

NORTHERN UTILITIES, INC.

ORIGINAL	
N.H.P.U.C. Case No.	DG 11-196
Exhibit No.	#4
Witness	Panel 2
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DIRECT TESTIMONY OF
MELCHORE CIULLA

New Hampshire Public Utilities Commission

Docket No. DG 11-196

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1 **I. INTRODUCTION**

2 **Q. Please state your name and business address.**

3 A. My name is Melchore (Mel) Ciulla. My business address is 325 West Rd.
4 Portsmouth, New Hampshire 03801.

5

6 **Q. What is your position and what are your responsibilities?**

7 A. I am Manager of Gas Operations for the New Hampshire operations of Northern
8 Utilities, Inc. (“Northern”). In this capacity, I am responsible for construction,
9 operation, service, inspection and maintenance of the Company’s gas distribution
10 systems, including compliance with applicable safety standards and regulations.

11

12 **Q. Please describe your business and educational background.**

13 A. I have over 39 years of experience in the utility industry and an extensive
14 background in the operation, maintenance and construction of natural gas
15 distribution systems. I joined Unitil in October 2008 in my current position of
16 Manager of Gas Operations. Prior to joining Unitil, I was employed for 17 years
17 at National Grid, including predecessor companies KeySpan, Eastern Enterprises
18 (Boston Gas), and Colonial Gas. Before joining National Grid’s predecessor
19 companies, I worked as a contractor in the utility industry from 1971 to 1991
20 including positions as a laborer and pipe welder. I was a self-employed pipe
21 welder from 1985 to 1991 before joining Colonial Gas Company in 1991 as a
22 welder. I moved into a Supervisor role in 1994 where my responsibilities included

1 emergency response, leak repair, and construction activities. I was promoted to
2 Manager of Construction/Fitting in 2000 where my responsibilities included
3 emergency response, meter installation new/replacement, and all construction
4 activities new and replacement. I was then promoted to Manager of
5 Reliability/Integrity in 2007 where I was responsible for construction involving
6 mains/services replacement with system reliability, Rhode Island, Massachusetts,
7 New Hampshire.

8
9 I am Operator Qualified in 67 covered tasks and have had industry training at the
10 Institute of Gas Technology in Gas Distribution Operations. I have attended the
11 New England Gas Association's Leadership in Tomorrow's Utility Workshop, the
12 US Department of Transportation Pipeline Safety Seminar, the American Welding
13 Society Welding Inspection Technology Seminar, and the National Welding
14 Inspection School for Plants and Pipelines. I was a Certified Welding Inspector
15 (CWI) and a Life Member of the American Welding Society. I have an Associate
16 Degree in Applied Science in Welding Technology from New Hampshire
17 Vocational Technical College Manchester, NH.

18

19 **Q. Have you previously testified before this Commission or other regulatory**
20 **agencies?**

21 A. No. However, I have had direct communication with Commission Staff on the
22 Emergency Response Standards that are the subject of this proceeding.

23

1 **II. SUMMARY OF TESTIMONY**

2 **Q. What is the purpose of your testimony?**

3 A. My testimony will describe the Company's implementation of the Emergency
4 Response Standards, the actions taken by management to comply with the
5 Emergency Response Standards, and the estimated costs of staffing and equipment
6 that would be necessary to achieve compliance with the current standards.

7
8 **Q. Please summarize your testimony.**

9 A. The key highlights of my testimony are summarized below. Each of these will be
10 more fully described in the testimony that follows:

- 11 • The Company followed through in a timely manner to develop a reporting
12 format within six months of the closing, as required in the settlement
13 agreement.
- 14 • Northern has gone to great lengths to meet the Emergency Response Standards
15 in the Commission's Order. Unfortunately, we have determined that meeting
16 the standards will require far more than slight tweaking and management
17 focus.
- 18 • Northern has hired staff and implemented five new work shifts in an effort to
19 meet the standards, extending working hours coverage to 11:00 PM Monday
20 through Friday, and 7:30 AM to 4:00 PM on Saturdays. This still has not been
21 enough to meet the standards.
- 22 • Meeting the Emergency Response Standards will require major changes to
23 Northern's operations and staffing. The 30 minute standards cannot be met
24 with traditional standby or "on call" procedures.
- 25 • We have estimated the staffing and costs required to meet the standards. First
26 year costs are estimated at \$1.27 to \$1.53 million, with annual costs thereafter
27 of \$1.1 to \$1.5 million to hire and outfit 9 – 11 Service Technicians plus
28 supervision.

1 **III. IMPLEMENTATION OF EMERGENCY RESPONSE STANDARDS**

2 **Q. When were the Emergency Response Standards first established?**

3 A. The Emergency Response Standards were established in a settlement agreement in
4 docket DG 08-048 and approved in Commission Order 24,906 approving Unitil's
5 acquisition of Northern Utilities. Under the agreement, we were to work with
6 Commission Staff to develop within six months (after the closing) a monthly
7 reporting format that would provide information regarding emergency response
8 times established in the settlement agreement. Unitil closed on this transaction and
9 assumed ownership of Northern on December 1, 2008. Thus, we were to develop
10 the reporting format by June 1, 2009.

11

12 **Q. Did Northern work with Commission Staff on a reporting format for the**
13 **Emergency Response Standards?**

14 A. Yes. In April 2009 we reached out to the Safety Division to discuss the format for
15 the Emergency Response Standards. On April 20, 2009 I sent a sample of the
16 proposed reporting format seeking feedback, and requested a meeting in May to
17 finalize the standards. In May I again sent a sample of the proposed reporting
18 format seeking feedback, and requested a follow up meeting in June to finalize the
19 standards. A meeting was held at the PUC's offices on June 9, 2009 to review the
20 reporting format. Following the meeting, we were under the impression that the
21 Safety Division would get back to us with comments or approval after reviewing
22 the sample report.

1 **Q. When did the Emergency Response Standards become effective?**

2 A. While the standards were approved in Commission Order 24,906 , it is unclear
3 when full compliance with the standards was expected. The Settlement Agreement
4 does not specify a “start” date or compliance date. Given that Northern was not in
5 compliance with the standards at the time of closing, it clearly could not comply
6 with the standards on Day 1. Furthermore, the requirement that Northern work
7 with staff “within six months” to develop the report format suggested that it would
8 take time to implement the standards. In addition, some of Northern’s emergency
9 response responsibilities were being fulfilled by Bay State under a Transition
10 Services Agreement, and it was expected to take time before these responsibilities
11 were integrated into Unitil’s operations.

12
13 Although we never received any formal feedback or approval from Staff following
14 our meeting in June 2009, we nonetheless began reporting on the Emergency
15 Response Standards in early 2010.

16
17 **Q. Aside from the issue of the reporting format, was there any discussion or**
18 **agreement between the Company and Staff as to the measurement period**
19 **(annually, quarterly or monthly) for purposes of compliance with the**
20 **Emergency Response Standards?**

21 A. No, this was not discussed, and no agreement or understanding on this issue was
22 ever reached.

1 **Q. When did Northern begin reporting under the Emergency Response**
2 **Standards?**

3 A. After not hearing anything further from Staff following our meeting in June 2009,
4 we made the decision to begin reporting under the Emergency Response Standards
5 beginning with the January 2010 report, which was filed in February of 2010.

6 **Q. Has Northern ignored the Commission's Order or otherwise failed to**
7 **implement the Emergency Response Standards?**

8 A. No. To the contrary, the Company has been very diligent in its attention to this
9 issue, and has gone to great lengths to meet the Emergency Response Standards in
10 the Commission's Order. At no point have our response times deteriorated; rather,
11 we have consistently improved our performance, though not to the level of
12 meeting the response times in all categories. Unfortunately, it has become clear
13 that Northern cannot meet the Emergency Response Standards within its existing
14 operations and staffing levels. The standards can be met only through significant
15 changes to working hours and shift coverage, which will require a substantial
16 increase in staffing levels. Northern's existing staffing of 11 Service Technicians
17 has been stretched as far as it can be.

18

19 **Q. Has Northern undertaken efforts and initiatives to achieve compliance with**
20 **the Emergency Response Standards?**

21 A. Yes. As I will describe in the next section, the Company has focused extensive
22 efforts on meeting the Emergency Response Standards established in Order
23 24,906, including additions to staffing, shift coverage and working hours. This

1 included the hiring of two Service Technicians and one Distribution Operator to
2 provide safe and reliable service in the Atkinson/Plaistow/Salem area that had
3 been serviced previously from the Bay State field office in Lawrence, MA.
4

5 **IV. MANAGEMENT ACTIONS TO MEET THE RESPONSE STANDARDS.**

6 **Q. How did Unitil plan to provide emergency response to the Plaistow, Salem,**
7 **and Atkinson area immediately following the closing?**

8 A. Under the Settlement Agreement, emergency response to the Plaistow, Salem, and
9 Atkinson area would continue to be serviced from Bay State's Lawrence facilities
10 pursuant to the Transition Service Agreement until such time as Unitil fully
11 integrated its service to this area after the closing. This provided Unitil with a
12 reasonable period of time to develop an integration plan for this area addressing
13 staffing, shifts, and emergency response procedures, and to hire and train
14 necessary staff, to ensure no degradation in response time. This provision of the
15 Settlement Agreement was intended to address concerns expressed in the Direct
16 Testimony of Randall S. Knepper in DG 08-048 that customers in the Plaistow,
17 Salem, and Atkinson area could see increases in delays to emergency leak
18 response and odor complaints because they would no longer be serviced from
19 Lawrence, Massachusetts.
20

21 **Q. Were the concerns that, under Unitil management, emergency response**
22 **would deteriorate to the Plaistow, Salem, and Atkinson area warranted?**

1 A. No. Almost immediately after the Commission approved the Settlement
2 Agreement in Order 24,906, the Company received information from Bay State
3 showing that the emergency response to this area from Lawrence was in fact quite
4 poor if measured against the Emergency Response Standards. By that measure, the
5 emergency response to the Atkinson/Plaistow/Salem area under the prior corporate
6 owner failed to meet 6 of the 9 standards, some by a wide margin. After a review
7 of leak response times, Bay State advised us that “[b]ased on our history, [we] do
8 not believe during the Transition Period, it will be possible for the LW Operations
9 to meet the goals....” As a result, Unitil moved forward immediately after closing
10 with the actions needed to assume responsibility for emergency response,
11 including staffing, shifts, and emergency response procedures, in order to improve
12 response time to this area.

13

14 **Q. Please describe the actions taken by Unitil to meet the Emergency Response**
15 **Standards.**

16 A. Immediately after acquiring Northern, we looked at the coverage that would be
17 needed for emergency response purposes and in January of 2009 we posted and
18 filled two new positions to add two new shifts to provide emergency coverage
19 from 1:00 PM to 9:00 PM Monday through Friday. These shifts were added in an
20 effort to improve response to ‘After Hours’ calls, especially to meet the 30 minute
21 response standards. These new shifts/positions provided coverage to two distinct
22 coverage areas, defined as the “north area” and the “south area”. One Service
23 Technician was to cover the north part of the system and the other Service

1 Technician would cover the south part of the system, including the
2 Atkinson/Plaistow/Salem area. These shifts were *in addition to* the normal
3 daytime staffing during regular working hours, and are illustrated below.

4 **Table MC-1. Shifts Implemented 2009**

AREA	SUN	MON	TUES	WED	THUR	FRI	SAT
North	--	1-9 PM	--				
South	--	1-9 PM	--				

5
6 **Q. Did you communicate with PUC Staff as to the changes being implemented?**

7 A. Yes. At an informal conference at the Commission at the beginning of 2009
8 (related to 3rd party damages), I informed Staff that we had implemented these
9 two new shifts and were going to gather data to determine if future changes would
10 be needed to meet the Emergency Standards. During a subsequent informal
11 conference in August, I explained that we were not meeting our 30 minute
12 percentages and would be reviewing the 2009 data to determine if additional shift
13 coverage would be needed.

14
15 **Q. Were additional actions subsequently undertaken to attempt to meet the**
16 **Standards?**

17 A. Yes. At the end of 2009 we reviewed all of the 2009 data, specifically focusing on
18 our response times for the 30 minutes response standards. For the ‘After Hours’
19 period we determined that our 30 minute response percentage was 67% relative to
20 the target of 80%. We looked at the number of calls outside of regular hours that

1 we missed by 1 to 4 minutes and determined there were 22 such calls during 2009.
2 We also looked at the number of missed calls that occurred after the 9:00 PM
3 shifts we recently implemented, and determined there were 20 such calls during
4 2009. Based on this analysis, we split the service territory into three areas and
5 added an additional (3rd) Service Technician to the 1:00 – 9:00 PM shifts with the
6 expectation that this would capture most of the 22 calls missed by 1 to 4 minutes.
7 This additional shift was implemented in March of 2010. Again, these shifts are *in*
8 *addition to* the normal daytime staffing during regular working hours, and are
9 shown below.

10 **Table MC-2. Shifts Implemented March 2010**

AREA	SUN	MON	TUES	WED	THUR	FRI	SAT
North	--	1-9 PM	--				
South	--	1-9 PM	--				
Middle	--	1-9 PM	--				

11
12 We also reviewed the 2009 data focusing on the ‘Weekend and Holiday’ response
13 standards. We determined that our 30 minute response percentage for this time
14 period was 54% with a target of 76%. We again looked at the number of calls
15 missed by 1 to 4 minutes and determined there were 13 such calls during 2009.
16 Due to the low number of such calls (‘Weekend and Holiday’ calls represented
17 only 17% of the total calls) and correspondingly low confidence in potential
18 solutions given the low number of data points, we felt we needed additional data
19 and analysis before pursuing alternatives that would require hiring additional
20 staffing to staff new shifts on the weekends

1

2 **Q. When did you next perform an analysis of the emergency response data?**

3 A. In October of 2010, we again analyzed the data to evaluate the performance
4 improvement resulting from the third shift that had been added in March. For the
5 ‘After Hours’ period we determined that our 30 minute response percentage had
6 improved from 67% to 74%, though still below the target of 80%. We again
7 looked at the number of calls outside of regular hours that we missed by 1 to 4
8 minutes and determined there were 6 such calls since the new shift was added in
9 March. We also again looked at the number of missed calls that occurred *after* the
10 recently implemented 9:00 PM shifts, and determined there were 5 such calls since
11 March. Based on this analysis, we concluded that if we moved the 1:00 – 9:00 PM
12 shifts to 3:00 – 11:00 PM, thereby expanding after hours coverage, we would have
13 met the Emergency Response Standards for 30, 45 and 60 minute response in the
14 after hours time period. This shift change was implemented in October of 2010, for
15 all three Service Technicians and covering the three areas. Given the low number
16 of calls on weekends and holidays (just 18% of total calls through October), the
17 decision was made to wait until the end of 2010 to have 2 complete years of data
18 before evaluating alternatives, all of which would require additional staffing. The
19 revised shifts are shown below.

20 **Table MC-3. Shifts Implemented October 2010**

AREA	SUN	MON	TUES	WED	THUR	FRI	SAT
North	--	3-11 PM	--				
South	--	3-11 PM	--				

Middle	--	3-11 PM	--				
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Q. Did you communicate with Staff the challenges Northern was facing meeting the 30 minute response standards and the actions being taken?

A. Informally, yes. While at the Commission for other matters, typically damage prevention or 3rd party damages, I updated Safety Division Staff on the status of our efforts and our concerns.

Q. What actions have you taken in 2011?

A. In January, we reviewed all the data from 2009 and 2010. Based on that review, we determined that the 30 min response standard was achievable in the ‘After Hours’ period with the three 3-11PM shifts we had put in place. Our total for 30 minute response to after hours calls at the end of 2010 was 75%, or 5% below the target of 80%. However, after reviewing the data, we determined that had the extended shifts been in place for the full year, our response percentage would have been 79%. Furthermore, looking at the calls that “just missed” the 30 minute benchmark in 2010, we found 12 calls that missed by 1-4 minutes and 6 calls that missed by 1-2 minutes. Achieving a 30 minute response for just 4 such calls would allow us to meet the 80% standards, which we felt was achievable.

We also reviewed the 2010 data focusing on the ‘Weekend and Holiday’ response standards. We determined that our 30 minute response percentage for this time period was 45% with a target of 76%. With only 20% of the total calls

1 corresponding to this standard on weekends and holidays we looked at when these
2 calls were occurring and determined that 60% of the calls were on Saturday. In
3 order to improve response on the weekend, we implemented two additional shifts
4 covering Tuesday through Saturday in order to extend work coverage to Saturdays.
5 Again, these shifts are *in addition to* the normal daytime staffing during regular
6 working hours. The additional shifts covering the hours 3-11 PM Monday through
7 Friday and the hours of 7:30-4 PM on Tuesday through Saturday is shown below.

8 **Table MC-4. Shifts Implemented 2011**

AREA	SUN	MON	TUES	WED	THUR	FRI	SAT
North	--	3-11 PM	3-11 PM	3-11 PM	3-11 PM	3-11 PM	--
South	--	3-11 PM	3-11 PM	3-11 PM	3-11 PM	3-11 PM	--
Middle	--	3-11 PM	3-11 PM	3-11 PM	3-11 PM	3-11 PM	--
North	--	--	7:30-4 PM	7:30-4 PM	7:30-4 PM	7:30-4 PM	8-3:30 PM
South	--	--	7:30-4 PM	7:30-4 PM	7:30-4 PM	7:30-4 PM	8-3:30 PM

9

10 **Q. You have indicated that not many emergency calls are received on weekends**
11 **and holidays. Please provide a breakdown of when calls were received.**

12 A. A summary of emergency calls broken out by time period for the years 2009, 2010
13 and 2011 is provided as Table MC-5. As shown in the table, on average we receive
14 roughly 15 to 18 emergency calls per month on weekends and holidays. There are
15 some months when we receive fewer than 10, and many months when we receive
16 fewer than 15. Given the emergency response objective of responding to 76% of
17 these calls in 30 minutes or less, there are some months when missing more than 1

1 call would cause us to miss the target, and many months where missing just 3 to 4
 2 calls would cause us to miss the target.

3 **Table MC-5. Emergency Calls Received, By Time Period**

Year →	2009			2010			2011 YTD		
Month	Regular Hours	After Hours	Weekend & Holiday	Regular Hours	After Hours	Weekend & Holidays	Regular Hours	After Hours	Weekend & Holidays
January	86	25	20	35	10	26	68	40	34
February	51	22	15	41	15	16	75	38	33
March	60	23	20	52	20	10	69	19	13
April	34	12	7	52	22	19	57	20	14
May	50	24	15	29	15	14	36	18	12
June	57	13	10	50	16	9	57	26	14
July	50	17	6	41	15	10	52	16	9
August	24	12	7	58	16	8	52	17	14
September	47	22	27	57	14	12	55	20	17
October	68	19	12	78	19	21	-	-	-
November	29	7	13	49	18	30	-	-	-
December	46	37	23	76	20	32	-	-	-
Total	602	233	175	618	200	207	521	214	160
Mo. Average	50.2	19.4	14.6	51.5	16.7	17.3	57.9	23.8	17.8

4

5 **Q. Please show a similar table showing the number of calls responded to in**
 6 **greater than 30 minutes during each time period.**

7 A. A summary of emergency responses exceeding 30 minutes broken out by time
 8 period for the years 2009, 2010 and 2011 is provided as Table MC-6. As
 9 evidenced by the data for 2011, we are typically only a handful of calls away from
 10 meeting the 30 minute response standard for weekends and holidays. In most
 11 months, the difference between meeting the 76% response objective, and not
 12 meeting the objective, is 3 to 4 missed calls (often by just 1-4 minutes). This is
 13 why we've been reluctant to undertake a significant and costly expansion of
 14 Northern's workforce to meet the 30 minute response benchmark for weekends

1 and holidays, especially when we are exceeding the targets in most of the other
 2 benchmarks.

3 **Table MC-6. Emergency Response Over 30 Mins, By Time Period**

Year →	2009			2010			2011 YTD		
Month	Regular Hours	After Hours	Weekend & Holidays	Regular Hours	After Hours	Weekend & Holidays	Regular Hours	After Hours	Weekend & Holidays
January	39	9	6	2	6	15	9	8	14
February	6	6	7	3	5	7	9	11	19
March	10	6	9	2	8	7	5	1	8
April	6	7	3	6	4	10	4	5	7
May	4	3	9	5	5	7	5	2	5
June	6	3	3	2	4	5	3	4	6
July	3	5	6	1	3	8	4	4	6
August	3	3	3	5	3	7	3	5	5
September	5	9	12	11	3	4	15	6	8
October	5	9	4	13	1	11	-	-	-
November	3	2	6	7	5	14	-	-	-
December	5	14	13	9	4	18	-	-	-
Total	95	76	81	66	51	113	57	46	78
Mo. Average	7.9	6.3	6.8	5.5	4.3	9.4	6.3	5.1	8.7

4

5 **Q. Have you taken other actions to improve emergency response times?**

6 A. Yes. In July we met with union leaders to discuss the issues we were having in
 7 meeting our targets for emergency response. Specifically, we asked if they had any
 8 ideas or recommendations that would improve response and allow us to meet our
 9 targets. We discussed the benchmarks and time periods as well as an on-call
 10 rotation for a 3 (geographic) call area. We agreed to follow up with another
 11 meeting in August. This then led to a series of meeting with union leaders where a
 12 number of options were discussed, including having Distribution Operators be first
 13 responders along with Service Technicians. Certain of these changes are subject to

1 collective bargaining and can only be implemented with the agreement of the
2 union.

3
4 At this point we had determined a 3 call area was needed to improve response. To
5 date, we have met with the union multiple times. However, there has not been an
6 agreement as to staffing. Furthermore, while proposed changes to call rotations
7 and first response responsibilities may improve response, we do not believe they
8 will be sufficient to meet the 30 minute standard on weekends and holidays.

9

10 **Q. Did you meet with Staff to discuss the Company's progress with respect to the**
11 **Emergency Response Standards?**

12 A. Yes. At the request of Staff, Bob Lundergan (Supervisor, Gas Services, Northern
13 Utilities) and I attended a meeting at the Commission on March 11, 2011 to
14 discuss our emergency response percentages. During the meeting, we had a
15 lengthy discussion on everything we were doing to achieve the percentages laid
16 out in the settlement agreement. I explained the changes that had been made
17 implementing shifts, extending shift coverage, splitting the service territory into
18 coverage areas for emergency response purposes, and other actions taken. We
19 reviewed the number of calls received on weekend and holidays and the number of
20 calls missed by just 1-4 minutes. We also discussed concerns with having the
21 Service Technicians sitting idle waiting for calls as there is little work that can be
22 done after 9 PM, and on Saturday after 4 PM.

23

1 During the discussion, Staff noted that they had been unaware of all the shifts and
 2 time changes implemented in an effort to meet the standards. I apologized for any
 3 miscommunication and committed to providing monthly information on the
 4 actions being undertaken to meet the standards. Thereafter, starting with the March
 5 report (which was submitted in April) I began to communicate with Staff on a
 6 monthly basis the actions taken to meet the emergency response standards. This
 7 has continued every month since.

8

9 **Q. Have these changes been effective in improving Northern’s response times?**

10 A. Yes. Since acquiring Northern Utilities in December of 2008, the Company’s
 11 emergency response has shown consistent improvement. Moreover, we believe our
 12 emergency response to be outstanding as compared to the industry. Our response is
 13 summarized in the table below.

14 **Table MC-7. Emergency Response Performance**

Response Objective	Time of Call	Goal	Actual Response		
			2009	2010	2011 YTD
60 Minutes	Normal Hours	97.00%	96.00%	100.00%	100.00%
	After Hours	95.00%	98.00%	100.00%	100.00%
	Weekends/Holidays	94.00%	98.00%	99.00%	98.00%
45 Minutes	Normal Hours	90.00%	95.00%	97.00%	99.00%
	After Hours	86.00%	94.00%	95.00%	97.00%
	Weekends/Holidays	84.00%	84.00%	78.00%	86.00%
30 Minutes	Normal Hours	82.00%	84.00%	89.00%	89.00%
	After Hours	80.00%	67.00%	75.00%	79.00%
	Weekends/Holidays	76.00%	54.00%	45.00%	51.00%

15

16 **Q. Have the changes implemented by Unitil allowed it to meet each of the nine**
 17 **Emergency Response Standards?**

1 A. No. The Company is currently meeting or very close to meeting 8 of the 9
2 standards. We are slightly missing our after hours bench mark of 30 minutes. Data
3 shows an additional person on the 3-11 shifts (3 people to 4 person coverage)
4 would be required to reduce travel time and at the current staffing level this is
5 unachievable. We are currently unable to meet the 30 minutes response standard
6 for weekends and holidays. We will not be able to meet this standard without
7 significantly expanding shift coverage on weekends which will in turn necessitate
8 a significant expansion of staffing.

9

10 **V. COSTS TO ACHIEVE COMPLIANCE WITH RESPONSE STANDARDS**

11 **Q. Have you determined the additions to working hours and staffing that will be**
12 **required to meet the Emergency Response Standards?**

13 A. Yes. Based on our analysis of the data, specifically with regard to 30 minute
14 response on after-hours and weekends and holidays, we believe it will be
15 necessary to add one additional person to the existing 3-11 after hours shift
16 coverage on Monday through Friday to have a 16 hour, 5 days per week staffing
17 level of 4. Weekends and holidays will require three shifts on each day where we
18 currently only have only one shift in order to achieve 24 hour coverage. This
19 means 2 days of 24 hour coverage with a staffing level of 4 as we will have to

1 make virtually every 30 minute response¹. In essence, it will be necessary to
2 transition from an “on-call” system to a full time staffing model, covering three
3 shifts per day on weekend and holidays. This will require the addition of 9 Service
4 Technicians relative to Northern’s current staffing. We estimate that this will
5 entail a first year cost of \$1,274,858 and a total projected five year cost of
6 \$6,127,914. A breakdown of these costs is provided below. Even at this staffing
7 level, however, we would be unable to guarantee 100% compliance with the
8 Emergency Response Standards if they are interpreted to require a monthly
9 compliance objective.

10 **Table MC-8. Minimum Cost to Meet Emergency Response Standards**

Category	2012	2013	2014	2015	2016	Total
Tools and Equip	162,000	-	-	-	-	162,000
Labor and Benefit	864,583	890,520	917,236	944,753	973,096	4,590,189
Transportation	122,715	126,396	130,188	134,094	195,717	709,111
Supervisory	125,560	129,327	133,207	137,203	141,319	666,615
Total	1,274,858	1,146,244	1,180,631	1,216,050	1,310,131	6,127,914

11

12 **Q. Please explain.**

13 A. It is still unclear and undefined as to what the performance standard is and how it
14 is measured. For example, is the compliance requirement under the Emergency
15 Response Standards determined monthly or annually? This has significant
16 implications for the shift coverage and staffing needed to meet the standards.

¹ As discussed below, since the total number of emergency calls received during this time period is very low, the consequence to the overall call response percentage of missing – by even a few minutes - just a handful of response times is quite significant.

1 Given the small number of emergency calls received on nights, weekends, and
2 holidays, enforcement of a *monthly* compliance objective for emergency response
3 would result in a de facto percentage objective much higher than those identified
4 in the Emergency Response Standards. In some cases, it will be necessary to
5 respond to 100% of calls, or nearly 100% of calls, in order to meet the response
6 percentages. Failing to make even one or two calls could result in performance
7 below the required percentage. For example, during 2011 (year-to-date), we
8 received an average of 17-18 calls per month during the Weekend/Holiday time
9 period, with some months experiencing significantly less. Accordingly, each
10 response which misses the 30 minute standard carries a huge penalty in terms of
11 meeting the overall target. Effectively, if compliance with the Emergency
12 Response Standards is to be evaluated and enforced monthly, the Company will in
13 essence be required to strive for 100% response in less than 30 minutes on nights,
14 weekends, and holidays in order to be assured of meeting the standards. This has
15 significant implications for shift coverage and staffing.

16

17 **Q. What would the cost impact be if the compliance objective for the Emergency**
18 **Response Standards was measured monthly?**

19 A. In that case, we believe it would be necessary to implement shift coverage 24
20 hours per day, 7 days per week, in three coverage areas, in order to ensure each
21 response standard is met each month. This will require the addition of 11 Service
22 Technicians relative to Northern's current staffing. The cost is estimated at a first

1 year cost of \$1,530,257 and a five year total of \$7,341,533. A breakdown of these
2 costs is provided below.

3 **Table MC-9. Cost to Meet Emergency Response Standards (Monthly Objective)**

Category	2012	2013	2014	2015	2016	Total
Tools and Equip	198,000	-	-	-	-	198,000
Labor and Benefit	1,056,712	1,088,413	1,121,066	1,154,698	1,189,339	5,610,228
Transportation	149,985	154,485	159,119	163,893	239,209	866,691
Supervisory	125,560	129,327	133,207	137,203	141,319	666,615
Total	1,530,257	1,372,225	1,413,391	1,455,793	1,569,867	7,341,533

4 **Q. Do you believe these costs are appropriate, and result in a commensurate**
5 **improvement in safety?**

6 A. No. All of the additions to staffing and shift changes implemented to achieve
7 compliance with the Emergency Response Standards involve significant costs that
8 will ultimately be recovered from customers. In that regard, they should be viewed
9 in the context of risk and risk mitigation, and should be evaluated on the basis of
10 cost and benefit. While there may be a reduction in risk, we believe the
11 improvement to safety is de minimis given the very small improvement in
12 response time responding to a very small handful of calls. On the other hand, given
13 the very significant expenditures involved, it is highly likely that far greater
14 improvements to safety could be achieved by spending the same sum of money on
15 other purposes – for example, infrastructure replacement. There is no evidence to
16 suggest that the large increases in staffing and associated costs will drive any
17 appreciable improvement in safety.

18

1 **VI. CONCLUSION**

2 **Q. Does this conclude your testimony?**

3 **A. Yes, it does.**