Attachment SLF-R1
National Grid NHNational Grid NH
Docket DG 10-017Docket No. DG 10-017
Page 1 of 6Attachment OCA 1-83 (c)
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GENG-2050: Identification, Evaluation and Prioritization of Distribution Main Segments for Replacement

Date Revised:	05/21/2007	/21/2007 Filed: Yes Application: LI-MA-NH-NY		LI-MA-NH-NYC	
		Review:	3 years	Lead Org:	System Integrity & Corrosion
		R	evision:		
Location:	From:		To:		
			New document		

DESCRIPTION

This procedure describes and details the identification, evaluation, and prioritization of distribution main segments for replacement.

PROCEDURE

A. Identification of main segments for replacement

- Main Replacement Levels by Material will be established annually for each Region (NYC, LI, NE), where deemed necessary due to large inventories of underperforming pipe and/or known problems with main population segments. Levels are developed to maintain projected steady state integrity and leak rates. If, however, the amount of main determined to contain active corrosion exceeds projected levels, all actively corroding main must be replaced in accordance with the established timeframes.
- 2. Main segment candidates are identified through three avenues:
 - a. Field Requests, which will be reviewed throughout the year.
 - b. Mains located in Public Improvement Job Areas, which will also be reviewed throughout the year, as requested by Field Operations and/or Public Works employees.
 - c. Annual screenings by Gas Engineering, as deemed appropriate. Screenings will vary among the regions, based on the data and tools available for the systems.
- 3. All identified main segment candidates will be evaluated and prioritized by Gas Engineering in accordance with the criteria set forth in this procedure. Minimum segment lengths for screening and Engineering review will vary among the regions, however, no Engineering review is required for O&M replacements up to 50 feet.

B. Evaluation/prioritization of steel main segments for replacement

- 1. **STEP 1** Data Collection Minimum Data Required:
 - a. All Repaired <u>Corrosion</u> Leaks on Main Segment for the last 10 years (not service leaks)
 - b. All Open Leaks that are believed to be on the actual Main Segment
 - For all applicable leaks, the following data is required:
 - a. Leak Number
 - b. Date (date found for open leaks, date repaired for repaired leaks)

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- c. Leak Class (original class for open leaks, repaired class for repaired leaks)
- For repaired leaks, the following additional data is also required:
 - a. Number of Clamps Installed to Repair and specific clamp locations
 - b. Condition of Main When Repaired
 - c. Specific Leak Location
 - d. Length of Segment being considered for replacement
 - e. Building Types in Area of Main Segment (None, Single Family Houses, Small Buildings, Public Buildings)
- 2. STEP 2 Calculate a main deterioration factor ("D") using the formula
 - $D = N \times 500 / L$
 - L = Length of Segment

(The segment length used in calculations is not necessarily the total length being considered for replacement. "L" should be determined by the evaluating engineer as the length of the segment exhibiting significant leak activity. In no case should the length used for calculations extend beyond the locations of the leaks)

N = Repair Factor (within the defined "L")

If the leak was repaired with 1 clamp, by another method (service) or is still open, N=1

If the leak was repaired with 2-3 clamps, N=2

If the leak was repaired with 4-5 clamps, N=3

If the leak was repaired with 6-7 clamps, N=4

If the leak was repaired with >7 clamps, N=5

THE SUM OF ALL THE "N"'S FOR EACH LEAK IS PLUGGED INTO THE FORMULA

This method estimates the deterioration according to the actual number of physical repairs and normalizes it for the length of the segment.

3. STEP 3 – Calculate an incident probability factor ("P") using the formula P = {[(# Class1 Leaks/0.5) + (# Class2A Leaks/1.5) + (# Class2 Leaks/2) + (# Class3 Leaks/3)] x 500} / L

This method estimates public safety incident probability by weighting each leak based on how far the gas migrated to buildings, again normalized according to the segment length. (Note – If leak class is unknown, Class 2A will be assumed)

4. STEP 4 – Calculate a risk factor ("R") using the formula R = P x C P = Probability Factor Calculated in Step 3 C = Consequence Factor If there are no buildings in the area, C = 0 If there are only single family homes, C = 1 If there are small buildings (multi-family, strip malls, etc), C = 1.2 If the are small buildings (multi-family, strip malls, etc), C = 1.2

If there are public buildings (school, church, hospital, etc) C = 1.5

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This is the standard Risk Analysis calculation where Risk is defined as the product of the likelihood of an event and the potential consequence of that event. Consequences increase with building size and number of people affected.

5. STEP 5 – Calculate the preliminary prioritization factor ("Pr") using the formula

Pr = D + R

D = Deterioration Factor Calculated in Step 3

R = Risk Factor Calculated in Step 5

The prioritization calculation takes into account both the deterioration of the main and the risk to public safety.

6. STEP 6 – Adjustments

- 1. Before making a final determination and prioritization of a main segment replacement, the details of the job are reviewed and "engineering judgement" is applied where appropriate. This application may result in the following types of adjustments:
 - a. Changing the priority of the job
 - b. Increasing or decreasing the job length/scope
 - c. Breaking the job into smaller segments
 - d. Merging several segments into one job
- 2. These adjustment may be made based on the following types of information, if available and applicable:
 - a. Analysis of the age of the leaks and any increasing frequency of leak occurrences
 - b. Pipe vintage and service insert activity associated with the main
 - c. Service leaks at the main connection due to corrosion
 - d. Adjustments based on very long or very shorts segments
 - e. Observed pipe condition from leak repair data
 - f. Observed pipe condition from recent field exposure
 - g. Clustering of repairs and/or clamps along the segment
 - h. Other replacement jobs in the vicinity
 - i. Cathodic protection systems in place
 - j. Specific locations of intersections, fittings, material transitions, diameter transitions, etc.
 - k. Customer complaints, Executive complaints, Regulatory Agency complaints
 - 1. Corporate good will
 - m. Unusual hazards or exposure in the area
 - n. Proximity to gas regulating equipment
 - o. Proximity to transmission main
 - p. Unusual difficulty or expense of repairs
 - q. Main location
 - r. Identification of outdated construction methods or problematic materials or fittings
 - s. Depth of cover and soil conditions
 - t. High open leak counts
 - u. Water intrusion or other geographic considerations

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- v. Any special or unusual conditions or considerations identified by Field Operations
- w. Any other safety, integrity, operational or economic factors that are available and deemed appropriate

<u>*IMPORTANT*</u>: Segments that qualify based on their preliminary prioritization calculation may not be disqualified by adjustments.

- 7. STEP 7 Job Qualification
 - 1. Jobs will be approved and prioritized based on the Prioritization Factor "Pr" calculated in Step 5 and adjustments applied in Step 6. Enough jobs should be approved to accommodate the replacement levels determined by the model(s) in use at the time.
 - 2. Some jobs will be mandatory to replace. In general, a condition of "Active Corrosion" will be determined when the preliminary Prioritization Factor ("Pr") calculation exceeds 12. Each region will be further responsible for declaring jobs as "Active Corrosion" by modifying this criteria based on specific regional operating conditions as required to comply with any more stringent definitions provided by the regulators in the State(s) in which the region operates. Any unprotected bare steel main containing "Active Corrosion" must be replaced within two years - unless extenuating circumstances make it unfeasible to do so, in which case, other appropriate mitigative measures are to be taken. Any unprotected coated steel main containing "Active Corrosion" must have cathodic protection engineered and installed within one year or be replaced within two years - unless extenuating circumstances make it unfeasible to do so, in which case, other appropriate mitigative measures are to be taken. Any cathodically protected main containing "Active Corrosion" must be brought up to acceptable cathodic protection within one year or replaced within two years - unless extenuating circumstances make it unfeasible to do so, in which case, other appropriate mitigative measures are to be taken. An example of such a circumstance may be when a street is under guarantee or a moratorium from excavation.
- 8. STEP 8 Impact Identification
 - 1. Every approved job should be processed through the Planning and Corrosion areas of Gas Engineering for:
 - a. Sizing (determining the appropriate replacement material and diameter).
 - b. Determining if the replacement will have any impact on existing cathodic protection systems.

C. Evaluation/prioritization of cast iron main segments for replacement

Cast Iron Main Segments will be evaluated in a similar manner as Steel Main segments, where the Prioritization factor will be the sum of the Deterioration Factor and the Risk factor (Pr = D + R).

1. Candidates are reviewed that contain at least 2 breaks or graphitization repairs within 400 ft.

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- 2. Important If the candidate segment meets the above identification criteria and:
 - The Pressure is greater than inches of water column automatic approval for replacement
 - The Pressure is in inches of water column approval will be based on the Prioritization calculation

If Pr > 12, replacement will be required (however, a cast iron segment is not deemed active corrosion)

If Pr < 12, prioritize and replace according to resources and replacement level recommendations

- 3. The Repair Factor "N" (as defined in Step 2 for steel evaluation), will be assigned for each leak, as follows: For cast iron main breaks, graphitization (corrosion of cast iron) and joint leak repairs are examined.
 - If the leak is still open and Type 3, N = 0.5
 - If the leak is still open and workable, N = 1
 - If the leak was repaired by joint sealing, N = 0.5 x (the number of joints sealed)
 - If the leak was a circumferential break, N = 2
 - If the leak was a the result of graphitization, N = 2
- 4. Engineering judgment should also be applied to both the prioritization and determination of the segment length to be replaced based on the pressure, diameter, dates of failures, surrounding areas, etc.

D. Evaluation/prioritization of plastic main segments for replacement

1. Plastic Main Segments will be evaluated in the same manner as Steel Main segments, with the exception of the calculation of the Repair Factor "N" in Step 2. For plastic – previous squeeze-offs, point loading failures (eg – rock impingement) and material defects (eg – cracking) and construction defect failures (eg – butt fusion joint) are examined.

N = Repair Factor (within the defined "L")

Where N will be the product of an "Initial N" (Ni) and Material Factor (Mf)

 $N = (Ni) \times (Mf)$ If the leak is still open, Ni = 1If the leak was the result of an improper squeeze-off, $Ni = 1 \times (the number known squeeze-offs)$ If the leak was the result of a point loading failure, Ni = 2

If the leak was a the result of a construction defect, Ni = 3If the leak was a the result of a material defect, Ni = 3

2. Additionally, a material factor will be applied to "N", as follows:

MATERIAL FACTOR (Mf)

If the main is known to be old vintage Aldyl-A pipe (Green Plastic), Mf = 1.5If the main is known to be new vintage Aldyl-A pipe (Pink Plastic), Mf = 1.5

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E. Note regarding jobs in public improvement areas or reinforcements:

1. Additional adjustments are applied for candidate segments in public works areas or for which reinforcement opportunities have been identified - by the addition of a Public Works (PW) or Reinforcement (RI) factor to the Prioritization calculation:

Pr = D + R + PW + RI

For Road Resurfacing, PW = 2.4For Road Reconstruction, PW = 4.2For Size-Upgrade Reinforcement, RI = 2.5For Reinforcement With No Size Upgrade, RI = 0

<u>IMPORTANT</u>: These adjustments are only to be used to qualify a job that previously did not qualify, or to upgrade the priority of a qualified job. *They may not upgrade a job to active corrosion status*.

These factors are applied because of potential cost savings in combining main replacements with other work, as well as anticipated avoidance of performing work on protected streets that were recently improved.

(End of GENG2050-LI-MA-NH-NYC)

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ENERGYNORTH NATURAL GAS, INC. d/b/a NATIONAL GRID NH DG 10-017

National Grid NH's Responses to Staff's Data Requests – Set #2

Date Received: June 18, 2010 Request No.: Staff 2-83 Date of Response: July 12, 2010 Witness: Susan L. Fleck

- **REQUEST:** Ref. Response Staff 1-209, Attachment at 7 of 16. Please describe the actions taken for line item 291, for South Main St. Pressure Regulator, Concord. Provide a breakdown of expenses charged to line item 291 and justification for the project. What other alternatives and schedules were considered prior to approving the project? What would the repercussions have been if the project was not approved? Please provide any maintenance records for the 2 years prior to replacement.
- **RESPONSE:** South Main St. @ Gas St., Concord was a discretionary capital project for improved performance and reliability of the station. The work included the replacement of the four regulator block valves, and upgrading the Fisher 399A boot style regulators with Mooney FlowMax regulators. The breakdown of expenses charged to this project was as follows:

Project Location	Capital Categories	Total
	Base Labor	\$2,991
	Benefits	\$3,131
S.MAIN@GAS STREET	Contractors/Consultants	\$4,439
CONCORD NH	Employee Exp	\$50
	Materials	\$802
	Other	\$5,676
	Overhead	\$2,768
	Overtime	\$3,565
TOTAL		\$23,421

This project was necessary because a complete replacement of the regulator station with a prefabricated unit is not expected in near term. If the project was not approved, additional maintenance and operating cost would have increased. Spare parts were becoming costly, and the block valves were becoming difficult to operate.

Attachment Staff 2-83 contains the requested maintenance records.

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603-226-4311

			Attachment SLF-R2 National Grid NH Docket No. DG 10-017	Attachment S Page 1 of 9
Station Inspection Form		Regulator Station	Page 2 of 10	
City		SO. MAIN ST. & GA	45.51.	
Division EnergyNorth Due D	ate: 9/08/	2005 Performed Date: 7-2103	Employee: DB, FG +.	JB.
Standard Inlet Pressure: 60#	Stan	adard Outlet Pressure: 12"	Single Feed	
Valves Key Valve Nu Primary Valve Location Verified	umber 57	5		1
Primary Valve Cleared, Operated	E Re	cord No. of Turns:	s: I	
Primary Valve Fully Closed	11	No, Explain:		
Primary Valve Greased		NIA		
Primary Valve Gate Key Fits On	e l	<u> </u>		
Primary Valve Cover and Inside Pain		P1		
Stamped with Valve Number	leu neu		100 100 100 100 100 100 100 100 100 100	<u></u>
Primary Valve Leak Checked	Meth	od: CGI SoapTest	3. 1	
	Gas L	eak Reading: 0% Notes:		
All Valve Boxes Gas tested Max %	I I			
All Valve Boxes Clear	<u></u>		»	
Valve Key fit Properly on Valves	E			
Valves in Correct Position	9	· · · · · · · · · · · · · · · · · · ·		
Outlet Valve Painted Green				
Hands off Guards on By-Pass Valve				
Hands off on Control Line Valves				
Vault, Pit or Building				
Flow Sheet Correct	E-		0000 2 41 42 4	
Flow sheet posted on station	E			
Water Depth (in feet)		0		
Water Pumped		/0		
Atmosphere Check		OK]		
Vault Covers/Doors/Gate	3			
Gutters Clean (Bilco)	Ľ			
Ventilating Duct Ends Unobstructed				
LNG Tap inspected		VIR		
General Condition of Vault/Building		Good	· · · · · · · · · · · · · · · · · · ·	
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Recording Chart Accurate	9	telemetering		a

Vent Pole Condition General Notes

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Regulator Maintenance

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City	CONCORD		SO	MAIN ST. & GA	S ST.	· · · · · · · · · · · · · · · · · · ·
Regulator	4211					
Notes:	WORKER					7:21-05
Outlet Pressure:	12"] Iniet Pi	ressure:	60#		
Manufacturer:	Model Number:	Size:	ANSI:	Serial Number:	Type Loading:	Actualor:
FISHER	399 EZ JOE	4"	150#	10924919	السيبي مروجية والمراجع	I
Pilot Mfg:	Pilot Model:	Override P	ilot Mfg:	Override Pilot Model:	Remote Pilot:	and a second sec
Fisher	161-Y-1					No
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Regulator Filter W	/et		Sample take	en 🗌		
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Filter		17	new			
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Regulator Filter We	et	NO Sa	mple taken	NO		
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Station Inlet Press	ure-Left: 277)#		-		
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Setpoint - Left:	<u></u>		1 .	1 + 1.A.	Kit an	+ 1. 1. +
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Regulator Main	tenance
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City	SO MA	IN ST. & GAS	SST	1
Regulator 4211M	00.110			
Notes: MONITOR				-21-05
Outlet Pressure: 12"	Inlet Pressure: 60#	****** = ************************		
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FISHER 399 EZ JOE	4" 150#	10924918		
Pilot Mfg: Pilot Model:	Override Pilot Mfg: O	verride Pilot Model:	Remote Pilot:	Weight Setting:
Fisher 161-Y-1	Check for Yes] <u>N</u>	D)
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100% Lockup Obtained	3			
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02:18p CONCORD LNG			60:	3-226-4311 Attachment SLF-R2 National Grid NH	P-Docket DG 1 Attachment 9 Page 4 of 9
Station Inspection F	orm	Regu	lator Station	- Docke t No. DG 10-017 Page 5 of 10	
City CONCORD			MAIN ST. &		
Division EnergyNorth Due I	Date:	7/21/2006 Performed Da	te: 10-11-04	Employee: DB+K	<u> </u>
Standard Inlet Pressure: 60#	1	Standard Outlet Pressure		Single Feed	
Valves Key Valve N	umber	575			
Primary Valve Location Verified	X				
Primary Vaive Cleared, Operated	R	Record No. of Turns;	Notes:		
Primary Valve Fully Closed	~	If No, Explain:			
Primary Valve Greased		NA			
Primary Valve Gate Key Fits On	\boxtimes				
Primary Valve Cover and Inside Pain	ted Re	A NAIVER	lox Needs To	bekenlacon	
Stamped with Valve Number					
Primary Valve Leak Checked	区	lethod: CGI 🕅 SoapTo			
		as Leak Reading:	Vo Notes:		
All Valve Boxes Gas tested Max %	X				
All Valve Boxes Clear	X				
Valve Key fit Properly on Valves	K)				
Valves in Correct Position	R				
Outlet Viv Painted Green	X	T			
Hands off Guards on By-Pass Valve	X				
Hands off on Control Line Valves	X				
Vault, Pit or Building					
Flow Sheet Correct	28				······
Flow sheet posted on station	X			Na	
Water Depth (in feet)		0			
Water Pumped		NO		······································	
Atmosphere Check		OK		· · · · · · · · · · · · · · · · · · ·	
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Gutters Clean (Bilco)	¥		······································		
Ventilating Duct Ends Unobstructed	ģ	NA			N (X
LNG Tap Inspected		NA			
General Condition of Vault	Ì	Good			
Recording Gauge					
Recording Chart Accurate	× [· · · · · · · · · · · · · · · · · · ·	
Vent Pole Condition		Good		· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·
General Notes	ſ	inlit value Be replaced No O	y Broken a	port Box nee	dstobe

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	Regul	ator	Maintenance
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Regulator Notes: Outlet Pressure;	4211		SO. N	AIN ST. & GA	S ST.	
L	WORKER					
Outlet Pressure;				· · · · · · · · · · · · · · · · · · ·	······································	10-11-06
		Inlet Pi	ressure:	60#		
Manufacturer:	Model Number: 399 EZ JOE	Size: 4"	ANSI: 150#	Serial Number: 10924919	Type Loading:	Actuator:
Pilot Mfg:	Pilot Model:	Override Pi	lot Mfg:	Override Pilot Model:	Remote Pilot:	Weight Setting:
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Rebuilt Regulator		9				
Internal Inspection						
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1/2 PSIG air and so		· ·				
Corrosion Inspect Regula Pilot Main P Contro	ator		Surface Ru	st 3 - Minor Pitting	4 - Deep Pitting	5 - Leaking
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Filter All Abo lain Line Filter Elen lain Line Strainer C egutator Filter Wet tation Inlet Pressur	e-Found: 56 P	NO Sam	A	[NO]		
Filter All Abo lain Line Filter Elen lain Line Strainer C egulator Filter Wet lation Inlet Pressur tation Inlet Pressur	e-Found: 56 /s	NO Sam	A	[NO]		
Filter	e-Found: 56 P	NO Sam	A	[NO]		

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City	CONCORD			Regulator Station of	
Regulator]	4211M	== SO	. MAIN ST. & G.	AS ST.	
Notes:	MONITOR				·····
Outlet Pressure	L.,	Inlet Pressure:			10-11-06
Manufacturer:	Model Number:		l60#		
FISHER	399 EZ JOE	Size: ANS! 4" 150#	Serial Number: 10924918	Type Loading:	Actuator:
Pilot Mfg: Fisher	Pilot Model: 161-Y-1	Override Pilot Mfg:	Override Pilot Model	Remote Pilot:	Weight Setting
		ck for Yes			
Rebuilt Regulator		6	and (1992		·
Internal Inspection	1.17M	3			
Smooth Full Strok		3			
100% Lockup Obt	and the second second				
Rebuild / Replace	and an address of the second of the second second				
Pilot Operation No					
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Pilot Filter Elemen		LI NO			1
Vent lines blown o	Salar and Salar a close sector a "I	Ľ			And a second
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Pilot Main Pi Cantrol Filter All Aboy					
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ain Line Strainer Cle	eared	[NA			
gulator Filter Wet]	NO Sample taken] [NO		J
ation Inlet Pressure	Found: 56 Psi			······································	
ation inlet Pressure	-Left; 56/5	,		· · · · · · · · · · · · · · · · · · ·	
tpoint - Found:	1 12 m	the manufacture of the manufacture of the			
tpoint - Left:					
		and a second sec	Kit , tube +		·
tion taken Notes:		11. Il Val. P	1 Kil 1	and a d	

06 10 02:17p CONCORD LNG		6 Regulator Station	03-226-4311 Attachment SLF-R2 National Grid NH —Đeçket No. DG 10-017 Page 8 of 10	National Grid NH P. Docket DG 10-017 Attachment Staff 2-83 Page 7 of 9
Station Inspection For	m	SO. MAIN ST. &	() () () () () () () () () () () () () (· · · · · · · · · · · · · · · · · · ·
City				
Division EnergyNorth Due Dat	the second s		$\begin{array}{c c} \hline \\ \hline $	
Standard Infet Pressure: 60#	Standard Out	let Pressure: 12"	501 1016 1.66 0	
Valves Key Valve Num	· · · · · · · · · · · · · · · · · · ·			<u> </u>
Primary Valve Location Verified	Record No.	of Turns: Notes:		
-	Record No.			
Primary Valve Fully Closed				
Primary Valve Greased		······································		
Primary Valve Gate Key Fits On			A	
Primary Valve Cover and Inside Painte		Alve Box BROKEN +	Cover Missing	
Stamped with Valve Number Primary Valve Leak Checked	Method: CG	I SoapTest		
Frimary varye Leak Checked		ding: 0% LEL Notes:		
All Vaive Boxes Gas tested Max %	Y	······································		
All Valve Boxes Clear	Y :			
Valve Key fit Properly on Valves				
Valves in Correct Position				
Outlet V/v_Painted Green				
Hands off Guards on By-Pass Valve	2			
Hands off on Control Line Valves			······································	
Vault, Pit or Building				2
Flow Sheet Correct				
Flow sheet posted on station			· ····································	1
Water Depth (in feet)	0'			
Water Pumped				
Atmosphere Check	0% L			a nangananan sa tan tanan sa na di wakatata
Vault Covers/Doors/Gate	e			······································
Gutters Clean (Bilco)	0			
Ventilating Duct Ends Unobstructed				1
LNG Tap Inspected	NIA_			
General Condition of Vault	Good			
Recording Gauge				
Recording Chart Accurate	Telem	etering		
Vent Pole Condition	Good			
General Notes		r.Ker v:teiz		
Pipe to Soil Read	1. <u>.56</u> 2. <u>1.0</u>		5. 7. 6. 8.	

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Jul 06 10 02:18p	CONCORD LNG

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Regu	lator	Main	ten	ance

City Regulator	CONCORD		100 T	MAIN ST. & GA	CCT	
Responses and pills the California Approximation of	4211	· · · · · · · · · · · ·	- 30.1	VIAIN ST. & GP		· · · · ·
Notes:	WORKER					9-11-07
Outlet Pressure:	8"	Inlet P	ressure:	60#		
Manufacturer:	Model Number:	Size:	ANSI:	Serial Number:	Type Loading:	Actuator:
ISHER	399 EZ JOE	4"	15C#	10924919	i	
Pilot Mfg:	Pilot Model:	Override P	ilot Mfg:	Override Pilot Model:	Remote Pilot:	: Weight Se No
isher :	161-Y-1	eck for Yes	J	· 		<u>NO</u> }
Rebuilt Regulator	······					
Internal Inspection						
Smooth Full Strok	The second second second second second second second		internet at the			
100% Lockup Obt	·	5				
Rebuild / Replace	Pilot					
Pilot Operation No	ormat		and a second			
Pilot Filter Elemer	nt Visually Inspected					
Pilot Filter Elemen	nt Changed	8				
Vent lines blown t	out with air				· · · · · · · · · · · · · · · · · · ·	
1/2 PSIG air and s	oap of Atm System					
Regul Pilot Main						
· · · · · · · · · · · · · · · · · · ·	ol Lines	E				
Conu						
			Ş			
Filter	ave Ground Pining					
Filter	ave Ground Piping			- MARTINE IN THE REAL PROPERTY OF THE REAL PROPERTY		
Filter All Ab			//A			
Filter All Ab Main Line Filter Ele	ement Changed		//A V/ 177			
Filter All Ab Main Line Filter Ele Main Line Str ain er (ement Changed Cleared			NO		
Filter All Ab Main Line Filter Ele Main Line Strainer (Regulator Filter We	ement Changed Cleared		VIA	NO.		
Filter All Ab Main Line Filter Ele Main Line Strainer Regulator Filter We Station Inlet Pressu	ement Changed Cleared et .re-Found: & & & & & & & & & & & & & & & & & & &	NO Sa	VIA	<u>NO</u>		
Filter	ement Changed Cleared It Ire-Found: 58,	NO Sa 5 #	VIA	NO		
Filter All Ab Main Line Filter Ele Main Line Strainer (Regulator Filter We Station Inlet Pressu Station Inlet Pressu	emení Changed Cleared et rre-Found: 58, rre-Left: 37, 8,4	NO Sa 5 # . 5 # .	₩/ <i>I</i> } mple taken	NO NO NO NO NO NO NO NO NO NO NO NO NO N		

Jul 06 10 02:17p CON	CORD LNG
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0		Mainton

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City	CONCORD		SOM	MAIN ST. & GA	S ST.	
Regulator	4211M				· · · · · · · · · · · · · · · · · · ·	
Notes:	MONITOR					9-11-07
Outlet Pressure:	. 12"	Inlet Pr	essure:	60#		
Manufacturer:	Model Number:	Size:	ANSI:	Serial Number:	Type Loading:	Actuator
ISHER	399 EZ JOE	4°	150#	10924918		
Pilot Mfg:	Pilot Model:	Override Pil	lot Mfg:	Override Pilot Model:	Remote Pilot	Weight Setting:
isher	161-Y-1					
		ck for Yes				
Rebuilt Regulator	177722					
Internal Inspectio	the second se					
Smooth Full Stree						
100% Lockup Obt						
Rebuild / Replace	and the second s					
Pilot Operation N	and a second sec					And the second
	nt Visually Inspected					
Pilot Filter Eleme				· · · · · · · · · · · · · · · · · · ·		
Vent lines blown		- 4/	<u> 1946</u>			<u> </u>
1/2 PSIG air and s	soap of Atm System					······································
Pilot Main Cont Filter	Ilator Pipe rol Lines		- Surface R	lust <u>3 - Minor Pitting</u>	4 - Deep Pitting	5 - Leaking
Main Line Filter El	······································		VIA			
Main Line Strainer			NTA		k	
Regulator Filter W		le em	nple taken		III	······································
Station Inlet Press		512				
Station Inlet Press	sure-Left: 58	.50				
Setpoint - Found:	12	7"we	n - Company and Andre Maria (1999)			
Setpoint - Left:						
		TATION	1011	MOONES Flou	1 MAX Reg	whator 4 11
Action taken Notes	Ser. New for	# 91554 Inlet+ Supply	Also , outlet Pressu	vere mooney - VALUOS KEROT Le.	20L Pilot) 2st + Naw fis	w/stor 4 to w/stor 15 "wcsplit her 67 cf Pilot

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ENERGYNORTH NATURAL GAS, INC. d/b/a NATIONAL GRID NH DG 10-017

NH PUC Staff Responses To Data Requests of National Grid NH

Date Received: November 5, 2010 Request: Grid-Staff 49 Date of Response: November 23, 2010 Witness: Randall Knepper

REQUEST:

Ref. p. 9, 1. 18- p. 10, l. 4 of Mr. Knepper's testimony. Are there other situations that Mr. Knepper is aware, aside from the one mentioned in Mr. Knepper's testimony, where he believes the Company prematurely replaced an adequately functioning appurtenance? If so, please identify each such instance.

RESPONSE:

There are other instances Staff where it believes that the Company prematurely replaced an adequately functioning appurtenance. Staff is attempting to confirm whether its beliefs are accurate. Therefore, Staff does not have specific examples at present. Staff will provide a supplemental response with specific examples when it has confirmed or dispelled its belief.