



CCO ANNUAL EXERCISE 2017

Exercise Interface

Test of the First Gas Ltd Critical Contingency Management Plan

Prepared in accordance with the Gas Governance (Critical Contingency Management)
Regulations 2008

11 May 2017

Critical Contingency Operator
cco@cco.org.nz

CONTENTS

1. Introduction	2
2. Executive Summary	2
3. First Gas as Transmission System Owner	3
4. Exercise Scenario	3
5. Summary of Assessment against Test Criteria	4
6. Recommendations	5
7. Pre-Test Exercise Audit of TSO by CCO	6
8. TSO Exercise Test Criteria and Observations	8
9. CCO Exercise Test Criteria and Observations	10
10. Retailers and Large Consumers Exercise Test Criteria & Observations	13
11. Asset Owners Exercise Test Criteria and Observations	15
Appendix A – Exercise Injects	16
Appendix B – Exercise Timeline	19
Appendix C – Notice Summary	23
Appendix D – Asset Owners Public Statements and Retailer Media Appeals	24
Appendix E – Retailer Curtailment Plan Test Report Template	29

Acknowledgment

The success of the exercise was directly attributable to the time and effort contributed by the participants during the planning, execution and feedback phases. These contributions are recognised and appreciated and have assisted in identifying valuable improvement opportunities.

Particular thanks go to those Retailers who accommodated observers for the duration of the exercise and to the observers provided by First Gas Limited and the Gas Industry Company (GIC).

1. Introduction

The Critical Contingency Operator (CCO) is required by regulation 34 of the Gas Governance (Critical Contingency Management) Regulations 2008 (the regulations), to instigate test exercises. These exercises should test that:

- the Critical Contingency Management Plan (CCMP) complies with regulation 25 and achieves the purpose of the regulations
- the CCMP contains the contact details required by regulation 25 and that they are current; and
- the list of emergency contact details maintained by Retailers required by regulation 43 is current

After the exercise, regulation 34 also requires that:

- within 10 business days of the exercise the Transmission System Owner (TSO) must provide a report to the CCO explaining why it's CCMP does or does not comply with regulation 25 and gives effect to the purpose of the regulations; identifies improvements and recommends CCMP amendments.
- within 10 business days of receiving the TSO report, the CCO provides a report to the industry body that assesses the effectiveness of the CCMP; evaluates any amendments recommended by the TSO; and identifies any amendments to the regulations, CCMP, communications plan or information guide that would improve the effectiveness in achieving the purpose of the regulations.

This report is based on:

- the CCO's pre-test exercise audit of the TSO
- the TSO post exercise reports
- Retailer self-assessment forms and other participant feedback
- observations from observers placed in the TSO control room and Retailer offices during the exercise; and
- the CCO's own observations.

After completion of the exercise and the required reporting, a change process occurs to implement any recommendations arising, with consultation where appropriate.

2. Executive Summary

Exercise Interface provided an opportunity for parties to practice their response to a critical contingency event in a safe environment and subsequently enhance their knowledge and competency for dealing with an actual event. The exercise successfully tested the core critical contingency phases and information flows associated with an event, such as declaration, demand curtailment and restoration, public information statements, Retailer and consumer compliance updates as well as event termination.

This report:

- concludes that the CCMP substantially complies with regulation 25 and is effective in achieving the purpose of the regulations; and

-
- identifies several recommendations in Section 6 to improve the efficiency of processes and procedures to support application of the CCMP.

A key point of difference in this year's test exercise was the presence of observers at the Retailers' offices for the duration of the exercise. This provided an excellent opportunity to see first-hand how the various Retailers apply their Retailer Curtailment Plans. Thus, this report also contains recommendations in Section 6 to improve the efficiency of processes and procedures to support the application of Retailer Curtailment Plans.

The CCO and TSO conclude from this exercise that the industry remains well prepared to respond to a potential or actual critical contingency. The recommendations proposed will further improve performance and response to such events.

3. First Gas as Transmission System Owner

First Gas Limited (First Gas) became the single TSO for the purposes of the regulations during 2016 as a result of purchasing both Vector Gas Limited and the Maui Pipeline. In June 2016, First Gas signalled its intent to transition to a single CCMP that covers the entire Transmission System. First Gas advised it would also take that opportunity to address any suggested CCMP improvements from previous critical contingency test exercises as well as any other enhancements First Gas considered prudent to make.

Changes to a CCMP that both the TSO and CCO consider to be more than immaterial are required to go through both a stakeholder consultation and independent expert review and approval process. This process and the associated timeframes are set out in the CCM Regulations.

First Gas compiled a consolidated CCMP for review at the end of November 2016. The process was completed and the revised CCMP was approved by both the Expert Adviser and the GIC on 22 February 2017.

Exercise Interface was the first formal test of the revised single CCMP.

A further update of the CCMP is expected to be completed to coincide with the development of a new single Gas Transmission Access Code (GTAC), which will replace the current Vector Transmission and Maui Pipeline Operating Codes. First Gas intends for the GTAC and its associated IT-platform to be operative from 1 October 2018.

4. Exercise Scenario

The exercise scenario was designed and managed by the CCO and centered on 3rd party damage to the First Gas Maui transmission pipeline just north of Pirongia resulting in a gas escape.

The exercise required the CCO, TSO and Retailers to carry out tasks and activities associated with the regulations, CCMP and other relevant documents.

The test exercise was desk-top only. Formal notices were sent and communications made, but no physical actions affecting equipment or gas supplies were carried out.

A series of exercise injects were pre-designed and issued by the CCO at set times during the course of the exercise. These injects are designed to ensure the full range of activities required to meet the test objectives are triggered. The complete injects are detailed in Appendix A.

Particular features arising from this year's scenario were:

- First Gas Ltd operating to a single combined CCMP;
- greater time allocated for Retailers' to act on curtailment instructions; and
- observation of Retailers.

The CCO arranged for observers to be positioned in the First Gas operations control room and at Retailer's premises. These observers were not directly involved in the exercise and were present to monitor and record events as they occur. Observers included representatives from the TSO and GIC.

Exercise debriefings were held with CCO, TSO and GIC observers following the exercise.

5. Summary of Assessment against Test Criteria

5.1 CCO Assessment

The CCO considers that the test exercise provided sufficient evidence to conclude that the CCMP complies with regulation 25 and is effective in achieving the purpose of the regulations.

The CCO has made several recommendations to improve the efficiency of processes and procedures to support application of the CCMP which are included in Section 6.

The CCO also considers that the test exercise provided sufficient evidence to conclude that the list of emergency contact details maintained by Retailers required by regulation 43 is substantially current.

The CCO has also made recommendations to improve the process and procedures to support the application of the Retailer Curtailment Plans and the Retailer Media Communications Protocol which are included in Section 6.

5.2 TSO Assessment

First Gas considers that the First Gas CCMP complies with Regulation 25 and when implemented during the test exercise gave effect to the purpose of the CCM Regulations.

The TSO report made several recommendations to improve the efficiency of processes and procedures to support application of the CCMP which are included in Section 6.

6. Recommendations

The following is a summary of the recommendations arising from this exercise:

Item	Recommendation	Responsible
1	<i>Complete the outstanding action from Exercise Kakama in 2016 to review and document the rationale for each pressure threshold.</i>	TSO
2	<i>Investigate options for posting the SCADA data files to a Cloud to enable the CCO to download them as required.</i>	TSO
3	<i>Complete the outstanding action from Exercise Kakama in 2016 to improve the OATIS contacts management and maintenance process to ensure the contact information provides (and continues to provide) a list that is complete and accurate. (NB. It is noted that First Gas also proposes to revisit notification mechanisms and increase digital utility as part of the new IT platform designed to support the new GTAC).</i>	TSO
4	<i>Engage directly with any exercise participants that had specific issues relating to correct organisation contacts in OATIS, interpreting the TSO notice methodology or populating the compliance templates to correct any errors or misunderstandings.</i>	TSO
5	<i>Review the email distribution list set up for TSO Incident Controller and amend to reduce likelihood of accidental omission of the CCO on security of supply updates.</i>	TSO
6	<i>Amend TSO procedure 3207704 and Incident Controller training to emphasise that, whenever possible, critical decisions should be made directly between the Incident Controller and the CCO. When this is not possible, the System Control Liaison Officer will be authorised to make the decisions with the CCO.</i>	TSO
7	<i>Establish naming conventions and asset descriptions (especially for pipelines) to improve the understanding of communications to wider stakeholders. (Present use of pipeline numbers etc. can be confusing)</i>	TSO
8	<i>Review the First Gas Crisis Communications processes regarding external communications requirements and support.</i>	TSO
9	<i>Formalise the TSO Media Statement review process and provide training on the procedure to TSO Incident Controllers.</i>	TSO
10	<i>Develop a process to ensure that external communications prepared by the TSO, CCO and Retailers are accurate, consistent and unambiguous prior to release.</i>	TSO & CCO & Retailers
11	<i>Update the Retailer Media Communications Protocol to correct errors with the standard media release template and reinforce the curtailment of small commercial consumers.</i>	GIC
12	<i>Formalise the document management of the Media Communications Protocol to ensure it has a designated "owner" and is kept current.</i>	GIC

Item	Recommendation	Responsible
13	<i>Retailers to review their Retailer Curtailment Plan to ensure it gives due consideration to minimizing the time taken to curtail all consumers affected by the contingency and prioritizes largest consumers first.</i>	<i>Retailers</i>

7. Pre-Test Exercise Audit of TSO by CCO

The pre-exercise elements were audited on the 29 March 2017. All items were audited by holding a pre-arranged interview with the First Gas Control Room Manager and Commercial Technical Advisor.

7.1 Does the CCMP provide for compliant thresholds that meet the purpose of the regulations? [r25(1)(a)]

Thresholds:

A revised single combined CCMP was published by the TSO on 22 February 2017. Five pressure thresholds were amended as part of this revision. Tauranga, Whakatane, Taupo and Gisborne pressure thresholds were all changed from 32barg to 30barg. The Westfield time to threshold was changed from 4 hours to 3 hours.

Previous audits have made recommendations that the rationale for each threshold be documented to clearly establish whether each threshold is still representative for that part of the system or whether it needs to be reviewed considering any system changes. The TSO made some progress on this action however it has yet to be fully completed. Thus, the action from Exercise Kakama to document the rationale for each pressure threshold remains outstanding.

SCADA System Alarms

The CCO checked the threshold alarm settings and found the settings for Rotowaro and Westfield to be incorrect. Both errors were on the “safe-side” and whilst checking the alarms the TSO took the opportunity to correct them.

Threshold information:

The Scada data transfer process is now slower than at the previous exercise. The TSO has investigated the delay in the transfer and has yet been unable to determine a specific cause. In lieu of further investigation, the TSO has agreed to investigate options for posting the SCADA files to the Cloud to enable the CCO to download them as required.

Recommendations:

- Complete the outstanding action from Exercise Kakama to document the rationale for each pressure threshold.
- Investigate options for posting the SCADA data files to the Cloud to eliminate current time delays.

7.2 Does the CCMP contain descriptions of the events that the TSO considers may feasibly result in a breach of the thresholds? [r25(1)(b)]

The CCMP contains description of the events that the TSO considers may feasibly result in a breach of the thresholds and it has been revised to include explanation of situations or occasions where thresholds may be breached for short durations due to high demand or system flow changes (i.e. transient conditions). A protocol for Gas Control Operators to respond to transient threshold alarms has been established by the TSO.

7.3 Does the CCMP contain actions that the TSO may take to remedy any threshold breach? [r25(1)(c)]

The CCMP refers to the Pipeline Emergency Response Plans and associated Specific Event Guides for the management of pipeline emergencies. A brief review of the Emergency Response Plan and some sample Specific Event Guides found that the plans are being actively managed and kept up to date.

7.4 Are the contact details in the CCMP current? [r25(1)(i)]

Copies of the contact reports generated in OATIS were obtained for review. The contacts are used by the OATIS system to automatically send emails and SMS text messages to affected parties alerting them to the existence of the full notices in OATIS. The full notice is not sent with the email or text alert and affected parties must access the notices on the OATIS website. The following observations are made from a review of both lists:

- *There are some organizations listed on the contact lists that are not listed in Appendix 4 of the CCMP (E-Gas 2000, emsTradepoint, Gas Industry Company, Maui Development Ltd, Multigas (NZ) Ltd, NZX Ltd)*
- *There are organizations listed in Appendix 4 of the CCMP that are not listed on the contact lists (First Gas, Mercury Energy, Bay of Plenty Energy, Origin Energy, TAG Oil, Cheal Petroleum, Westside NZ Ltd, Fonterra)*
- *There are contact details for some people who have left that organisation or the industry.*
- *It is problematic to accurately correlate the contact lists to Appendix 4 of the CCMP to ensure that contact details for all the parties listed in the CCMP are properly represented in OATIS.*

Previous audits have made recommendations that the contact list maintenance process be reviewed to provide assurance that the contact information provides (and continues to provide) a list that is complete and accurate and includes a mechanism for ensuring that key contacts that are non-routine users of OATIS are kept up-to- date or maintained

The findings from this pre-exercise audit are an improvement on the findings from previous audits. However, management and maintenance of the contact lists remain as an opportunity for improvement.

Recommendations:

- Complete the outstanding action from Exercise Kakama to improve the OATIS contacts management and maintenance process and implement any changes required to ensure the contact information provides (and continues to provide) a list that is complete and accurate.

8. TSO Exercise Test Criteria and Observations**8.1 Does the CCMP have a process for demand curtailment and restoration consistent with the purpose of the regulations? [r25(1)(d)]**

Demand curtailment and restoration notices were all issued successfully and in accordance with the CCMP. A summary of the notices issued by the CCO to the TSO and by the TSO to relevant parties are included in Appendix C.

The CCMP states that *“In the interest of timely notification, First Gas elects to create a PDF of the notice issued by the CCO and attaches it to the published OATIS notice”*. This approach has been adopted for several years and is reinforced by the CCO during the annual industry training.

One exercise participant indicated that this approach caused some confusion and suggested that the notice on OATIS should clearly state that First Gas is notifying Retailers to follow the instruction.

Two exercise participants raised issues relating to having the correct contacts in OATIS to receive TSO notices.

Recommendations:

- TSO to engage directly with any exercise participants that had specific issues relating to correct organisation contacts in OATIS, interpreting the TSO notice methodology or populating the compliance templates to correct any errors or misunderstandings.

8.2 Does the CCMP have a communications plan describing how the TSO will communicate to and from the participants and within what timeframes? [r25(1)(e)]

Section 3 of the First Gas CCMP details the communication plan. The communications plan describes the notices that First Gas will issue to affected parties during a critical contingency event, the reciprocal communications and the timeframes under which those communications will take place.

The First Gas internal procedure 3207704 “Critical Contingency Response Actions” was utilised during the exercise to facilitate correct communications, with status update information contained within the Security of Supply Update form. This procedure, form and the communication process used was consistent with that described in section 3 of the First Gas CCMP.

Additionally, the security of supply updates enabled First Gas to provide information to the CCO such that both First Gas (as Asset Owner) and CCO could publish consistent public statements that met the requirements of sections 1 and 2 of Schedule 5 of the regulations.

However, during the exercise the CCO was omitted from two of the circulated Security of Supply updates. This was human error due to TSO personnel practising the System Control Liaison Officer role for the first time. The oversight was corrected during the exercise.

Recommendation:

- Review the email distribution list set up for TSO Incident Controller and amend to reduce likelihood of accidental omission of the CCO for security of supply updates.

8.3 Does the CCMP contain the contact details of suitably qualified TSO employees responsible for giving communications and directions under the CCMP and Communications Plan? [r25(1)(f)]

Appendix 6 of the First Gas CCMP contains appropriate and up to date contact details of the suitably qualified TSO employees responsible for giving communications and directions under the CCMP and communications plans. These were used to establish initial contact between First Gas and the CCO at the start of the exercise via the First Gas control room and to the nominated person who is the Transmission Duty Officer. The Duty Officer became the Incident Controller and the key contact point for the CCO.

The communications plan also recognises that during a significant event, the Incident Controller would have significant communication demands for several stakeholders and as such may not be able to provide sufficient, timely information to the CCO. For such events, the TSO has established a System Control Liaison Officer role to take up such tasks.

During the exercise, there were occasions when the CCO was communicating with either or both the Incident Controller and the System Control Liaison Officer. The CCO considers that it is preferable that critical decisions such as curtailment requirements and survival times etc. should be made directly between the incident Controller and the CCO. The TSO acknowledged this preference and made a recommendation to facilitate this:

Recommendation:

- Amend TSO procedure 3207704 and Incident Controller training to emphasise that, whenever possible, critical decisions should be made directly between the Incident Controller and the CCO. When this is not possible, the System Control Liaison Officer will be authorised to make the decisions with the CCO.

8.4 Does the CCMP detail circumstances in which the TSO may consider restoration should be directed in an order different from the regulations? [r25(1)(g)]

Section 5.6 and Appendix 11 of the First Gas CCMP details the steps taken for considering alternative restoration arrangements. This was not specifically tested through the exercise, as the scenario was that all bands had demand restored at the same time.

8.5 Does the CCMP have a process to determine the contingency imbalances? [r25(1)(h)]

Appendix 8 of the CCMP describes the relevant contingency imbalance calculation methodologies. Exercise Interface was a “regional” critical contingency so no critical contingency imbalances would have

been calculated after the termination of the event. However, it is noted that these processes were used after the most recent critical contingency in May 2016.

8.6 Does the CCMP provide effective mechanisms for making information available to the CCO? [r25(1)(j), r38, Communications Protocol]

Sections 3.8 and 4 of the First Gas CCMP address communications with, and the provision of information to, the CCO. The document refers to the CCO Communications Plan for the detail. Exercise Interface was carried out in a manner consistent with the current CCO Communications Plan.

Detailed communication was also managed through the CCO's Communications Protocol. The Communications Protocol sets out the information requirements that apply to the TSO during normal system conditions, as well as during abnormal system conditions which do not amount to a potential or actual critical contingency. These requirements are consistent with sections 38 and 38A of the regulations. A summary of the Communications Protocol is provided in Appendix 11 of the CCO's Communications Plan.

Not all processes in the Communications Protocol were needed and therefore not tested. Overall, the communication processes used were consistent with that described in the CCMP.

8.7 Is there a protocol for informing the CCO of potential CC conditions? [r25(1)(j), r38(1A)(a)(i)]

Section 2 of the CCMP addresses pre-critical contingency and sets out the conditions under which the TSO will notify the CCO of an event it believes could or would result in a critical contingency scenario. It also states that First Gas will communicate with the CCO in accordance with the CCO Communications Plan.

The exercise was carried out in a manner consistent with the CCMP and the CCO Communications Plan, including the rigorous timeframes on communicating the event.

8.8 Are the CCMP consistent with the MPOC and VTC? [r25(2)]

No inconsistencies between the CCMP and MPOC or VTC were observed as a result of this exercise.

9. CCO Exercise Test Criteria and Observations

9.1 CCO Process for determining, declaring and notifying critical contingency [r48-49]

The TSO briefed the CCO on the event based on the first inject. The CCO was informed that a section of the Maui pipeline was being isolated due to a gas escape. The CCO verified with the TSO that isolating the pipeline would result in the pressure threshold at Rotowaro being breached.

At 09:25, the CCO determined that a breach of threshold was unavoidable and gave urgent notice to the TSO that a critical contingency was being declared at 09:25 on 11 April 2017 and written notice would be

issued as soon as possible. The critical contingency declaration notice was subsequently issued to the TSO and published on the CCO website within required timeframes.

9.2 CCO process for determining and declaring regional status [r52A]

The exercise scenario required isolation of a section of the First Gas Maui pipeline resulting in the entire system downstream of the isolation point being isolated from any source of gas supply and being dependent on residual linepack.

The CCO determined that this scenario constituted a regional critical contingency and this was notified as a part of the declaration notice.

9.3 CCO processes for issuing notices during a CC event [r51,52, 53, 59]

The Communications Protocol incorporates a process with associated timeframes for the TSO to provide information to the CCO that is considered necessary to ensure that the CCO has the information required to prepare and issue notices. This process includes steps for the TSO to review the CCO's draft notices. Given the co-location of the CCO and TSO in the First Gas control room, several of the steps were circumvented and the review of the draft notices prepared by the CCO worked very effectively and enabled the CCO to accelerate the process of issuing notices.

All notices were sent to the correct parties and stakeholders and contained the correct information and were given within required timeframes.

9.4 CCO processes for demand curtailment, exploration of alternative supply and restoration [r53]

Observers noted there was a well-reasoned approach to determining proposed curtailment, bolstered by checking with the TSO and obtaining clear agreement. Exploration of alternative supply wasn't relevant to this regional scenario.

9.5 CCO process for determining and notifying termination [r60]

These were observed as being effective and in accordance with the CCO Communications Plan.

9.6 CCO modelling of the system operates effectively and gives consistent results [r53, r38]

The curtailment and restoration decisions were supported by a robust modelling tool. The TSO is able, when requested, to provide the most recent SCADA data file by copying it on to a USB stick and handing it to the CCO for uploading to the CCO load model within a few minutes. This process eliminates any delays associated with the SCADA Data File Transfer Process.

9.7 CCO publishes information [r54A, Schedule 5]

Both the CCO and First Gas (as Asset Owner) had obligations to provide public statements in accordance with Schedule 5 of the regulations.

Prior to the exercise, the TSO introduced a new procedure for the TSO and CCO to jointly review the content of proposed media statements to ensure consistency and accuracy of content.

The CCO prepared two public statements compliant with Schedule 5 and verified the content with the TSO prior to publishing them at 10:35 and 12:48.

In parallel with the CCO's public statements, the TSO issued two media statements compliant with Schedule 5 during the exercise (Appendix D). The first statement was not reviewed by the CCO prior to release, contrary to the new TSO procedure due to an oversight by the Incident Controller. Some observers noted that the TSO statements were generally light on information and contained jargon and naming conventions that may be confusing for wider stakeholders.

Subsequently, the TSO has made several recommendations in relation to publishing information which are supported by the CCO.

Recommendations:

- Establish naming conventions and asset descriptions (especially for pipelines) to improve communications for wider stakeholders. (Present use of pipeline numbers etc. can be confusing)
- Review the First Gas Crisis Communications processes regarding external communications requirements and support.
- Formalise the TSO Media Statement review process and provide training on the procedure to TSO Incident Controllers.

Similarly, the CCO had instructed Retailers to issue media appeals requesting domestic gas users to conserve gas. The lead Retailer prepared and issued a Media Release in accordance with the current Gas Retailers Communications Protocol.

The first Retailers Media statement contained some mildly ambiguous and potentially misleading information in the statements, such as: *'This message is for domestic and small commercial gas consumers'*; *'we have already contacted all critical care customers'*, when in fact small commercial consumers had been fully curtailed and critical care consumers were not affected. The source of the error was an incorrect template in the Media Communications Protocol. However, it is recognised that although small commercial consumers had been curtailed, the practical reality is that Retailers wouldn't have had the chance to contact all of them so a media release to reinforce the curtailment would be useful.

The second Retailers Media statement was reviewed by the CCO and TSO which enabled all parties to ensure the content was accurate. Despite the ambiguities with the first statement this was an excellent learning opportunity and the CCO has made recommendations for future improvement:

Recommendations:

- Develop a process to ensure that external communications prepared by the TSO, CCO and Retailers are accurate, consistent and unambiguous prior to release.
- Update the Retailer Media Communications Protocol to correct errors with the standard media release template and reinforce the curtailment of small commercial consumers.
- Formalise the document management of the Retailer Media Communications Protocol to ensure it has a designated “owner” and is kept current.

9.8 CCO performs to required standard [SPACCO Schedule 2]

Schedule 2 of the SPACCO sets performance standards and target/measures for during a critical contingency event for determining; declaring; decision making; communication and termination.

The observers concluded that the CCO had performed to the required performance standards

10. Retailers and Large Consumers Exercise Test Criteria & Observations

10.1 Participation

All Retailers were requested to participate in the exercise and issued with a Participants Briefing on 9 February 2017

As part of the exercise, Retailers were required to undertake such testing to confirm that the processes that support their certified Retailer Curtailment Plan, which ensures that the list of emergency contact details maintained in accordance with regulation 43 is current, so as to confirm those processes are effective. Testing should include sampling of both longstanding and recently-acquired customers to confirm completeness and accuracy of contact details.

Retailers were required to provide supporting evidence of such testing to the CCO within 10 business days of completion of the exercise. The CCO provided an optional Test Report Template for Retailers to use (Appendix E).

There was a very good level of participation by all Retailers in the exercise. All Retailers subsequently provided the required Reports and all participants have identified some areas for improvement in their processes and considered the exercise a good learning opportunity. The key learnings from these reports have been incorporated into the recommendations.

Large Consumers also participated in the exercise. Two were affected by the exercise scenario and were observed to respond in accordance with the requirements of the CCMP. Other large consumers not directly affected by the scenario took the opportunity to run through their processes and procedures as though they had been affected.

10.2 Ensure the Retailer curtailment plan contains 24/7 contact information for each consumer installation [r43]

All Retailer Curtailment Plan Testing Reports received reported processes for holding and maintaining emergency consumer contact details.

10.3 Ensure the Retailer has up to date curtailment band information for each consumer [r43]

Retailers reported their consumers by band in both their testing reports and in their curtailment compliance updates during the exercise.

10.4 Retailers and large consumers to provide regular updates to TSO [r55]

There were a couple of relatively minor issues for a couple of exercise participants and the TSO will engage directly with those participants to address these.

10.5 Retailers to give urgent notice to their consumers affected by a CC direction [r56]

All Retailers reported processes for contacting consumers and some Retailers contacted a sample of their consumers to check contact details were correct

Retailers have a range of processes and procedures for contacting consumers to issue curtailment instructions which are generally commensurate with the number of consumers serviced. However, the exercise has highlighted that the time taken for Retailers to contact all consumers can vary significantly.

It is important to note that the times to pressure thresholds in the CCMP relate to the length of time the TSO considers will be required for curtailment instructions to take effect. Depending on the part of the system, the pressure thresholds allow for between 3 and 10 hours to achieve full curtailment. This time needs to cover the entire time from the initial identification of the critical contingency conditions through all the declaration and curtailment processes, to the Retailer communications and the response of consumers to curtailment instructions. Some of the times reported for communicating with consumers by Retailers were in excess of these times.

It is understood that for an exercise Retailers might not use all the resources at their disposal, but it is requested that they reflect on how, during an actual event, they may shorten this communication process. Options may include using all available resources to minimise the communication time, for example using all call centre staff or redeploying staff usually involved in other parts of the business.

Recommendation:

Retailers to review their Retailer Curtailment Plan to ensure it gives due consideration to minimizing the time taken to curtail all consumers affected by the contingency and prioritizes largest consumers first.

11. Asset Owners Exercise Test Criteria and Observations

11.1 The owner of the damaged or failed component publishes the required information [r54A]

First Gas was the affected asset owner in this exercise and relevant observations and recommendations have been incorporated in Section 9.7.

Appendix A – Exercise Injects

Exercise Interface TSO Inject #1 09:00am Issued to Duty Officer:

1st inject from Exercise Control.

Gas Control has received a phone call from a contractor carrying out some directional drilling work.

They have struck the Maui pipeline at 664 Kakaramea Rd on SH39 Highway between Pirongia and Ngahinapouri. Gas is escaping.

The police and fire-brigade have arrived on-site and they have closed the road to traffic in both directions.

The Gas Controller has spoken to the emergency services on site. Although they can't smell any gas they can hear the escape and see a large dust cloud. It is a still day and a farmer is burning some stubble in a paddock some 1500m north of the damage. Traffic is building up in both directions and they have asked if the gas escape can be isolated and the site made safe as soon as possible.

TSO Response so far:

The Gas Controller has contacted the CCO via the Answer Message Service requesting the CCO to contact the Duty Officer urgently.

First Gas field crews working at Temple View Delivery Point have been mobilised to site.

The Duty Officer has declared an emergency and instructed Gas Control to activate the remote Main Line Valves at Pirongia and Te Kowhai to isolate the damaged section.

The MLV's have been closed and the Critical Contingency Pressure Threshold at Rotowaro is showing 4 hours to 32barg.

The 200 pipeline between Pokuru Offtake and Temple View Delivery Point is currently isolated and depressurised to facilitate a station modification at Temple View to provide a connection to the Delivery Point from the south side of the MLV.

An update on site conditions will be provided by 10:30am.

Assumptions:

TSO is to assume that the CCO has not received this inject and can only act on information provided by the TSO.

Any queries relating to this inject should be referred to the CCO Exercise Controller.

2nd Inject from Exercise Control.

Current status:

- The Maui pipeline isolated between mainline valves at Pirongia MLV and Te Kowhai MLV.
- The damaged section of pipeline has been de-pressurised and the site has been made safe.
- Investigations reveal that directional drill has punctured the side of the pipeline with a small hole some 5mm dia.
- The damage can be repaired with a bolt-on repair clamp.
- Police have established traffic diversions.
- Repair crews have been mobilised and return to service time is expected to be at least 24 hours.
- Time taken to restore the 200 line between Pokuru Offtake and Temple View Delivery Point would be at least 24 hours.
- Critical Contingency Pressure Threshold at Rotowaro is showing 3 hours to 32barg
- Cambridge Pressure Threshold at 5 hours to 32bar.

An update on progress with repairs and system conditions will be available at 14:00pm

Background information:

- The contractor had requested a permit for the work but commenced before First Gas staff had arrived at the site.
- There are no injuries.
- Emergency services responded to site.
- Weather conditions are fine and site access unrestricted.
- There are reporters on-site.

Assumptions:

TSO to assume that the CCO has not received this inject and can only act on information provided by the TSO.

Any queries relating to this inject should be referred to the CCO Exercise Controller.

Exercise Interface. TSO Inject #3

14:00

Issued to Incident Controller

3rd Inject from Exercise Control.

Pipeline repairs have been completed and the section between Pirongia MLV and Te Kowhai MLV has been fully re-commissioned.

Pipeline pressures are stable and conditions suitable to allow demand to be re-instated.

This is the final inject.

Continue with the exercise until notified that the exercise has ended.

Assumptions:

TSO to assume that the CCO has not received this inject and can only act on information provided by the TSO.

Any queries relating to this inject should be referred to the CCO Exercise Controller.

Appendix B – Exercise Timeline

Exercise Control Log

Please note this is a summary only of events. Not every communication has been noted in this report.

Time	From	To	Details
09:00	Exercise Control	All Participants	Exercise Interface has commenced – email & SMS Website updated to reflect exercise commenced
09:10	Exercise Control	TSO Duty Officer (DO)	1 st Interject issued to Duty Officer. Gas Controller commenced preparing Security of Supply Alert. Check location on Maps TSO DO declares Emergency and becomes Incident Controller
09:20	CCO	TSO Incident Controller (IC)	CCO briefed on event. CCO advised CC is being declared as breach of Rotowaro threshold considered unavoidable. CCO requested schematic showing location of damage & isolation and advised that estimated time to repair would be needed. Requested SCADA data be switched to Event Mode.
09:25	CCO	TSO IC	CCO determines that breach of threshold unavoidable and gives urgent notice (oral) to TSO that Critical Contingency is now being declared at 09:25 on 11 April 2017 and written notice will be issued as soon as possible. CCO commences preparing CC Declaration Notice.
09:25	Gas Controller	CCO	Received copy of TSO internal update #1
09:35	CCO	TSO IC	Printed copy of draft declaration notice issued for review. TSO concurs with content and initials.
09:36	CCO	TSO & Stakeholder	Declaration notice CC-0030 emailed to TSO & Stakeholders.
09:45	CCO		Declaration notice CC-0030 published on website.
09:45	CCO	Electricity System Operator	CCO explained scenario. Huntly & Te Rapa to be curtailed. No designation available. ESO to assess impact on system and advise.
09:48	Contact Energy	CCO	Request to include Media person in CCO contacts for Notices
09:50	CCO		SMS text advising CC-0030 has been issued.
09:50	CCO	Huntly PS	CCO explained scenario. Huntly to be curtailed. No designation available. ESO advised. Curtailment notice being prepared.
09:50	TSO	Interconnected Parties	OATIS (Maui) New Critical notice ID 37061 "Exercise Interface - Critical Contingency Declaration Notice CC-0030" - Action Required
09:51	Greymouth Gas	CCO	Request to include additional person in CCO contacts for Notices
09:54	Vector Gas	CCO	Request to include additional person in CCO contacts for Notices

Time	From	To	Details
09:54	TSO	Interconnected Parties	OATIS (Vector). New Critical notice ID 37062 "Exercise Interface: Critical Contingency Declaration Notice - CC-0030" - Action Required
09:55	CCO	TSO IC	CCO advises that curtailment to Band 3 will provide 15 hours' survival time. Time to repair not yet known and TSO agrees to initial curtailment proposal. CCO prepares Curtailment Notice.
09:56	CCO	Methanex	Confirmed unaffected. Mx still reviewing their process and had identified improvements.
10:00	CCO	TSO & Stakeholders	Curtailment notice CC-0031 emailed to TSO & copied to Stakeholders.
10:10	CCO		Curtailment notice CC-0031 published on website.
10:12	TSO	Interconnected Parties	OATIS (Maui) New Critical notice ID 37063 "Exercise Interface – Direction to Curtail Demand Notice CC-0031" - Action Required
10:13	CCO	Stakeholders	SMS text advising CC-0031 has been issued.
10:14	TSO	Interconnected Parties	OATIS (Vector). New Critical notice ID 37064 "Exercise Interface: Direction to Curtail Demand Notice - CC-0031" - Action Required
10:25	CCO	Senate	Draft Status Update sent for review prior to publishing
10:30	CCO		Status Update notice CC-0032 emailed to Stakeholders & copied to TSO.
10:37			Status Update notice CC-0032 published on CCO website
10:39	CCO	Stakeholders	SMS text advising CC-0032 has been issued.
10:39	TSO	Interconnected Parties	OATIS (Maui) New Critical notice ID 37065 "Exercise Interface – Status Update Notice CC-0032"
10:44	TSO	Interconnected Parties	OATIS (Vector). New Critical notice ID 37065 "Exercise Interface – Status Update Notice CC-0032"
10:45	Exercise Control	TSO IC	2 nd Interject issued to Incident Controller. Time to repair 24 hours.
10:50	TSO DO	CCO	Update on situation & time to repair. CCO confirms curtailment of Band 6 and Retailer Media Appeals required to provide 24-hour survival time. CCO to prepare revised curtailment notice.
10:56	CCO	TSO & Stakeholders	Revised Demand Curtailment notice CC-0033 emailed to TSO & copied to Stakeholders.
11:03	CCO		Revised Demand Curtailment notice CC-0033 published on CCO website
11:06	CCO	Stakeholders	SMS text advising CC-0033 has been issued.
11:08	Hawkes Bay Civil Defence	CCO	Querying contact details for CCO notices. CCO replies to confirm.
11:16	TSO	Interconnected Parties	OATIS (Maui). New Critical notice ID 37067 "Exercise Interface: Direction to Revise Demand Curtailment Notice - CC-0033

Time	From	To	Details
11:18	TSO	Interconnected Parties	OATIS (Vector). New Critical notice ID 37068 "Exercise Interface: Direction to Revise Demand Curtailment Notice - CC-0033
11:28	CCO	Retailers	Request to Implement Media Appeals notice CC-0034 emailed to Retailers & copied to Stakeholders.
11:34	CCO		Request to Implement Media Appeals notice CC-0034 published on CCO website
11:35	CCO	Stakeholders	SMS text advising CC-0034 has been issued.
11:39	Switch Utilities	CCO	Request to change contact details for CCO Notices and provision of compliance update. CCO advises that Compliance Update should be sent to TSO. Acknowledged.
11:41	Critical Compliance	CCO	Update on Retailers compliance.
11:46	TSO	Interconnected Parties	OATIS (Maui). New Critical notice ID 37069 "Exercise Interface: Retailers to Implement Media Appeals - CC-0034
11:47	Mercury	CCO	1 st Media Release issued on behalf of Retailer. Template was found to contain error regarding small consumers being asked to conserve gas when actually fully curtailed.
11:49	TSO	Interconnected Parties	OATIS (Vector). New Critical notice ID 37068 "Exercise Interface: Retailers to Implement Media Appeals - CC-0034
11:56	Contact	CCO	Request to add number of personnel to OATIS for TSO Notices. CCO redirected request to TSO.
11:58	First Gas	Stakeholders	1 st Media statement issued. Errors in statement re Kapuni line. Process for CCO to review statement not followed.
12:00	CCO	TSO DO	CCO not receiving Security of Supply Updates from TSO since 1 st report. 2 subsequent reports not seen by CCO.
12:03	CCO	Mercury	Comments on 1 st Media release and associated errors.
12:09	TSO	Interconnected Parties	OATIS (Maui). New Critical notice ID 37071 "Exercise Interface: First Gas Media Release
12:11	TSO	Interconnected Parties	OATIS (Vector). New Critical notice ID 37072 "Exercise Interface: First Gas Media Release
12:43	CCO	Stakeholders	Status Update notice CC-0035 emailed to Stakeholders & copied to TSO.
12:52			Status Update notice CC-0035 published on website
12:54	CCO	Stakeholders	SMS text advising CC-0035 has been published.
12:54	TSO	Interconnected Parties	OATIS (Maui). New Critical notice ID 37073 "Exercise Interface: Critical Contingency Status Update Notice - CC-0035
12:56	TSO	Interconnected Parties	OATIS (Vector). New Critical notice ID 37074 "Exercise Interface: Critical Contingency Status Update Notice - CC-0035
12:59	CCO	Critical Compliance	Query regarding Te Rapa Cogen curtailment.

Time	From	To	Details
14:04	TSO DO	CCO	Security of Supply Update #4
14:10	Critical Compliance	CCO	Summary of compliance from Retailers provided. No Update from Mercury
14:18	TSO DO	CCO	Security of Supply Update #5
14:36	CCO	Stakeholders	Direction to Restore Curtailed Demand notice CC-0036 emailed to TSO to & copied Stakeholders.
14:39			Direction to Restore Curtailed Demand notice CC-0036 published on website
14:41	CCO	Stakeholders	SMS text advising CC-0036 has been published.
14:43	TSO	Interconnected Parties	OATIS (Maui). New Critical notice ID 37077 "Exercise Interface; Direction to Restore Curtailed Demand Notice - CC-0036"
14:45	TSO	Interconnected Parties	OATIS (Vector). New Critical notice ID 37078 "Exercise Interface; Direction to Restore Curtailed Demand Notice - CC-0036"
14:52	Critical Compliance	CCO	Update on Retailers compliance. No update from Mercury. Queried by CCO
15:02	Mercury	CCO	2 nd Media Release issued on behalf of Retailer.
15:17	Mercury	CCO	Acknowledgement of error in not sending compliance update. Wrong template used. CCO advised correct template.
15:27	CCO	TSO & Stakeholders	Termination notice CC-0037 emailed to TSO & Stakeholders.
15:32	TSO DO	CCO	Security of Supply Update #5
15:32			Termination notice CC-0037 published on website
15:33	CCO	Stakeholders	SMS text advising CC-0037 has been published.
15:39	TSO	Interconnected Parties	OATIS (Maui). New Critical notice ID 37080 "Exercise Interface; Critical Contingency Termination Notice CC-0037"
15:41	TSO	Interconnected Parties	OATIS (Vector). New Critical notice ID 37082 "Exercise Interface - Critical Contingency Termination Notice CC-0037"
15:45	Exercise Control	All Participants	Exercise Interface has ended – email and SMS. Website updated to reflect exercise finished.

Appendix C – Notice Summary

All CCO notices can be viewed in full on www.cco.org.nz – Historical Events

All First Gas TSO notices can be viewed on www.oatis.co.nz – First Gas Information Exchange, using ‘Notice Search’ button and begin date of 11/4/17

Notices to TSO

Time of CCO e-mailed Notice to TSO	Notice ID	Notice Type	Time TSO Published CCO Notice	
			OATIS (Maui)	OATIS (First Gas)
09:36	CC-0030	Critical Contingency Declaration	09:48	09:52
10:00	CC-0031	Direction to Curtail Demand	10:11	10:12
10:30	CC-0032	Status Update	10:38	10:43
10:56	CC-0033	Revised Demand Curtailment	11:15	11:16
11:28	CC-0034	Retailers to Implement Media Appeals	11:45	11:48
12:43	CC-0035	Status Update	12:54	12:55
14:36	CC-0036	Direction to restore curtailed demand	14:42	14:43
15:27	CC-0037	Termination of Critical Contingency	15:38	15:39



FGL Schedule 5(2) CCM Regulations Public Statement

**ISSUED AS PART OF EXERCISE “INTERFACE” – CRITICAL
CONTINGENCY TEST EXERCISE - 11 APRIL 2017**

First Gas Limited – Transmission System Event Public Statement / Update: 01	
Report No:	2017-04-11 – 12:00. Update No. 01
What has Happened?:	<p>A contractor struck the Maui pipeline at 09:25 today at 664 Kakaramea Rd on SH39 Highway between Pirongia and Ngahinapouri.</p> <p>Gas has escaped, but has now been isolated.</p> <p>Police and fire-brigade have arrived on-site and they have closed the road to traffic in both directions.</p>
Actions Being Taken to Effect Repairs:	<p>First Gas field crews have been mobilised and are working on the return to service of the Maui pipeline.</p> <p>The Kapuni line has been isolated for maintenance. This is currently being reinstated. This will enable partial demand to be reinstated.</p>
Estimation of the Likely Duration of each Step of the Repair Process:	<p>The expected time frame is 24 hours for the Maui pipeline to be repaired</p> <p>The expected time frame is 24 hours for the Kapuni line to be reinstated ready for service.</p> <p>There is a high degree of confidence of reinstatement of the Kapuni line. Less so for the Maui pipeline due to the nature of the repair.</p>
Estimated Time of When the Component will be Returned to Service:	Each pipeline is expected to be able to return to full capacity on completion of repairs as per time frames above.
Will the Component be Temporarily Restored to a Reduced Level of Service?:	<p>Restoration of the Kapuni line will return a partial capacity to the North.</p> <p>When the Maui pipeline returns to service full capacity will be restored.</p> <p>At this stage both are expected to be returned to service within 24 hours consequently to full capacity.</p>

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- Further information on First Gas Limited and the Gas Transmission System can be found on the First Gas website www.firstgas.co.nz
 - The Critical Contingency Operator is also required to make regular public statements and updates, which will be posted on the CCO website www.cco.org.nz

**ISSUED AS PART OF EXERCISE “INTERFACE” – CRITICAL
CONTINGENCY TEST EXERCISE - 11 APRIL 2017**

FGL Schedule 5(2) CCM Regulations Public Statement

ISSUED AS PART OF EXERCISE “INTERFACE” – CRITICAL CONTINGENCY TEST EXERCISE - 11 APRIL 2017

First Gas Limited – Transmission System Event Public Statement / Update: 02	
Report No:	2017-04-12 - 10:45. Update No. 02
What has Happened?:	<p>A contractor struck the Maui pipeline at 09:25 Tuesday 11 April at 664 Kakaramea Rd on SH39 Highway between Pirongia and Ngahinapouri.</p> <p>Gas had escaped and the affected section of pipe was isolated.</p> <p>Police and fire-brigade attended the site and closed the road to traffic in both directions.</p> <p>Effective repairs were completed by First Gas at 09:30 Wednesday 12 April. Gas supply has now been restored to full capacity.</p>
Actions Being Taken to Effect Repairs:	NA
Estimation of the Likely Duration of each Step of the Repair Process:	NA
Estimated Time of When the Component will be Returned to Service:	NA
Will the Component be Temporarily Restored to a Reduced Level of Service?:	NA

- Further information on First Gas Limited and the Gas Transmission System can be found on the First Gas website www.firstgas.co.nz
- The Critical Contingency Operator is also required to make regular public statements and updates, which will be posted on the CCO website www.cco.org.nz

ISSUED AS PART OF EXERCISE “INTERFACE” – CRITICAL CONTINGENCY TEST EXERCISE - 11 APRIL 2017

Exercise Interface media release 1

11 April 2017 11.45am

Upper North Island gas outage – domestic and small commercial gas consumers to curtail use

This is a message for domestic and small commercial gas consumers.

The First Gas Maui pipeline between Pirongia and Te Kowhai has sustained damage that will affect supply to all areas to the north of Pirongia including Cambridge, Hamilton, Auckland and Northland (not including Tauranga). The pipeline owner, First Gas Ltd is currently investigating the situation and has advised that repairs will take approximately 24 hours.

Large gas users in the affected area have already stopped using gas, however as the gas supply system has not stabilised all gas retailers are now asking domestic consumers and any small commercial in the affected area, listed above, who have not been contacted to reduce their gas usage to a minimum until further notice.

These conservation measures are designed to extend the availability of gas for as long as possible while efforts are made to restore normal supplies. New information will be provided as it comes to hand.

Please note that we do not want consumers to turn off the service valve at their gas meter. All we are seeking is that consumers reduce their use of gas as much as possible.

We have already contacted all critical care customers (such as rest homes), and will continue to monitor the situation and give these customers all the help we can.

This message is provided by the following retailers – Contact Energy, Energy Direct New Zealand, Energy Online, Genesis Energy, Mercury, Nova Energy, Switch Energy and Trustpower.

Issued by:

Communications Manager, Mercury

Exercise Interface – exercise only

Media Statement

11 April 2017 3pm

Upper North Island gas outage – domestic gas consumers may resume use

This is a message for domestic gas consumers.

The damaged gas pipeline that caused a shortage of gas supplies in upper North Island is now repaired, to the extent that normal gas use can be resumed for domestic gas consumers.

Domestic consumers' efforts to conserve gas were much appreciated by gas producers, distributors and retailers.

The accidental damage to the First Gas Maui pipeline between Pirongia and Te Kowhai that caused the shortage of gas supplies was due to a contractor striking the Maui pipeline at 09.25 today. First Gas field crews worked to restore service to the damaged pipe.

This message is provided by the following retailers – Contact Energy, Energy Direct New Zealand, Energy Online, Genesis Energy, Mercury, Nova Energy, Switch Energy and Trustpower.

Issued by:

Communications Manager, Mercury

Appendix E – Retailer Curtailment Plan Test Report Template

Retailer Name:								
Date Retailer Curtailment Plan last updated:								
Date consumers were last notified of the existence of the critical contingency regulations as set out in regulation 44.								
Curtailment Bands:		3	3CP	4	4CP	5	6	7
1	How many consumers did you have in each of the affected bands?							
2	During the exercise, how many consumers in each curtailment band did you contact?							
3	Of those consumers contacted, how many were the correct contact details?							
4	Of those consumers contacted, how many were aware of their obligations under a critical contingency?							
5	Description of process in place to ensure consumer emergency contact details are maintained and up to date in accordance with regulation 43.							
6	Description of methods and processes in place for issuing urgent notice to consumers to curtail or restore demand in accordance with regulation 56.							
7	Comments on the levels of consumer understanding of your instructions and their obligation to comply with directions							
8	Description of process for implementing any media appeals if directed by the CCO under regulation 53(1)(db).							

9	Comments on the Retailer Compliance Update Form and process.	
10	Comments on the quality and effectiveness of your Retailer Curtailment Plan.	
11	Comments on the level of awareness and understanding of your Retailer Curtailment Plan within your organisation	
12	Comments on exercise format, lessons learnt and any planned changes or initiatives you may take identified during the exercise.	
13	What are the 'actions arising' for your organisation because of this exercise?	
14	Any other comments?	