adequately ventilated?				Γ
.457		is all buried piping cathodically protected?				
,481		Atmospheric corrosion of aboveground facilities				
.603		Does the operator have procedures for the start-up and shut-down of the station and/or compressor units?				
		Are facility maps current/up-to-date?	T.	[· · · ·	Π	
.615		Emergency Plan for the station on slie?	Ι.	Γ		T
.619		Review pressure recording charts and/or SCADA	1		ţ	T
707	444-4	Maixers	T	<b>I</b>	1	T
.731		Overpressure protection - reliefs or shutdowns	1	1		T
,735		Are combustible materials in quantities exceeding normal daily usage, stored a safe distance from the compressor building?			I.	
		Are aboveground oil or gasoline storage tanks protected in accordance with NFPA standard No. 30?	1			
.736		Gas detection - location	1	Γ	Y	Γ

#### Comments:

Contraction of Contraction of Contract	C	OMPRESSOR STATION O&M PERFORMANCE AND RECORDS	s	U	N/A	N/C
.709.	.731(a)	Compressor Station Relief Devices (1 per yr/15 months)			4	
	731(c)	Compressor Station Emergency Shutdown (1 per yr/15 months)			ΠŢ	
	.736(c)	Compressor Stations - Detection and Alarms (Performance Test)	ŀ		5	

Comments:

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Form 2 Standard Inspection Report of a Gas Distribution Operator (Rev. 03/23/09 through First Rule of 16 January 2009)

## Recent PHMSA Advisory Bulletins (Last 2 years)

Leave this list with the operator.

Number	Date	Subject
ADB-07-01	April 27, 2007	Pipeline Safety: Senior Executive Signature and Certification of Integrity
		Management Program Performance Reports
ADB-07-02	September 6, 2007	Pipeline Safety: Updated Notification of the Susceptibility to Premature
	•	Brittle-Like Cracking of Older Plastic Pipe
ADB-07-02	February 29, 2008	Correction - Pipeline Safety: Updated Notification of the Susceptibility to
		Premature Brittle-Like Cracking of Older Plastic Pipe
ADB-08-01	May 13, 2008	Pipeline Safety - Notice to Operators of Gas Transmission Pipelines on the
		Regulatory Status of Direct Sales Pipelines
ADB-08-02	March 4, 2008	Pipeline Safety - Issues Related to Mechanical Couplings Used in Natural Gas
		Distribution Systems
ADB-08-03	March 10, 2008	Pipeline Safety - Dangers of Abnormal Snow and Ice Build-Up on Gas
		Distribution Systems
ADB-08-04	June 5/ 2008	Pipeline Safety - Installation of Excess Flow Valves into Gas Service Lines
ADB-08-05	June 25, 2008	Pipeline Safety - Notice to Hazardous Liquid Pipeline Operators of Request for
		Voluntary Adv Notification of Intent To Transport Biofuels
ADB-08-06	July 2, 2008	Pipeline Safety - Dynamic Riser Inspection, Maintenance, and Monitoring
		Records on Offshore Floating Facilities

Fivin I Standard Inspection Report of a Gas Distribution Operator (Rev. 03/23/09) through Final Rule of Hi January 2009).

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# **CHAPTER 4**

# **APPENDIX B**

# **EXCERPT FROM 2010 AUDIT OF PG&E'S PENINSULA DIVISION**

STATE OF CALIFORNIA

ARNOLD SCHWARZENEGGER, Governor

PUBLIC UTILITIES COMMISSION 505 VAN NESS AVENUE SAN FRANCISCO, CA 94102-3298

September 24, 2010

Mr. Glen Carter, Senior Director Gas Engineering Pacific Gas and Electric Company 375 North Wiget Lane Walnut Creek, CA 94598

SUBJECT: General Order 112-E Audit of PG&E's Peninsula Division

Dear Mr. Carter:

On behalf of the Utilities Safety and Reliability Branch of the California Public Utilities Commission, Aimee Cauguiran, Terence Eng, and I conducted a General Order (GO) 112-E Inspection of PG&E's Peninsula Division from August 9 through 13, 2010. The audit included a review of Peninsula Division records for the period 2008 and 2009.

During the audit, we identified one or more violations of GO 112-E. These violations are itemized within the Audit Summary enclosed with this letter. Please note that the violations included within the Audit Summary may differ from the potential violations discussed with PG&E's representatives during the exit meeting of our audit. Any differences are generally attributed to research, conducted subsequent to the audit, which can result in some potential violations being excluded and other violations, not discussed during the exit meeting, being included in the Audit Summary.

Within 30 days of your receipt of this letter, please provide a written response indicating the measures taken by PG&E to address the violations noted in the Audit Summary.

If you have any questions, please contact me at (415) 703-2214.

Sincerely,

Dennis Lee, P.E. Utilities Engineer Utilities Safety and Reliability Branch Consumer Protection and Safety Division

Enclosure: Audit Summary

Copy: Larry Deniston – Pacific Gas and Electric Company Larry Berg – Pacific Gas and Electric Company



## AUDIT SUMMARY

#### AREAS OF VIOLATIONS

### 1. Title 49 CFR §192.723 Distribution systems: Leakage surveys.

§192.723 (b)(1) requires that "A leakage survey with leak detector equipment must be conducted in business districts, including tests of the atmosphere in gas, electric, telephone, sewer, and water system manholes, at cracks in pavement and sidewalks, and at other locations providing an opportunity for finding gas leaks, at intervals not exceeding 15 months, but at least once each calendar year."

During the review of the annual leak survey records, we noted that some of the areas indicated on map 3348-C1 were not leak surveyed in 2008 as required by §192.723 (b)(1). The entire area on map 3348-C1 was leak surveyed in 2009.

### 2. Title 49 CFR §192.621 Maximum allowable operating pressure: High-pressure distribution systems.

§192.621 requires that "No person may operate a segment of high pressure distribution system at a pressure that exceeds the lowest of the following pressures, as applicable: (1) The design pressure of the weakest element in the segment..."

### Title 49 CFR §192.619 Maximum allowable operating pressure: Steel or plastic pipelines.

§192.619 requires that "No person may operate a segment of steel or plastic pipeline at a pressure that exceeds the lowest of the following: (1) The design pressure of the weakest element in the segment..."

During the review of the regulator station records, we noted that the pressure ratings on the downstream valves at regulator / relief stations, C-28, A-59, and A-15, were less than the maximum allowable operating pressure (MAOP) of the regulator / relief station for which the valves were employed. Regulator / relief station C-28's downstream valve pressure rating is 175 psi, which is less than the inlet station MAOP of 375 psi. Regulator / relief station A-59's downstream valve pressure rating is 125 psi, which is less than the inlet station A-15's downstream valve pressure rating is 200 psi, which is less than the inlet station MAOP of 375 psi.

PG&E performed Operational Lockup at these stations in 2008 and 2009 as part of its normal Regulator Station Maintenance. If the regulators at these stations do not properly lockup during testing or normal operations, the pressure ratings on the valves could be exceeded, which is a violation of §192.621 and §192.619.

Please ensure that PG&E's entire system regulator / relief stations have the appropriate station pressure ratings so that the pressure ratings will not be exceeded.

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A completed Standard Inspection Report is to be submitted to the Director within 60 days from completion of the inspection. A Post Inspection Memorandum (PIM) is to be completed and submitted to the Director within 30 days from the completion of the inspection, or series of inspections, and is to be filed as part of the Standard Inspection Report.

Inspector/Submit Date: Dennis Lec / 9-24-2010 Per Review/Date: 0/6 Per Review/Date: 0/6 Per Review/Date: 0/6 Per Review/Date: 0/6 Prost INSPECTION MEMORANDUM (PIN) Name of Derator: Pacific Gas and Electric Company Name of Unit(3): Pacific Gas and Electric Company Name of Unit(3): Pacific Gas and Electric Company Name of Dray & Commodity: Inspection Type: GO 112-E of PG&E Peninsula Division Inspection Date(9): 8/9/10-8/13/10 PHMSA Representative(0):Dennis Lee, Aimee Cauguiran, & Terence Eng AFO Days: Company System Maps (copies for Region Files):n/a Validate SMART Data (components, miles, etc.): Acquisition(s), Sale or New Construction (submit SMART update): Validate Additional Requirements Resulting From Waiver(s) or Special Permit(s):n/a Summary: This report is a centralized audit of documents that form Pacific Gas and Electric Company's (PG&E) Operations, Maintenance, and Emergency Pins. This audit examined gas traansission -related findings). Findings: The findings for each subpart are noted in each individual section. A written report noting the findings will be sent to the operator.	Insp	ection Report	Post In	specti	on Memorandum
Director Approval/Date:         n/a           POST INSPECTION MEMORANDUM (PIM)         Name of Operator:         Pacific Gas and Electric Company         OPID #: 15007           Name of Unit(s):         Pacific Gas and Electric Company         Unit #(s):         Records Location: San Francisco, CA         Unit #(s):           Name of Unit(s):         Pacific Gas and Electric - Distribution         Unit #(s):         Records Location: San Francisco, CA         Activity #           Unit Type & Commodity:         Inspection Type:         GO 112-E of PG&E Peninsula Division         Inspection Date(s): 8/9/10-8/13/10           PHMSA Representative(s):Dennis Lee, Aimee Cauguiran, & Terence Eng         AFO Days:         Company System Maps (copies for Region Files):n/a           Validate SMART Data (components, miles, etc):         Acquisition(s), Sale or New Construction (submit SMART update):         Validate Additional Requirements Resulting From Waiver(s) or Special Permit(s):n/a           Summary:         This report is a centralized audit of documents that form Pacific Gas and Electric Company's (PG&E) Operations, Maintenance, and Emergency Plans. This audit examined gas transmission and distribution standards; however, only distribution-related findings are included in this report (see PHMSA Form-1 for transmission-related findings).			Inspector/Submit Date:	n/a	E
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Page 1 of 25 Form-2 Standard Inspection Report of a Gas Distribution Operator (Rev. 03/19/10 through Amdt 192-112) 1

OD ID No U	icitic Cas and Ci	ectric Company		······································
Name of Operator: Pa OP ID No. <sup>(1)</sup>	,	· · · · · · · · · · · · · · · · · · ·	Unit ID No. <sup>(1)</sup>	
HQ Address:			System/Unit Name & Ad	dress: (1)
77 Beale San Francisco, CA			- - -	
Co. Official:	n/a		Activity Record ID No.:	n/a
Phone No.:	n/a		Phone No.:	n/a
Fax No.:	n/a		Fax No.:	n/a
Emergency Phone No.:			Emergency Phone No.:	n/a
Persons Intervi		· - T	itle	Phone No.
See Sign In Sh			n In Sheet	See Sign In Sheet
				•
PHMSA Representative	(s) <sup>(1)</sup>	e	•	Inspection Date(s) <sup>(1)</sup>
		ion Files): No maps obtain	ed from the audit	
Portion of Unit Inspecto See inspection report.	ed: <sup>(1)</sup>		<u></u>	нин на на на на на на на на на на на на на

<sup>1</sup> Information not required if included on page 1.

Page 2 of 25 Form-2 Standard Inspection Report of a Gas Distribution Operator (Rev. 03/19/10 through Austri, 192-112)

Unless otherwise noted, all code references are to 49CFR Part 192. S - Satisfactory U - Unsatisfactory N/A - Not Applicable N/C - Not Checked If an item is marked U, N/A, or N/C, an explanation must be included in this report.

				GAS SYSTE	M OPERATIO	ONS				
Gas Supp	olier	n/a			Date:	n/a			**************************************	*********************
Unaccounted for gas: n/a		nla	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		Services:	Residential		Commercial	Industrial	Other
		1012 ,			or nets.	n/a		n/a	n/a	n/a
	Operating 1	Pressuire(s):		MAOP (W	/ithin last year)		]	Actual O (At ti	perating Press me of Inspection)	ure
Feeder:	n/a		n/a				n/a			
Town:	n/a		n/a			• • • • • • • • • • • • • • • • • • •	n/a			**
Other:	n/a	· · · · ·	n/a				n/a			· · · · · · · · · · · · · · · · · · ·
Does the	operator have	any transmission pipeling	s?	n/a						•
For comp	ressor station	inspections, use Attachm	ent 4.	n/a						

### 49CFR PART 191

		REPORTING PROCEDURES				<b>.</b> 10	ILLER S
	Procedures	for gathering data for incident reporting					
	191.5	Telephonically reporting incidents to NRC (800) 424-8802	x				1
	191.15(a)	30-day follow-up written report (Form 7100-2)	x	. ·		[	1
	191.15(b)	Supplemental report (to 30-day follow-up)	·X		Ι		1
.605(a)	191.23	Reporting safety-related condition (SRCR)	x	1	1		1
	191.25	Filing the SRCR within 5 days of determination, but not later than 10 days after discovery	X		1		1
.605(d)	Instruction	s to enable operation and maintenance personnel to recognize potential Safety Related Conditions	x	1	1		1

Comments:

191.15(b), 191.23, 191.25, 192.605(d): S4413 Reporting requirements

191.5, 191.15(a): Gas Asset Strategy On-Call Manual-Reporting Procedures (including contact numbers, forms, etc.)

Other: Emergency Plan, WP4000-02 (Leading document)

## 49CFR PART 192

.13(c)		CUSTOMER AND EFV INSTALLATION NOTIFICATION PROCEDURES	S	3 <b>0</b> /	эй
	.16	Procedures for notifying new customers, within 90 days, of their responsibility for those selections of service lines not maintained by the operator.	x		
	.381	If EFVs are installed, they must meet the performance requirements of §192.381	x		
	.383	If the operator has a voluntary installation program for excess flow valves, the program must meet the requirements outlined in §192.383.	x		
	.383	If the operator does not have a voluntary program for EFV installations, customers must be notified in accordance with § 192.383.	x		

,605(a)		NORMAL OPERATING and MAINTENANCE PROCEDURES	ŝ	<b>NA</b>	N/C
	.605(a)	O&M Plan review and update procedure (1 per year/15 months)	x		
	.605(b)(3)	Making construction records, maps, and operating history available to appropriate operating personnel	x		
	.605(b)(5)	Start up and shut down of the pipeline to assure operation within MAOP plus allowable buildup	x		
	605(b)(8)	Periodically reviewing the work done by operator's personnel to determine the effectiveness and adequacy of the procedures used in normal operation and maintenance and modifying the procedures when deficiencies are found	x		
	.6 <b>0</b> 5(b)(9)	Taking adequate precautions in excavated trenches to protect personnel from the hazards of unsafe accumulations of vapors or gas, and making available when needed at the excavation, emergency rescue equipment, including a breathing apparatus and a rescue harness and line	x	_	

Page 3 of 25

Form-2 Standard Inspection Report of a Gas Distribution Operator (Rev. 03/19/10 through Amdt. 192-112)

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.605(a)	NORMAL OPERATING and MAINTENANCE PROCEDURES	s	ILC N	Ab/c
1	.605(b)(10) Routine inspection and testing of pipe-type or bottle-type holders	x		T
ور المراجع المراجع المراجع المراجع المراجع المراجع المراجع المراجع المراجع المراجع المراجع المراجع ا	.605(b)(11) Responding promptly to a report of a gas odor inside or near a building, unless the operator's emergency proced. under § 192.615(a)(3) specifically apply to these reports.	x		
	es for 192.16 are in WP5449-02, which provides 192.16 notice to customers when work takes place; st S A-93.3 disallows EFVs for 1/4" CTS because no EFV available for 1/4" (email provided noting this fact)		by WP	5449-
	, <b>1</b>	/		
192.605(	a): WP4000-02 established in 09/2008			
192.605(	b)(3): UO Std S0470		•	
· •				
,	b)(5): UO Std S4125, D-S0430			
192.605(	b)(5): UO Std S4125, D-S0430 b)(8): IQI and PG&E's Quality Assurance Program			
192.605( 192.605(				
192.605( 192.605( 192.605(	b)(8): IQI and PG&E's Quality Assurance Program			

192.605(b)(11): Addressed in company's Gas Emergency Procedures (CGEP) Part 1, Section 5.8 and WP6434-01 (Gas Leak & Odor Investigation); UO Std S6434

S0470 (Design & Construction Standards)

GS&S A93.3 Excess Flow Valves voluntary installation program

.605(a)		CHANGE in CLASS LOCATION PROCEDURES		N/A	
	.609	Class location study	X		
	.611	Confirmation or revision of MAOP	X		

Comments:

UO Std S4127 and D-S0430/S4125

.613		CONTINUING SURVEILLANCE PROCEDURES	S	5	N/AN/
	.613(a)	Procedures for surveillance and required actions relating to change in class location, failures, leakage history, corrosion, substantial changes in CP requirements, and unusual operating and maintenance conditions	x		
	.613(b)	Procedures requiring MAOP to be reduced, or other actions to be taken, if a segment of pipeline is in unsatisfactory condition	x		

#### Comments:

192.613(a): UO Std S4127; TD4412P-07 Patrolling of Pipelines and Mains; UO Std s0350/S4110 Leak Survey and Repair; GS&S O-16 and UO Std S4133 Corrosion Control of Distribution and Transmission Pipelines; UO Std S2333 Material Problem Reporting; UO Std S4413 CPUC Curtailments; UO Std S0353 Physical Inspection of Mains and Pipeline Services; GS&S A93.1 Plastic Gas Distribution System Construction and Maintenance.

192.613(b): UO Std S4134 (DM-Tab A) and TD4412-07, S4127

.605(a)		DAMAGE PREVENTION PROGRAM PROCEDURES	S	U N	IAN/C
	.614(c)	Participation in a qualified one-call program, or if available, a company program that complies with the following:			
		(1) Identify persons who engage in excavating	x		
		(2) Provide notification to the public in the One Call area	x		
		(3) Provide means for receiving and recording notifications of pending excavations	x		

#### Page 4 of 25

Form-2 Standard Inspection Report of a Gas Distribution Operator (Rev. 03/19/10 through Amdt, 192-112)

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DAMAGE PREVENTION PROGRAM PROCEDURES	S	<b>1</b> 0	VAN	Ϋ́¢
(4) Provide notification of pending excavations to the members	x		1	
(5) Provide means of temporary marking for the pipeline in the vicinity of the excavations	x			
 (6) Provides for follow-up inspection of the pipeline where there is reason to believe the pipeline could be damaged	x			
 (i) Inspection must be done to verify integrity of the pipeline	X			
(ii) After blasting, a leak survey must be conducted as part of the inspection by the operator	x			

#### Comments:

UO Std S4412 Protection of Underground Infrastructure

PG&E Manual titled "Protection of Underground Infrastructure"

UO Std S4412 (TS); WP4412-05(c) and S4110 Attachment 1 (Leak survey requirements following blasting)

192.614(c)(6): Gas Information Bulletin 151 - Rev. 2

5		EMERGENCY PROCEDURES	S		SUS.	
	.615(a)(1)	Receiving, identifying, and classifying notices of events which require immediate response by the operator	x			
	.615(a)(2)	Establish and maintain communication with appropriate public officials regarding possible emergency	x			
	.615(a)(3)	Prompt response to each of the following emergencies:				
	-	(i) Gas detected inside a building	x			
		(ii) Fire located near a pipeline	x	·		
		(iii) Explosion near a pipeline	x			
		(iv) Natural disaster	x			i
	.615(a)(4)	Availability of personnel, equipment, instruments, tools, and material required at the scene of an emergency	x			
	.615(a)(5)	Actions directed towards protecting people first, then property	X			
	.615(a)(6)	Emergency shutdown or pressure reduction to minimize hazards to life or property	x			
	.615(a)(7)	Making safe any actual or potential hazard to life or property	x			
	.615(a)(8)	Notifying appropriate public officials required at the emergency scene and coordinating planned and actual responses with these officials	x			
	.615(a)(9)	Instructions for restoring service outages after the emergency has been rendered safe	x			
	,615(a)(10)	Investigating accidents and failures as soon as possible after the emergency	x			
	.615(b)(1)	Furnishing applicable portions of the emergency plan to supervisory personnel who are responsible for emergency action	x			
	.615(b)(2)	Training appropriate employees as to the requirements of the emergency plan and verifying effectiveness of training	x			
	.615(b)(3)	Reviewing activities following emergencies to determine if the procedures were effective	X			
	.615(c)	Establish and maintain liaison with appropriate public officials, such that both the operator and public officials are aware of each other's resources and capabilities in dealing with gas emergencies	x			

#### Comments:

PG&E's Emergency Plan consists of 2 parts: (1) Basic Plan (company-wide), and (2) Appendix (contains District/Division-specific information). Each PG&E division is responsible for updating their own binders (Appendix) including any changes received on the Basic plan. The Basic Plan is reviewed by PG&E's SME by 8/21 of each year.

Division personnel who are possible first responders (including managers, supervisors, mechanics, etc.) are required to take an annual web-based training and evaluation.

S6434 and WP6434-01: Gas Leak & Odor Response contains Field Services procedures for responding to customer calls of gas leaks or

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Comments: odor complaints.	ulana ulan yang menyang menyang menyang kenyang kenyang kenyang menyang kenyang kenyang kenyang kenyang kenyang	

		PUBLIC AWARENESS PROGRAM PROCEDURES (Also in accordance with API RP 1162)		to N	
.605(a)	.616	Public Awareness Program also in accordance with API RP 1162 (Amdt 192-99 pub. 5/19/05 eff. 06/20/05 and Amdt 192-not numbered pub 12/13/07 eff. 12/13/07).			
	.616(d)	The operator's program must specifically include provisions to educate the public, appropriate government organizations, and persons engaged in excavation related activities on:			
		(1) Use of a one-call notification system prior to excavation and other damage prevention activities;	x		
		(2) Possible hazards associated with unintended releases from a gas pipeline facility;	x		
		(3) Physical indications of a possible release;	x		
		(4) Steps to be taken for public safety in the event of a gas pipeline release; and	x		
		(5) Procedures to report such an event (to the operator).			1
·	.616(e)	The operator's program must include activities to advise affected municipalities, school districts, businesses, and residents of pipeline facility locations.	x		
	.616(1)	The operator's program and the media used must be comprehensive enough to reach all areas in which the operator transports gas.	x		
•	.616(g)	The program must be conducted in English and any other languages commonly understood by a significant number of the population in the operator's area?	x		
	.616(h)	IAW API RP 1162, the operator's program should be reviewed for effectiveness within four years of the date the operator's program was first completed. For operators in existence on June 20, 2005, who must have completed their written programs no later than June 20, 2006, the first evaluation is due no later than June 20, 2010.			
	.616(j)	Operators of a master meter or petroleum gas systems (unless the operator transports gas as a primary activity) must develop/implement a written procedure to provide its customers public awareness messages twice annually that includes: (1) A description of the purpose and reliability of the pipeline; (2) An overview of the hazards of the pipeline and prevention measures used; (3) Information about damage prevention; (4) How to recognize and respond to a leak; and (5) How to get additional information.		,	ĸ
		(See this subpart for requirements for master meter or petroleum gas system operators not located on property controlled by the operator.)			

Comments:

PG&E submitted its PAP into the USDOT Clearinghouse. The USRB received the results of the Clearinghouse's review and has worked with PG&E to resolve the issues noted by the Clearinghouse. Safety Health and Claims 103 addresses PG&E's PAP. PG&E's RMP-12 addresses PG&E's PAP.

Master-meter section 192.616(j) is not applicable to PG&E since it does not operate master-meter systems.

.617		FAILURE INVESTIGATION PROCEDURES	s a	N/A	N/C
	.617	Analyzing accidents and failures including laboratory analysis where appropriate to determine cause and prevention of recurrence	x		

Comments:

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Comments: WP1465-02: Gas Event and Near Hit Reporting S2333: Material Problem Reporting

.605(a)	MAOP PROCEDURES	*************	Ś	a a	NA	Sic.
	.619 Establishing MAOP so that it is commensurate with the class location		X			299921
	MAOP cannot exceed the lowest of the following:					
	(a)(1) Design pressure of the weakest element		X	T		
	(a)(2) Test pressure divided by applicable factor		X			
	(a)(3) The highest actual operating pressure to which the segment of line was subjected during the 5 years preceding the applicable date in second column, unless the segment was tested according to .619(a)(2) after the applicable date in the third column or the segment was uprated according to subpart K.					
	Pipeline segment Pressure da	The second s		ł	123	
	- Onshore transmission line that was a gathering line not subject to this part before March 15, 2006.		x			
	All other pipelines. July 1, 1970	July 1, 1965.		ļ		
	(a)(4) Maximum safe pressure determined by operator.					
	(b) Overpressure protective devices must be installed if .619(a)(4) is applicable	¥-	x			
	(c) The requirements on pressure restrictions in this section do not apply in the operator may operate a segment of pipeline found to be in satisfactory of operating and maintenance history, at the highest actual operating pressure to subjected during the 5 years preceding the applicable date in the second column (a)(3) of this section. An operator must still comply with § 192.611	condition, considering its which the segment was				
	.621 MAOP - High Pressure Distribution Systems Note: New PA-11 design criteria is incorporated into 192.121 & .123, (Final 2008)	Rule Pub. 24 December	x			
	.623 Max Min, Allowable Operating Pressure - Low Pressure Distribution Systems		X			

Comments: DCS Std D-S0430, GTS Std S4125, GS&S A-34

For low pressure distribution systems installed prior to July 1, 1970, MAOP is established as 150% of Standard Delivery Pressure or 7inches w.c., the MAOP is 10-1/2 inches w.c.

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Bulletin 302 addresses, "Establishing MAOP, Exhibit A"

.13(c)	PRESSURE TEST PROCEDURES						
	.503 Pressure testing	x					
Comment							

GS&S A-34 Piping Design and Test Requirements, Attachment A -- Test Requirements DCS Std D-S0430 and GTS Std S4125

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.605(a)		ODORIZATION of GAS PROCEDURES	S	D	N/A	NC
	.625(a)	Distribution lines must contain odorized gas. – must be readily detectable by person with normal sense of smell at $\frac{1}{2}$ of the LEL	x			
	.625(b)	Odorized gas in Class 3 or 4 locations (if applicable).	x			
	.625(f)	Periodic gas sampling, using an instrument capable of determining the percentage of gas in air at which the odor becomes readily detectable.	x			

Comments:

UO Std S4350 Gas Odor Detection at 0.6% gas in air or less

Periodic sampling is done monthly and recorded on Monthly Odorization Report (Form 62-4650)

,605(a)	+	TAPPING PIPELINES UNDER PRESSURE PROCEDURES	S	ŤŪ (	¥/Å	s/c
	,627	Hot taps must be made by a qualified crew			T	
		NDT testing is suggested prior to tapping the pipe. Reference API RP 2201 for Best Practices.	×		ĺ	

#### Comments:

GS&S C-38 Plastic Lateral Connection, Hot Tap Procedure GS&S A-52 Hot Tap Branch Connection Requirements GS&S D-40 Weld Inspection

.605(a)		PIPELINE PURGING PROCEDURES	S		N/A	ŇĢ
	.629	Purging of pipelines must be done to prevent entrapment of an explosive mixture in the pipeline		$\mathcal{L}(\mathcal{C})$	A.	
		(a) Lines containing air must be properly purged.	x			
		(b) Lines containing gas must be properly purged	. X			

Comments:

GS&S A-38 Procedure for Purging Gas Facilities, Atlachment A and B

WP4100-01 Hot and Cold Work Methods for Natural Gas Transmission Pipeline Shutdown and Tie-in, which replaces S4131, August 2008

.605(a)		MAINTENANCE PROCEDURES	S	U	Ŋ/A	ŇĊ
	.703(b)	Each segment of pipeline that becomes unsafe must be replaced, repaired, or removed from service	x			
	(c)	Hazardous leaks must be repaired promptly	X			

Comments:

192.703(b): US Std S4430 CGT Gs Facility Requirements; UO Std S4134 Selection of Steel Gas Pipeline Repair Methods; UO Std S4129 Deactivation of Gas Facilities

192.703(c): UO Std S4110/S0350 addresses repairs of hazardous leaks; UO Policy 3-7 Gas and Electric Operations, Maintenance and Construction; CT&CS S0205 Replacement of Deteriorated or Damaged Facilities; GS&S A-66 Repair of Cast Iron; GS&S A-67 Repair of Copper and Gas Bulletin 246; S4100-11

WP4100-11 Deactivation and/or Retirement of Underground Gas Facilities

.605(b)	Т	RANSMISSION LINES - PATROLLING & LEAKAGE SURVEY PROCEDURES	<b>.</b>	Û	N/A	NÍÇ
	.705(a)	Patrolling ROW conditions	X			
	(b)	Maximum interval between patrols of lines:	L	• ;•		對對

	INANSMISSION LINES	- PATROLLING & LEAKAGE SURV	ET FROCEDURES			Y STAN
	Class Location	At Highway and Railroad Crossings	At All Other Places	1		
1 and 2 2/yr (7½ months)	2/yr (7½ months)	1/yr (15 months)				
	3	4/yr (4½ months)	2/yr (7½ months)			
	4	4/yr (4½ months)	4/yr (4½ months)			ł
			Terrest Hanning States and and a state of a	•		
.706	Leakage surveys – 1 yea	r/15 months		X		
	Leak detector equipme	nt survey requirements for lines transporting un	-odorized gas	x		
	(a) Class 3 locations - 7% months but at least twice each calendar year					
	(b) Class 4 locations -	41/2 months but at least 4 times each calendar	year	x		

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#### Comments:

192.705(a): WP4412-07

192.705(b): UO Std S4111, Attachment 1 Procedure for Patrolling Pipelines and Mains

192.706(a) and (b): WP4110-05, UO Std S4110 Leak Survey and Repair of Gas Transmission and Distribution Facilities, Attachment +, Table 1 Frequency of Periodic Required Gas Leak Surveys, CGT Transmission Class 3 and 4, Semi-annual

.605(b)	DIST	RIBUTION SYSTEM PATROLLING & LEAKAGE SURVEY PROCEDURES	S.		ŊA	Sie
	.721(a)	Frequency of patrolling mains must be determined by the severity of the conditions which could cause failure or leakage (i.e., consider cast iron, weather conditions, known slip areas, etc.)	x			
	.721(b)	Mains in places or on structures where anticipated physical movement or external loading could cause failure or leakage must be patrolled				
	(b)(1)	In business districts at intervals not exceeding 41/2 months, but at least four times each calendar year; and	<b>x</b> .	[ [		
	(b)(2)	Outside business districts at intervals not exceeding 71/2 months, but at least twice each calendar year	x			
	.723(a) & (b)	Periodic leak surveys determined by the nature of the operations and conditions.	x			
	(b)(1)	In business districts as specified, 1/yr (15 months)	X			
	(b)(2)	Outside of business districts as specified, once every 5 calendar years/63 mos.; for unprotected lines subject to .465(e) where electrical surveys are impractical, once every 3 years/39 mos.	x			

Comments:

192.721(a): WP4412-07 replaces UO Std S4111 192.721(b)(1): WP4412-07; UO Std S4412 192.721(b)(2): WP4412-07, US Std S 4111 192.723(a) and (b)(1) and (b)(2): UO Std S4110

ĺ	.605(b)		LINE MARKER PROCEDURES	3	NIANC	
		.707	Line markers installed and labeled as required	x		

Comments:

GS&S L-10 Pipeline Marker Posts

UO Std S4122, Attachment – Detailed Procedures, Table I-Pipeline Marking Requirements Appendix A-Pipeline Marker Posts and Signs in GS&S Section L

 .605(b)
 TRANSMISSION RECORD KEEPING PROCEDURES
 X

 .709
 Records must be maintained...
 X

 (a)
 Repairs to the pipe – life of system
 X

 (b)
 Repairs to "other than pipe" – 5 years
 X

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N/C - Not Checked

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TRANSMISSION RECORD KEEPING PROCEDURES	S	W.	N/A	Nic
(c) Operation (Sub L) and Maintenance (Sub M) patrols, surveys, tests - 5 years or until next one	X			

Comments:

192.709(a) and (c): UO Std S4110, Attachment 1 Leak Survey, Repair, Inspection, and Gas Quarterly Incident Report (Form "A"), Gas Dig-In Incident Report (Form "A1") shall be retained for the life on any gas facility plus 1 year. 192.709(b): Bulletin 319

.605(b)		TRANSMISSION FIELD REPAIR PROCEDURES	S.		N.A	
		Imperfections and Damages	100			
	.713(a)	Repairs of imperfections and damages on pipelines operating above 40% SMYS				
		(1) Cut out a cylindrical piece of pipe and replace with pipe of 3 design strength	X			
		(2) Use of a reliable engineering method	X			-
	.713(b)	Reduce operating pressure to a safe level during the repair	X			
		Permanent Field Repair of Welds			1.94	
	.715	Welds found to be unacceptable under §192.241(c) must be repaired by:				
		(a) Taking the line out of service and repairing in accordance with §192.245:	X			
		Cracks longer than 8% of the weld length (except offshore) must be removed	X			
	····	<ul> <li>For each weld that is repaired, the defect must be removed down to clean metal and the pipe preheated if conditions demand it</li> </ul>	x			
	· · · ·	Repairs must be inspected to ensure acceptability	X			
		<ul> <li>Crack repairs or defect repairs in previously repaired areas must be done in accordance with qualified written welding procedures</li> </ul>	x			
		(b) If the line remains in service, the weld may be repaired in accordance with §192.245 if:	x			
		(1) The weld is not leaking	X			
		(2) The pressure is reduced to produce a stress that is 20% of SMYS or less	X			
	•	(3) Grinding is limited so that 1/4 inch of pipe weld remains	x			
		(c) If the weld cannot be repaired in accordance with (a) or (b) above, a full encirclement welded split sleeve must be installed	x			
		Permanent Field Repairs of Leaks				
	.717	Field repairs of leaks must be made as follows:				derve Ster
		(a) Replace by cutting out a cylinder and replace with pipe similar or of greater design	X			
		(b)(1) Install a full encirclement welded split sleeve of an appropriate design unless the pipe is joined by mechanical couplings and operates at less than 40% SMYS	x			
		(b)(2) A leak due to a corrosion pit may be repaired by installing a bolt on leak clamp	X			
		(b)(3) For a corrosion pit leak, if a pipe is not more than 40,000 psi SMYS, the pits may be repaired by fillet welding a steel plate. The plate must have rounded corners and the same thickness or greater than the pipe, and not more than ½D of the pipe size	x			
		(b)(4) Submerged offshore pipe or pipe in inland navigable waterways may be repaired with a mechanically applied full encirclement split sleeve of appropriate design	x			
		(b)(5) Apply reliable engineering method	X			
		Testing of Repairs		No fer e		:於法
	.719(a)	Replacement pipe must be pressure tested to meet the requirements of a new pipeline	<u>]</u> .	<u>.</u>		
	(b)	For lines of 6-inch diameter or larger and that operate at 20% of more of SMYS, the repair must be nondestructively tested in accordance with §192.2410	x			

#### Comments:

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#### Comments:

Transmission field repair procedures are addressed in GS&S A-60, A-60.2, A-64, D-22, A-34, UO Std S4131, and Transmission standards S4110

.605(b)		TEST REQUIREMENTS FOR REINSTATING SERVICE LINES		ħ:	N/A	Nc
	.725(a)	Except for .725(b), disconnected service lines must be tested the same as a new service line.	X			
:	(b)	Service lines that are temporarily disconnected must be tested from the point of disconnection, the same as a new service line, before reconnect. See code for exception to this.	x			

#### Comments:

GS&S A-34 Piping Design & Test Requirements under General Information Section, Item #6 GS&S A-93.1 Plastic Gas Distribution System Construction and Maintenance references GS&S A-34 under its "Test Requirements" section on page 9 of 13

.605 <b>(</b> b)		ABANDONMENT or DEACTIVATION of FACILITIES PROCEDURES		N/A	S.C.
	.727(b)	Operator must disconnect both ends, purge, and seal each end before abandonment or a period of deactivation where the pipeline is not being maintained. Offshore abandoned pipelines must be filled with water or an inert material, with the ends sealed	x		
	(c)	Except for service lines, each inactive pipeline that is not being maintained under Part 192 must be disconnected from all gas sources/supplies, purged, and sealed at each end.	x		
	(d)	Whenever service to a customer is discontinued, do the procedures indicate one of the following:			
		(1) The valve that is closed to prevent the flow of gas to the customer must be provided with a locking device or other means designed to prevent the opening of the valve by persons other than those authorized by the operator	x		
		(2) A mechanical device or fitting that will prevent the flow of gas must be installed in the service line or in the meter assembly	x		
		(3) The customer's piping must be physically disconnected from the gas supply and the open pipe ends sealed	x		
	(e)	If air is used for purging, the operator shall ensure that a combustible mixture is not present after purging	x		
	.727(g)	Operator must file reports upon abandoning underwater facilities crossing navigable waterways, including offshore facilities.	x		

### Comments:

WP4100-11 Deactivation and/or Retirement of Underground Gas Facilities

GS&S A-38 Procedures for Purging Gas Facilities

GS&S A-93.2 Deactivation of Plastic Services

GS&S A-38.2 Pre-purging Procedure for 2" Plastic Pipe

WP6435-04 Procedures for Discontinuing Gas Service

.605(b)		PRESSURE LIMITING and REGULATING STATION PROCEDURES	S	Ű	NA	NÇ
	.739(a)	Inspection and testing procedures for pressure limiting stations, relief devices, pressure regulating stations and equipment (1 per yr/15 months)	x			
		(1) In good mechanical condition	X			
		(2) Adequate from the standpoint of capacity and reliability of operation for the service in which it is employed	x			,
		(3) Set to control or relieve at correct pressures consistent with .201(a), except for .739(b).	X			
	oper.	(4) Properly installed and protected from dirt, liquids, and other conditions that may prevent proper	x			
	.739(b)	For steel lines if MAOP is determined per .619(c) and the MAOP is 60 psi (414 kPa) gage or more	一彩		$\sim q$	称

l

		PRESSURE LIMITING and R	EGULATING STATION PROCEDURES	S		NA	NįČ
.74		If MAOP produces hoop stress that	Then the pressure limit is:				
		Is greater than 72 percent of SMYS	MAOP plus 4 percent	x			
		Is unknown as a percent of SMYS	A pressure that will prevent unsafe operation of the pipeline considering its operating and maintenance history and MAOP				
	.741	Telemetering or Recording Gauges					
		(a) In place to indicate gas pressure in	n the district that is supplied by more than one regulating station	X	Γ		ſ
		(b) Determine the need in a distribution system supplied by only one district station			l –		
		(c) Inspect equipment and take correct pressure	ctive measures when indications of abnormally high or low	x	1		
	.743	Testing of Relief Devices		徽			
	.743	(a) Capacity must be consistent with .2	201(a) except for .739(b), and be determined 1 per yr/15 mo.	X		T	
		(b) If calculated, capacities must be or required.	compared; annual review and documentation are	x	, ,		<b> </b>
		(c) If insufficient capacity, new or ad	ditional devices must be installed to provide required capacity.	x		Γ	

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### Comments:

TD4430P-02, UO Std S4540, WP4540-01, and WP4540-04 CES Standard CT&CS-S0351 District Regulator Station Maintenance and DCS Standard D-S0456, Recording Pressures in Distribution Systems (this is found in DM-Tab H).

For transmission, CGT Standard TD4430-02, CGT S4433 Gas Pressure Relief Devices – Responsibility For Annual Inspection and Verification of Capacity, GS&S H-70 Pressure Relief Devices. CGT Standard 4431, Major Gas Facilities.

Note: Inspector should ask transmission districts to identify its major gas facilities considered per this standard, during the audit.

.605(b)		VALVE AND VAULT MAINTENANCE PROCEDURES	Se		NA	Vć
		Transmission Yalves	躨		钢	豴
	.745	<ul> <li>(a) Inspect and partially operate each transmission valve that might be required during an emergency (1 per yr/15 months)</li> </ul>	x			
	.745	(b) Prompt remedial action required, or designate alternative valve.	X			
		Distribution Valves		3 <u>11</u>	17:28	
	.747	<ul> <li>(a) Check and service each value that may be necessary for the safe operation of a distribution system (1 per yr/15 months)</li> </ul>	X			
		(b) Prompt remedial action required, or designate alternative valve.	X			
		Yaults	織	(約3)		驗
	.749	Inspection of vaults greater than 200 cubic feet (1 per yr/15 months)	X			

.605(b)		PREVENTION of ACCIDENTAL IGNITION PROCEDURES	S	U.N/	N/C
	.751	Reduce the hazard of fire or explosion by:	it is		N. COL
		(a) Removal of ignition sources in presence of gas and providing for a fire extinguisher	x		Ţ
		(b) Prevent welding or cutting on a pipeline containing a combustible mixture	x		
		(c) Post warning signs	x		

#### Comments:

192.745-.749: WP4430-04 for valves, and S4446 for vaults. Vault Inspection Procedure applies to distribution and transmission (found in DM-Tab K)

192.751: Code of Safe Practices, Utility Standard Practice 22, WP4414-04, G-14832, Gs Distribution and Maintenance Manual Section K, SG&C 236 (Tab A-38 Procedures for Purging Gas Facilities), GS&S A-93.1

N/C - Not Checked

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.605(b)	Ī	CAULKED BELL AND SPIGOT JOINTS PROCEDURES		10	16
	.753	Cast-iron caulked bell and spigot joint repair:			
		(a) When subject to more than 25 psig, sealed with mechanical clamp, or sealed with material/device which does not reduce flexibility, permanently bonds, and seals and bonds as prescribed in §192.753(a)(2)(iii)	x		
		(b) When subject to 25 psig or less, joints, when exposed for any reason, must be sealed by means other than caulking	x		

.605(b)		PROTECTING CAST-IRON PIPELINE PROCEDURES	S.			
	.755	Operator has knowledge that the support for a segment of a buried cast-iron pipeline is disturbed must provide protection.				
		(a) Vibrations from heavy construction equipment, trains, trucks, buses or blasting?	x			
		(b) Impact forces by vehicles?	x			
		(c) Earth movement?	x			
		(d) Other foreseeable outside forces which might subject the segment of pipeline to a bending stress	X			
}		(e) Provide permanent protection for the disturbed section as soon as feasible	x	T	,	

.13(c)		WELDING AND WELD DEFECT REPAIR/REMOVAL PROCEDURES	S.S.	О.		<b>K</b> ie
	.225	(a) Welding procedures must be qualified under Section 5 of API 1104	x			
	ļ	or Section IX of ASME Boiler and Pressure Code by destructive test.	4	<b>↓</b>		
	. <u>.</u>	(b) Retention of welding procedure - details and test	<u>x</u>			ļ
	.227	<ul> <li>(a) Welders must be qualified by Section 6 of API 1104 (19th Ed., 1999, including errata October31, 2001; and 20<sup>th</sup> edition 2007, including errata 2008) or Section IX of ASME Boiler and Pressure Code (2004 ed. Including addenda through July 1, 2005) See exception in .227(b).</li> </ul>	x			
		(b) Welders may be qualified under section I of Appendix C to weld on lines that operate at < 20% SMYS.	x			
	.229	<ul> <li>To weld on compressor station piping and components, a welder must successfully complete a destructive test</li> </ul>	x			
		(b) Welder must have used welding process within the preceding 6 months	x			ł
		(c) A welder qualified under .227(a)-	20		1823	
	.229(c)	(1) May not weld on pipe that operates at ≥ 20% SMYS unless within the preceding 6 calendar months the welder has had one weld tested and found acceptable under the sections 6 or 9 of API Standard 1104; may maintain an ongoing qualification status by performing welds tested and found acceptable at least twice per year, not exceeding 7½ months; may not requalify under an earlier referenced edition.	x		~~~~	
		(2) May not weld on pipe that operates at < 20% SMYS unless is tested in accordance with .229(c)(1) or requalifies under .229(d)(1) or (d)(2).	x			
,		(d) Welders qualified under .227(b) may not weld unless:	徽			22
		(1) Requalified within 1 year/15 months, or	X			
		(2) Within 7 <sup>1</sup> / <sub>2</sub> months but at least twice per year had a production weld pass a qualifying test	x			
	.231	Welding operation must be protected from weather	X			
	,233	Miter joints (consider pipe alignment)	x	†•		
	.235	Welding preparation and joint alignment	x	tt	**************************************	
	.241	<ul> <li>(a) Visual inspection must be conducted by an individual qualified by appropriate training and experience to ensure:</li> </ul>	x			
		(1) Compliance with the welding procedure	X		,	
	· · · · · · · · · · · · · · · · · · ·	(2) Weld is acceptable in accordance with Section 9 of API 1104	x			<b> </b>
		(b) Welds on pipelines to be operated at 20% or more of SMYS must be nondestructively tested in accordance with 192.243 except welds that are visually inspected and approved by a qualified welding inspector if:	x			
	<u> </u>	(1) The nominal pipe diameter is less than 6 inches, or	X			
		(2) The pipeline is to operate at a pressure that produces a hoop stress of less than 40% of SMYS and the welds are so limited in number that nondestructive testing is impractical	x			

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Unless otherwise noted, all code references are to 49CFR Part 192. S-Satisfactory U-Unsatisfactory N/A-Not ApplicableIf an item is marked U, N/A, or N/C, an explanation must be included in this report.

N/C - Not Checked

.13(c)	1	WELDING AND WELD DEFECT REPAIR/REMOVAL PROCEDURES	•Sa	D.	ν <i>μ</i> Α	NC
<b></b>	.241	(c) Acceptability based on visual inspection or NDT is determined according to Section 9 of API 1104. If a girth weld is unacceptable under Section 9 for a reason other than a crack, and if Appendix A to API 1104 applies to the weld, the acceptability of the weld may be further determined under that appendix.	x	•		1
		Repair and Removal of Weld Defects	8	12		
	.245	(a) Each weld that is unacceptable must be removed or repaired. Except for offshore pipelines, a weld must be removed if it has a crack that is more than 8% of the weld length	. x	Ē		
		(b) Each weld that is repaired must have the defect removed down to sound metal, and the segment to be repaired must be preheated if conditions exist which would adversely affect the quality of the weld repair. After repair, the weld must be inspected and found acceptable.	x			
		(c) Repair of a crack or any other defect in a previously repaired area must be in accordance with a written weld repair procedure, qualified under §192.225	x			
a		Note: Sleeve Repairs - use low hydrogen rod (Best Practices -ref. API 1104 App. B, In Service Welding)				

#### Comments:

92.753 GS&S A 39.

192,755 GS&S A-39

192,225 (a) and (b) GS&S D-20 Oxyacetylene Weld Procedure; GS&S D-22 Arc Welding Procedure Requirement All Stress Levels 192,227 (a) GS&S D-22 (b) GS&S D-30, Form FD-30-A, Welder Qualification for Under 20% SMYS

192.229 (a)(b) and (c) D-30

192.231: GS&S D-20 Oxyacetylene Weld Procedure, Page 2 of 4 Item #5

192.233: GS&S A-36 Design and Construction Requirements Gas Lines and Related Facilities

(Note: PG&E uses 20% SMYS as the upper threshold for miter joints)

192.235: GS&S D-22 Arc Welding Procedure Requirement All Stress Levels, Page 3 of 15 Item #4

192.241(a), 192.241(b): GS&S D-40 Weld Inspections

192.241(c): GS&S D-31 Acceptability Criteria for all welds

129.245: Production Welds: GS&S D-31 #22-25. In-Service Welds: GS&S D-23 #3-4, GS&S D-23.1 #10-18. Repair Criteria: S4134

.13(c)		NONDESTRUCTIVE TESTING PROCEDURES		NA	NIC
	.243	(a) Nondestructive testing of welds must be performed by any process, other than trepanning, that clearly indicates defects that may affect the integrity of the weld	x	2	
	-	(b) Nondestructive testing of welds must be performed:	57		國
		(1) In accordance with a written procedure, and	X		
		(2) By persons trained and qualified in the established procedures and with the test equipment used	x		
	-	(c) Procedures established for proper interpretation of each nondestructive test of a weld to ensure acceptability of the weld under 192,241 <sup>©</sup>	x		
		(d) When nondestructive testing is required under §192.241(b), the following percentage of each day's field butt welds, selected at random by the operator, must be nondestructively tested over the entire circumference	ない。		
		(1) In Class 1 locations at least 10%	X		<u> </u>
		(2) In Class 2 locations at least 15%	X		
		(3) In Class 3 and 4 locations, at crossings of a major navigable river, offshore, and within railroad or public highway rights-of-way, including tunnels, bridges, and overhead road crossings, 100% unless impractical, then 90%. Nondestructive testing must be impractical for each girth weld not tested.	x		
		(4) At pipeline tie-ins, 100%	X		
		(e) Except for a welder whose work is isolated from the principal welding activity, a sample of each welder's work for each day must be nondestructively tested, when nondestructive testing is required under §192.241(b)	x		:
		(f) Nondestructive testing - the operator must retain, for the life of the pipeline, a record showing by mile post, engineering station, or by geographic feature, the number of welds nondestructively tested, the number of welds rejected, and the disposition of the rejected welds.	x		

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Comments: GS&S D-40, Weld Inspection

GS&S D31 Standard of Acceptability for Welding: non-destructive and Destructive testing.

.273(b)			JOINING of PIPELINE MATERIALS	S		5/A	NÇ
	.281	(a)	A plastic pipe joint that is joined by solvent cement, adhesive, or heat fusion may not be disturbed until it has properly set. Plastic pipe may not be joined by a threaded joint or miter joint.	x			
		(b)	Each solvent cement joint on plastic pipe must comply with the following:	题	58. Y		
			(1) The mating surfaces of the joint must be clean, dry, and free of material which might be detrimental to the joint.			x	
			(2) The solvent cement must conform to ASTM Designation: D 2513.			х	
			(3) The joint may not be heated to accelerate the setting of the cement.	·		X	
		(¢)	Each heat-fusion joint on plastic pipe must comply with the following:		90	Ъų.	
		•	(1) A butt heat-fusion joint must be joined by a device that holds the heater element square to the ends of the piping, compresses the heated ends together, and holds the pipe in proper alignment while the plastic hardens.	x			<b>,</b>
			(2) A socket heat-fusion joint must be joined by a device that heats the mating surfaces of the joint uniformly and simultaneously to essentially the same temperature.	x			•
			(3) An electrofusion joint must be joined utilizing the equipment and techniques of the fittings manufacturer or equipment and techniques shown, by testing joints to the requirements of §192.283(a)(1)(iii), to be at least equivalent to those of the fittings manufacturer.	x			<u> </u>
			(4) Heat may not be applied with a torch or other open flame.	X			
	· [	(d)	Each adhesive joint on plastic pipe must comply with the following:			Q.S	統
			(1) The adhesive must conform to ASTM Designation: D 2517.	Γ		x	
			(2) The materials and adhesive must be compatible with each other.	1		х	
		(c)	Each compression type mechanical joint on plastic pipe must comply with the following:	60			
			(1) The gasket material in the coupling must be compatible with the plastic.	X			
	······		(2) A rigid internal tubular stiffener, other than a split tubular stiffener, must be used in conjunction with the coupling.	x			
	.283	(a)	Before any written procedure established under §192.273(b) is used for making plastic pipe joints by a heat fusion, solvent cement, or adhesive method, the procedure must be qualified by subjecting specimen joints made according to the procedure to the following tests:				
			(1) The burst test requirements of-	S.		的	() 科
			<ul> <li>(i) Thermoplastic pipe: paragraph 6.6 (sustained pressure test) or paragraph 6.7 (Minimum Hydrostatic Burst Test) or paragraph 8.9 (Sustained Static pressure Test) of ASTM D2513</li> </ul>	x			
			<ul> <li>(ii) Thermosetting plastic pipe: paragraph 8.5 (Minimum Hydrostatic Burst Pressure) or paragraph 8.9 (Sustained Static Pressure Test) of ASTM D2517; or</li> </ul>			х	ļ
			(iii) Electrofusion fittings for polyethylene pipe and tubing: paragraph 9.1 (Minimum Hydraulic Burst Pressure Test), paragraph 9.2 (Sustained Pressure Test), paragraph 9.3 (Tensile Strength Test), or paragraph 9.4 (Joint Integrity Tests) of ASTM Designation F1055.	x			
			(2) For procedures intended for lateral pipe connections, subject a specimen joint made from pipe sections joined at right angles according to the procedure to a force on the lateral pipe until failure occurs in the specimen. If failure initiates outside the joint area, the procedure qualifies for use; and,	x			
			(3) For procedures intended for non-lateral pipe connections, follow the tensile test requirements of ASTM D638, except that the test may be conducted at ambient temperature and humidity If the specimen elongates no less than 25 percent or failure initiates outside the joint area, the procedure qualifies for use.	x			
		(b)					

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N/C - Not Checked

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.273(b)		*****	JOINING of PIPELINE MATERIALS	<b>.</b> \$4	Q.	N/A	Ñ/C
*			(1) Use an apparatus for the test as specified in ASTM D 638 (except for conditioning).	X	CC SAM	<u> </u>	X1304
			(2) The specimen must be of such length that the distance between the grips of the apparatus and the end of the stiffener does not affect the joint strength.	x			
			(3) The speed of testing is 0.20 in. (5.0 mm) per minute, plus or minus 25 percent.	X			
			(4) Pipe specimens less than 4 inches (102 mm) in diameter are qualified if the pipe yields to an elongation of no less than 25 percent or failure initiates outside the joint area.	x			
			(5) Pipe specimens 4 inches (102 mm) and larger in diameter shall be pulled until the pipe is subjected to a tensile stress equal to or greater than the maximum thermal stress that would be produced by a temperature change of 100° F (38° C) or until the pipe is pulled from the fitting. If the pipe pulls from the fitting, the lowest value of the five test results or the manufacturer's rating, whichever is lower must be used in the design calculations for stress.			x	
			(6) Each specimen that fails at the grips must be retested using new pipe.	X			
			(7) Results pertain only to the specific outside diameter, and material of the pipe tested, except that testing of a heavier wall pipe may be used to qualify pipe of the same material but with a lesser wall thickness.			x	
×		(c)	A copy of each written procedure being used for joining plastic pipe must be available to the persons making and inspecting joints.	x			
Ŧ		(d)	Pipe or fittings manufactured before July 1, 1980, may be used in accordance with procedures that the manufacturer certifies will produce a joint as strong as the pipe.			x	
•	.285	(a)	No person may make a plastic pipe joint unless that person has been qualified under the applicable joining procedure by:				
		C1 1000 400000000	(1) Appropriate training or experience in the use of the procedure; and	x	ļ		
			(2) Making a specimen joint from pipe sections joined according to the procedure that passes the inspection and test set forth in paragraph (b) of this section.	x			
		(b)	The specimen joint must be:	於語	潮	拗	
			<ol> <li>Visually examined during and after assembly or joining and found to have the same appearance as a joint or photographs of a joint that is acceptable under the procedure; and</li> </ol>	x			
			(2) In the case of a heat fusion, solvent cement, or adhesive joint;	X			
			(i) Tested under any one of the test methods listed under §192.283(a) applicable to the type of joint and material being tested;	×			
			•		L	X	1
			(ii) Examined by ultrasonic inspection and found not to contain flaws that may cause failure; or			<u> </u>	
		*	(A) Visually examined and found not to contain voids or discontinuities on the cut surfaces of the joint area; and	x			
			(B) Deformed by bending, torque, or impact, and if failure occurs, it must not initiate in the joint area.	x			
		(c)	A person must be requalified under an applicable procedure, if during any 12-month period that person:	ļ	·.		·
		ووالم المحافظ المحافظ المحافظ المحافظ المحافظ المحافظ المحافظ المحافظ المحافظ المحافظ المحافظ المحافظ المحافظ ا	(1) Does not make any joints under that procedure; or	X	Ļ	<b>_</b>	ļ
			(2) Has 3 joints or 3 percent of the joints made, whichever is greater, under that procedure that are found unacceptable by testing under §192.513.	x	ļ		
		(d)	Each operator shall establish a method to determine that each person making joints in plastic pipelines in the operator's system is qualified in accordance with this section.	x	<b>_</b>	<b>_</b>	<b>_</b>
	.287	192	person may carry out the inspection of joints in plastic pipes required by §§192.273(c) and 2.285(b) unless that person has been qualified by appropriate training or experience in evaluating acceptability of plastic pipe joints made under the applicable joining procedure.	x			

Comments:

192.281 PG&E Standards and Specs D-21 (pg 2-4/17); and S4170 (with specification #4750) -

192.283 (a)(1)(i) (PG&E 10/02/89 TES);

192.283 (a)(1)(ii) not used by PG&E;

192.283(a)(1)(iii) (PG&E 03/87 TES);

192.283 (a)(2) and (3) (PG&E 10/02/89 TES);PG&E does not use thermosetting plastic pipe.

192.2833 (b)(1-4) (PG&E 01/17/06 Southwest High Density and 05/21/90 Medium density;

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N/C - Not Checked

Comments:

192.283(b)(5) PG&E doesn't perform mechanical joints for diameters greater than 4-inch; 192.283(b)(7) (PG&E tested same wall as size being used); 192.283(c) (PG&E D-21); 192.283(d) (PG&E does not have anything of that vintage);

192.285 (a)(b)(c) GS&S D34. S4170 (Leading Document). PG&E does not perform ultrasonic inspection on their plastic.

.605(b)		CORROSION CONTROL PROCEDURES		See 8		語語
	.453	Are corrosion procedures established and carried out by or under the direction of a qualified person for:				
		* Design	X			
		Operations	X			
		• Installation	X			
•		- Maintenance	X			
	.455	<ul> <li>(a) For pipelines installed after July 31, 1971, buried segments must be externally coated and</li> <li>(b) cathodically protected within one year after construction (see exceptions in code)</li> </ul>	x			
		(c) Aluminum may not be installed in a buried or submerged pipeline if exposed to an environment with a natural pH in excess of 8 (see exceptions in code)			x	
	.457	(a) All effectively coated steel transmission pipelines installed prior to August 1, 1971, must be cathodically protected	x			
		(b) If installed before August 1, 1971, cathodic protection must be provided in areas of active corrosion for: bare or ineffectively coated transmission lines, and bare or coated c/s, regulator sta., meter sta. piping, and (except for cast iron or ductile iron) bare or coated distribution lines.	x			
	.459	Examination of buried pipeline when exposed: if corrosion is found, further investigation is required	X			
	.461	Procedures must address the protective coating requirements of the regulations. External coating on the steel pipe must meet the requirements of this part.	x			
	.463	Cathodic protection level according to Appendix D criteria	x			
	.465	(a) Pipe-to-soil monitoring (1 per yr/15 months) or short sections (10% per year, all in 10 years)	x			
		(b) Rectifier monitoring (6 per yr/2 <sup>1</sup> / <sub>2</sub> months)	x			
		(c) Interference bond monitoring (as required)	x			
		(d) Prompt remedial action to correct any deficiencies indicated by the monitoring	x	1	1	
1	.465	(e) Electrical surveys (closely spaced pipe to soil) on bare/unprotected lines, cathodically protect active corrosion areas (1 per 3 years/39 months)	x			~~~
	.467	Electrical isolation (include casings)	X			-
L.	.469	Sufficient test stations to determine CP adequacy	x			
	.471	Test lead maintenance	x			
	.473	Interference currents	x			
	.475	(a) Proper procedures for transporting corrosive gas?			x	
		(b) Removed pipe must be inspected for internal corrosion. If found, the adjacent pipe must be inspected to determine extent. Certain pipe must be replaced. Steps must be taken to minimize internal corrosion.	x			
	.476	Systems designed to reduce internal corrosion Amdt 192-(no number) Pub. 4/23/07, eff. 5/23/07 (a) New construction	x			
		(b) Exceptions - offshore pipeline and systems replaced before 5/23/07	x			
		(c) Evaluate impact of configuration changes to existing systems	x			
	.477	Internal corrosion control coupon (or other suit. Means) monitoring (2 per yr/71/2 months)	x			
	.479 ·	(a) Each exposed pipe must be cleaned and coated (see exceptions under .479(c))	x	·		
		Offshore splash zones and soil-to-air interfaces must be coated	x			
		(b) Coating material must be suitable	X			
		Coating is not required where operator has proven that corrosion will:	30	8 10 1 9 10 1	- 1.87	аг С
		(c) (1) Only be a light surface oxide, or	X			

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Form-2 Standard Inspection Report of a Gas Distribution Operator (Rev. 03/19/10 through Amdt. 192-112)

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.605(b)		CORROSION CONTROL PROCEDURES	S	UN/A	LN/C
		(2) Not affect safe operation before next scheduled inspection	X		T
	.481	<ul> <li>(a) Atmospheric corrosion control monitoring (1 per 3 yrs/39 months onshore; 1 per yr/15 months offshore)</li> </ul>	x		
	.481	(b) Special attention required at soil/air interfaces, thermal insulation, under disbonded coating, pipe supports, splash zones, deck penetrations, spans over water	x		
	.481	(c) Protection must be provided if atmospheric corrosion is found (per §192.479)	X		
	.483	Replacement and required pipe must be coated and cathodically protected (see code for exceptions)	X		Ī
	.485	(a) Procedures to replace pipe or reduce the MAOP if general corrosion has reduced the wall thickness?	x		Τ
		(b) Procedures to replace/repair pipe or reduce MAOP if localized corrosion has reduced wall thickness (unless reliable engineering repair method exists)?	x		
		(c) Procedures to use Rstreng or B-31G to determine remaining wall strength?			T
	.487	Remedial measures (distribution lines other than cast iron or ductile iron)	X		
•	.489	Remedial measures (cast iron and ductile iron pipelines)	7		
	.491	Corrosion control maps and record retention (pipeline service life or 5 yrs)	X		T

#### Comments:

Corrosion requirements are found in the new PG&E Gas Transmission & Distribution Manuel: Corrosion Control Volume.

.801- .809	Subpart N Qualification of Pipeline Personnel Procedures	S U NANC
,009	Refer to Operator Qualification Inspection Forms and Protocols (OPS web site)	

.901- .951	Subpart O — Pipeline Integrity Management	S D NANG
.531	This form does not cover Gas Pipeline Integrity Management Programs	

Subparts A - C	PART 199 - DRUG and ALCOHOL TESTING REGULATIONS and PROCEDURES	S A NANC
n-c	Drug & Alcohol Testing & Alcohol Misuse Prevention Program - Use PHMSA Form # 13, PHMSA	
	2008 Drug and Alcohol Program Check.	

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#### Comments:

Conducted as general office audit of PG&E

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	PIPELINE INSPECTION (Field)	Ś	统	y A	R.
.179	Valve Protection from Tampering or Damage	x		·T	
.463	Cathodic Protection	x		T	
.465	Rectifiers	x			
.476	Systems designed to reduce internal corrosion	x			
.479	Pipeline Components Exposed to the Atmosphere	x			
.605	Knowledge of Operating Personnel	x			
.707	ROW Markers, Road and Railroad Crossings	x		T	
,719	Pre-pressure Tested Pipe (Markings and Inventory)	x			
.741	Telemetering, Recording gauges	x			
.739/.743	Pressure Limiting and Regulating Devices (spot-check field installed equipment vs. inspection records)	x			
.745	Valve Maintenance	x		ŗ	, ,
.751	Warning Signs	X		Ī	4
.801809	Operator Qualification - Use PHMSA Form 15 Operator Qualification Field Inspection Protocol Form	x		  .	• • • •

Comments:

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	REGULATORY REPORTING PERFORMANCE AND RECORDS		<b>创</b> 税	NA	S/C
191.5	Telephonic reports to NRC	x			
191.15	Written incident reports; supplemental incident reports (Form F 7100.2)	x			
191	Annual Reports (Forms 7100.1-1, 7100.2-1)	X			
191.23	Safety related condition reports	x			
192.16	Customer Notification (Verification – 90 days – and Elements)	x			
192.727(g)	Abandoned facilities offshore, onshore crossing commercially navigable waterways reports	x			

	CONSTRUCTION PERFORMANCE AND RECORDS	Sig	s la	N/Ç
.225	Test Results to Qualify Welding Procedures	X		
.227	Welder Qualification	x		
.241 (a)	Visual Weld Inspector Training/Experience	<b>x</b> .		
.243 (b)(2)	Nondestructive Technician Qualification	X	1	
(c)	NDT procedures	X		
(1)	Total Number of Girth Welds	x		
(1)	Number of Welds Inspected by NDT .	x		
(f)	Number of Welds Rejected	x	-	
(1)	Disposition of each Weld Rejected	x		
.273/.283	Qualified Joining Procedures Including Test Results	X		
.285	Personnel Joining Qualifications	x		
.287	Joining Inspection Qualifications	x		
.303	Construction Specifications	X		İ
.325	Underground Clearance	x		

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Form-2 Standard Inspection Report of a Gas Distribution Operator (Rev. 03/19/10 through Aindt. 192-112)

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	CONSTRUCTION PERFORMANCE AND RECORDS	₿ <b>S</b>	JU.	N/A	NIC
.327	Amount, Location, Cover of each Size of Pipe Installed	X	Ī		
.383(e)	EFV customer notification	X	[		
.455	Lainodic Protection	X			

	<b>OPERATIONS and MAINTENANCE PE</b>	RFORMANCE AND RECORDS		(C.S.	娰
.517 (a)	Pressure Testing (operates at or above 10	0 psig) - useful life of pipeline	X		T
.517 (b)	Pressure Testing (operates below 100 psi	g, service lines, plastic lines) - 5 years	X		1
.603(b)	.605(a) Procedural Manual Review – Operations	and Maintenance (1 per yr/15 months)	X		$\top$
•		s, operating history to operating personnel	x		+
•	.605(b)(8) Periodic review of personnel work - effe		x		+
		ctiveness of abnormal operation procedures	$\mathbf{x}$		+
.709	.614 Damage Prevention (Miscellaneous)		x		╉
		۵	$\frac{1}{x}$	<u>_</u>	┿
(02/1)	.609 Class Location Study (If Applicable)				
.603(b)	.615(b)(1) Location Specific Emergency Plan		X		+-
	.615(b)(2) Emergency Procedure training, verify eff		X		_
,	.615(b)(3) Employee Emergency activity review, de	etermine if procedures were followed.	X		
	.615(c) Liaison Program with Public Officials		X		
	.616 Public Awareness Program	reflects implementation of operator's Public Awareness		的社会	
	method and frequency, supplemental er mailing rosters, postage receipts, return	idience identification, message type and content, delivery inancements, program evaluations, etc. (i.e. contact or receipts, audience contact documentation, etc. for school superintendents, program evaluations, etc.). See table	x		
		commended Message Deliveries	2.3	1297.68	藏
	Stakeholder Audience (Natural Gas	Baseline Message Frequency	滋		
	Transmission Line Operators)	(starting effective date of Plan)			
	Residents Along Right-of-Way and Places of	2 years			
	Congregation Emergency Officials	Annual			
	Public Officials	3 years			
	Excavator and Contractors	Annual			
	One-Call Centers	As required of One-Call Center			
	Stakeholder Audience (Gathering Line Operators)	Baseline Message Frequency (starting from effective date of Plan)			
	Residents and Places of Congregation	Annual	語語		
	Emergency Officials	Annual	133		
	Public Officials	3 years			
	Excavators and Contractors	Annual			
	One-Call Centers	As required of One-Call Center Baseline Message Frequency			155
	Stakeholder Audience (LDCs)	(starting from effective date of Plan)	國務	地震	
	Residents Along Local Distribution System	Annual			1.2.4
	LDC Customers	Twice annually		salin earling	
	Emergency Officials	Annual	No.22		
	Public Officials	3 years	19 10		
	Excavator and Contractors	Annual	1.5		1
	One-Call Centers * Refer to API RP 1162 for additional requiremen	As required of One-Call Center	35,50		
	* Refer to API RP 1162 for additional requirement supplemental requirements, recordkeeping, progra	ns, menung general program recommendations,			
	.616(g) The program must be conducted in English significant number of the population in the	sh and any other languages commonly understood by a	x		Ţ
	.616(h) Effectiveness Review of operator's progr		X		

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			ENANCE PERFORMANCE AND REC				Y/A	關
	.616(j) (	<ol> <li>A description of</li> <li>An overview of</li> <li>Information about the second of the second</li></ol>	r or petroleum gas systems - public awareness m f the purpose and reliability of the pipeline; The hazards of the pipeline and prevention meas out damage prevention; ize and respond to a leak; and itional information.		x			
517	*****	Pressure Testing			X			
709	,619 .621 .62		erating Pressure (MAOP)		-	x		
ļ	Note: New P	A-11 design criteria is inco	orporated into 192.121 & .123. (Final Rule Pub.	24 December, 2008)			ł	
· .	.625	Odorization of Gas			X			
	.705	Patrolling (Refer to Tab	le Below)		X			
	[	Class Location	At Highway and Railroad Crossings	At All Other Places	7			
		1 and 2	2/yr (7½ months)	1/yr (15 months)				
		3	4/yr (4½ months)	2/yr (7½ months)	-			
		4	4/yr (4½ months)	4/yr (4½ months)	]			
709	.706	Leak Surveys (Refer to	Table Below)		1	x		<b></b>
				· · · · · · · · · · · · · · · · · · ·	<b>⊦</b>	ii		L
		Class Location	Required	Not Exceed	_			
		1 and 2	1/yr	15 months 7½ months	4			
		3	2/yr* 4/yr*	4½ months				
	*T ook	•	ey required for lines transporting un-odorized ga		_J			
	Loan	ustertor equipment surv	by required for mice dansporting an-odoriced ga	J.				<b>.</b>
.603(b)	.721(b)(1)	Patrolling Business Dist	rict (4 per yr/4½ months)		X			L
	.721(b)(2)	Patrolling Outside Busin	ess District (2 per yr/7½ months)	· · · · · · · · · · · · · · · · · · ·	X			
	.723(b)(1)	Leakage Survey - busin	ess District (1 per yr/15 months)			X		
1	.723(b)(2)	Leakage Survey				сі с		S.
		Outside Business D		·	X			L
			tected distribution lines (3 years)	• 	X			L
	.725	Tests for reinstating serv		14117	X			L
.6036/.727g	.727		nderwater Facility Reports			ļ	, 	Ļ
.709	.739		egulating Stations (1 per yr/15 months)		<u>x</u>			
	.743		egulator Stations - Capacity (1 per yr/15 month	15)	<u> </u>			ļ
······	,745		nsmission Lines (1 per yr/15 months)		X			ļ
,603(b)	.747 '		tribution Lines (1 per yr/15 months)		X	ļ		-
.709	.749		0 cubic feet)(1 per yr/15 months)					Ļ
.603(b) .	.751		I Ignition (hot work permits)		<u> </u>			
	.755	Caulked Bell and Spigor	t Joint Repair		<u> </u>	<b> </b>		L
	.225(b)	Welding – Procedure			<u>x</u>	ļ	ļ	Ļ
	.227/.229	Welding Welder Qual			<u> </u>	<u> </u>	ļ	Ļ
	.243(b)(2)	NDT - NDT Personnel	Qualification	τγ	x			L
	.283	Joining - Procedures			<u>x</u>			L
	.285	Joining - Personnel Qua		۰. 	x			L
	.287	Joining - Inspector Qua			x	<u> </u>		L
	1 040/0	NIDE B	1 : C_1		X	1		ľ
.709	.243(f)	NDT Records (Pipeline	( 1.11C)	······	$\perp$			<u>1</u>

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Unless otherwise noted, all code references are to 49CFR Part 192. S - Satisfactory U - Unsatisfactory N/A - Not Applicable N/C - Not Checked If an item is marked U, N/A, or N/C, an explanation must be included in this report.

Comments: See inspection report dated September 24, 2010.

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	•	CORROSION CONTROL PERFORMANCE AND RECORDS	s	R.	S/A	S/E
.491	.491(a)	Maps or Records	X		Cold. He	
.491	.459	Examination of Buried Pipe when Exposed	X			
.491	.465(a)	Annual Pipe-to-soil Monitoring (1 per yr/15 months) for short sections (10% per year; all in 10 years)	1	X		
.491	.465(b)	Rectifier Monitoring (6 per yr/21/2 months)	X			
.491	.465(c)	Interference Bond Monitoring – Critical (6 per yr/21/2 months)	X	1		
.491	.465(c)	Interference Bond Monitoring – Non-critical (1 per yr/15 months)	x			
.491	.465(d)	Prompt Remedial Actions	X	1		
.491	.465(e)	Unprotected Pipeline Surveys, CP active corrosion areas (1 per 3 cal yr/39 months)	X			
.491	.467	Electrical Isolation (Including Casings)	X	1		
.491	.469	Test Stations - Sufficient Number	x	]		
.491	.471	Test Lead Maintenance	x	1	<b></b>	ŀ
.491	.473	Interference Currents	X		[	
.491	.475(8)	Internal Corrosion; Corrosive Gas Investigation	x	1		
.491	.475(b)	Internal Corrosion; Internal Surface Inspection; Pipe Replacement	x	1		
.491	.476 (d)	Internal Corrosion; New system design; Evaluation of impact of configuration changes to existing systems	x			
.491	.477	Internal Corrosion Control Coupon Monitoring (2 per yr/7% months)	X			
.491	.48]	Atmospheric Corrosion Control Monitoring (1 per 3 cal yr/39 months onshore; 1 per yr/15 months offshore)		x		
.491	.483/.485	Remedial: Replaced or Repaired Pipe; coated and protected; corrosion evaluation and actions	X			

### Comments:

See inspection report dated September 24, 2010.

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# Attachment 1

Distribution Operator Compressor Station Inspection Unless otherwise noted, all code references are to 49CFR Part 192. S-Satisfactory U-Unsatisfactory N/A - Not Applicable If an item is marked U, N/A, or N/C, an explanation must be included in this report.

N/C - Not Checked

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.605(b)		COMPRESSOR STATION PROCEDURES	<b>S</b>		N/A	NC
	.605(b)(6)	Maintenance procedures, including provisions for isolating units or sections of pipe and for purging before returning to service			x	
·	.605(b)(7)	Starting, operating, and shutdown procedures for gas compressor units		1	x	
•	.731	Inspection and testing procedures for remote control shutdowns and pressure relieving devices (1 per yr/15 months), prompt repair or replacement			x	
	.735	<ul> <li>(a) Storage of excess flammable or combustible materials at a safe distance from the compressor buildings</li> </ul>			x	
		(b) Tank must be protected according to NFPA #30			x	
	.736	Compressor buildings in a compressor station must have fixed gas detection and alarm systems (must be performance tested), unless:			x	
		<ul> <li>50% of the upright side areas are permanently open, or</li> </ul>		Γ	X	
		<ul> <li>It is an unattended field compressor station of 1000 hp or less</li> </ul>		[	X	

#### Comments:

		COMPRESSOR STATIONS INSPECTION (Field)				
		(Note: Facilities may be "Grandfathered")				
.163	(c)	Main operating floor must have (at least) two (2) separate and unobstructed exits			Х	-
		Door latch must open from inside without a key			х	
		Doors must swing outward			X	
	(d)	Each fence around a compressor station must have (at least) 2 gates or other facilities for emergency exit			х	
		Each gate located within 200 ft of any compressor plant building must open outward		<b>1</b>	х	
		When occupied, the door must be opened from the inside without a key			х	[ .
•	(e)	Does the equipment and wiring within compressor stations conform to the National Electric Code, ANSI/NFPA 70?			x	
.165	(a)	If applicable, are there liquid separator(s) on the intake to the compressors?			х	
	(b)	Do the liquid separators have a manual means of removing liquids?			x	
		If slugs of liquid could be carried into the compressors, are there automatic dumps on the separators, Automatic compressor shutdown devices, or high liquid level alarms?			x	
. 167	(a)	ESD system must:	13	縱斜	减数	徽
		- Discharge blowdown gas to a safe location	}		х	
		- Block and blowdown the gas in the station	}		x	
		<ul> <li>Shut down gas compressing equipment, gas fires, electrical facilities in compressor building and near gas headers</li> </ul>			x	
		<ul> <li>Maintain necessary electrical circuits for emergency lighting and circuits needed to protect equipment from damage</li> </ul>			x	
		ESD system must be operable from at least two locations, each of which is:		线扬		÷,
		- Outside the gas area of the station			x	
		- Not more than 500 feet from the limits of the station			X	
	e e e e e e e e e e e e e e e e e e e	- ESD switches near emergency exits?			x	
	(Ե)	For stations supplying gas directly to distribution systems, is the ESD system configured so that the LDC will not be shut down if the ESD is activated?			x	
	(c)	Are ESDs on platforms designed to actuate automatically by	100			
		- For unattended compressor stations, when:				23

## Attachment 1

Distribution Operator Compressor Station Inspection Unless otherwise noted, all code references are to 49CFR Part 192. S - Satisfactory U - Unsatisfactory N/A - Not Applicable If an item is marked U, N/A, or N/C, an explanation must be included in this report.

N/C -- Not Checked

		COMPRESSOR STATIONS INSPECTION (Field)			S.A	
		(Note: Facilities may be "Grandfathered")				
		The gas pressure equals MAOP plus 15%?			x	
		• An uncontrolled fire occurs on the platform?			Х	
		- For compressor station in a building, when				
		<ul> <li>An uncontrolled fire occurs in the building?</li> </ul>			x	
		<ul> <li>Gas in air reaches 50% or more of LEL in a building with a source of ignition (facility conforming to NEC Class 1, Group D is not a source of ignition)?</li> </ul>			x	
.171	(a)	Does the compressor station have adequate fire protection facilities? If fire pumps are used, they must not be affected by the ESD system.	. •		x	ĺ
	(b)	Do the compressor station prime movers (other than electrical movers) have over-speed shutdown?			х	
	(2)	Do the compressor units alarm or shutdown in the event of inadequate cooling or lubrication of the unit(s)?		T	Х	[ 
	(d)	Are the gas compressor units equipped to automatically stop fuel flow and vent the engine if the engine is stopped for any reason?			х	
	(e)	Are the mufflers equipped with vents to vent any trapped gas?			. <b>X</b>	[
.173		Is each compressor station building adequately ventilated?			x	
.457		Is all buried piping cathodically protected?			x	
.481		Atmospheric corrosion of aboveground facilities		1.	х	
.603		Does the operator have procedures for the start-up and shut-down of the station and/or compressor units?		1	х	
		Are facility maps current/up-to-date?	1		x	
.615	24172222 Postofe Mintage	Emergency Plan for the station on site?		1	х	
.619		Review pressure recording charts and/or SCADA	1	1	x	
.707		Markers	-	1	x	
,731		Overpressure protection – reliefs or shutdowns	1	1	x	
.735		Are combustible materials in quantities exceeding normal daily usage, stored a safe distance from the compressor building?			x	
		Are aboveground oil or gasoline storage tanks protected in accordance with NFPA standard No. 30?		Ι	х	
.736		Gas detection - location		T	х	

Comments:

	C	COMPRESSOR STATION O&M PERFORMANCE AND RECORDS	i kak	S	Ų.	N/Á	N/C
.709	.731(a)	Compressor Station Relief Devices (1 per yr/15 months)				х	
	.731(c)	Compressor Station Emergency Shutdown (1 per yr/15 months)				х	
	.736(c)	Compressor Stations - Detection and Alarms (Performance Test)				x	

### Comments:

## Recent PHMSA Advisory Bulletins (Last 2 years)

Leave this list with the operator.

## Recent PHMSA Advisory Bulletins (Last 2 years)

Number	Date	<u>Subject</u>
ADB-07-02	February 29, 2008	Correction - Pipeline Safety: Updated Notification of the Susceptibility to
		Premature Brittle-Like Cracking of Older Plastic Pipe
ADB-08-01	. May 13, 2008	Pipeline Safety - Notice to Operators of Gas Transmission Pipelines on the
	•	Regulatory Status of Direct Sales Pipelines
ADB-08-02	March 4, 2008	Pipeline Safety - Issues Related to Mechanical Couplings Used in Natural Gas
		Distribution Systems
ADB-08-03	March 10, 2008	Pipeline Safety - Dangers of Abnormal Snow and Ice Build-Up on Gas
		Distribution Systems
ADB-08-04	June 5, 2008	Pipeline Safety - Installation of Excess Flow Valves into Gas Service Lines
ADB-08-05	June 25, 2008	Pipeline Safety - Notice to Hazardous Liquid Pipeline Operators of Request for
		Voluntary Adv Notification of Intent To Transport Biofuels
ADB-08-06	July 2, 2008	Pipeline Safety - Dynamic Riser Inspection, Maintenance, and Monitoring
		Records on Offshore Floating Facilities
ADB-09-01	May 21, 2009	Potential Low and Variable Yield and Tensile Strength and Chemical
		Composition Properties in High Strength Line Pipe
ADB-09-02	Sept 30, 2009	Weldable Compression Coupling Installation
ADB-09-03	Dec 7, 2009	Operator Qualification Program Modifications
ADB-09-04	Jan 14, 2010	Reporting Drug and Alcohol Test Results for Contractors and Multiple
		Operator Identification Numbers
ADB-10-01	Jan 26, 2010	Pipeline Safety: Leak Detection on Hazardous Liquid Pipelines
ADB-10-02	Feb 3, 2010	Implementation of Revised Incident/Accident Report Forms for Distribution
		Systems, Gas Transmission and Gathering Systems, and Hazardous Liquid
		Systems
ADB-10-03	March 24, 2010	Girth Weld Quality Issues Due to Improper Transitioning, Misalignment, and
		Welding Practices of Large Diameter Line Pipe

For more PHMSA Advisory Bulletins, go to http://ops.dot.gov/regs/advise.htm

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