VERITEK

Gas Meter Owner Audit Report

For

GasNet Ltd

Prepared by: Tara Gannon – Veritek Ltd

Date of Audit: 07/12/2017

Date Audit Report Complete 02/03/2018

Executive Summary

This Performance Audit was conducted at the request of the Gas Industry Company (GIC) in accordance with Rule 88 of the Gas (Switching Arrangements) Rules 2008 (GSAR) and rule 65 of the Gas (Downstream Reconciliation) Rules (GDRR), both in effect from 14 September 2015.

The purpose of this audit is to assess the systems, processes and performance of **GasNet Ltd (GasNet)** in terms of compliance with these rules.

The audit was conducted in accordance with terms of reference prepared by GIC.

The summary of report findings in the table below shows that GasNet's control environment is "effective" for three of the areas evaluated, "adequate" for one area, and "not adequate" for one area.

Three of the five areas evaluated were found to be compliant. Two breach allegations are made in relation to the remaining areas. They are summarised as follows:

- Some metering information was not updated on the Registry within two business days of GasNet becoming aware that the meter was installed.
- A small number of inaccuracies in TOU information, meter location and meter replacement dates were identified.

I recommend implementation of further data checks to reduce the likelihood of future non conformance, including:

- A monthly check of TOU ICP details to ensure that any replaced records are identified and corrected.
- A consistency check for meter flags (logger owner, corrector owner, and telemetry owner) and TOU equipment owners (logger owner, corrector owner, and telemetry owner) to the fortnightly reconciliation.
- Once populated, add a check for meter pressure operating at network pressure to the fortnightly reconciliation.

I identified two issues within the rules, for investigation by the GIC:

- I recommend the GIC consider revising the timeframe for TOU meter installation set out in rule 29.1 of the GDRR, in consultation with Meter Owners.
- I recommend the GIC consider setting clear timeframes for population of metering data on the Registry within the GSAR.

The matters raised are shown in the tables below.

Summary of Report Findings

Issue	Section	Control Rating (Refer to Appendix 1 for definitions)	Compliance Rating	Comments
General obligations	2	Effective	Compliant	GasNet's Registry participant register information is correct. Based on the information provided, GasNet has met their obligations to act reasonably and use Registry software competently.
Accuracy of meter information	3	Effective	Compliant	Based on the information provided, GasNet's processes for faults, maintenance and testing are robust and compliant. The TOU processes ensure that incomplete or inaccurate information is identified, and acted upon promptly.
New connections	4	Not adequate	Not compliant	Initial metering information was not updated on the Registry within two business days of GasNet becoming aware that the meter was installed for 12 ICPs. The timeliness of updates has been improving over time.
Registry information management	5	Adequate	Not compliant	GasNet's processes ensure that MIDaS and the Registry data match closely for all fields validated. One off discrepancies in TOU information, meter location and meter replacement dates were identified.
Metering price codes	6	Effective	Compliant	GasNet's processes for metering price codes are compliant.

Issue	Section	Control Rating (Refer to Appendix 1 for definitions)	Compliance Rating	Comments
Disclosure on applications	7	Not applicable	Not applicable	All meter price codes are published on the Registry.

Persons Involved in This Audit

Auditor:

Tara Gannon
Veritek Limited

GasNet personnel assisting in this audit were.

Name	Title
Deylene Payne	Finance & Administration Supervisor
Fiona McMillan	Administration Assistant
Wayne Armishaw	Engineering Manager

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1. Pre-Audit and Operational Infrastructure Information

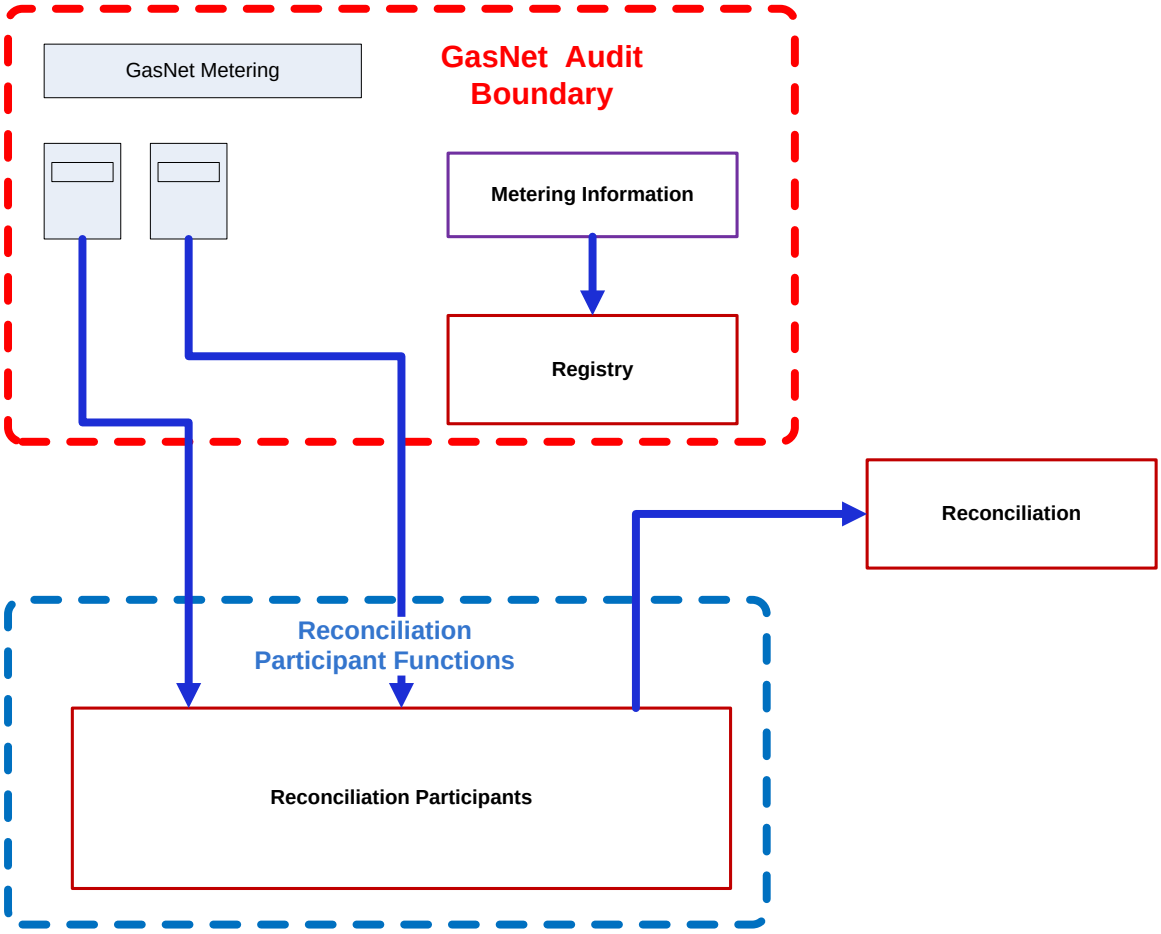
1.1 Scope of Audit

The purpose of this audit is to assess the systems, processes and performance of GasNet in terms of compliance with these rules.

The audit was conducted using a guideline prepared by Veritek.

The audit was carried out on 7 December 2017 at GasNet's office in Wanganui.

The scope of the audit includes the Meter Owner responsibilities only, as shown in the diagram below.



1.2 Audit Approach

As mentioned in Section 1.1 the purpose of this audit is to assess the performance of GasNet in terms of compliance with the rules, and the systems and processes that have been put in place to enable compliance with the rules.

This audit has examined the effectiveness of the controls GasNet has in place to achieve compliance, and where it has been considered appropriate sampling has been undertaken to determine compliance.

Where sampling has occurred, this has been conducted using the Auditing Standard 506 (AS-506) which was published by the Institute of Chartered Accountants of New Zealand. I have used my professional judgement to determine the audit method and to select sample sizes, with an objective of ensuring that the results are statistically significant.[1]

Where compliance is reliant on manual processes, manual data entry for example, the sample size has been increased to a magnitude that, in my judgement, ensures the result has statistical significance.

Where errors have been found or processes found not to be compliant the materiality of the error or non conformance has been evaluated.

[1] In statistics, a result is considered statistically significant if it is unlikely to have occurred by chance. (Wikipedia)

1.3 General Compliance

The Market Administrator confirmed that no alleged breaches have been recorded for GasNet in the last two years.

1.4 Provision of Information to the Auditor (GSAR r91)

In conducting this audit, the auditor may request any information from GasNet, and any Registry participant or operator.

Information was provided by GasNet in a timely manner in accordance with this rule.

Information was not required from any other participant in relation to this audit. I consider that GasNet have complied with the requirements of this rule.

1.5 Breach allegations

As noted in the Summary of Report Findings, this audit has found two areas of non conformance. The following breach allegations are made in relation to these matters.

Breach Allegation	Rules	Section in this report
Initial metering information was not updated on the Registry within two business days of GasNet becoming aware that the meter was installed for the following ICPs: • 0000012929GN301 • 0000031864GNCD6 • 0000031896GNC44 • 0000014132GN2B5 • 0000031849GNED8 • 0000013694GN047 • 0000013853GNC69 • 0000031755GN864 • 0000031786GN9E6 • 0000031788GNA7D • 0000031817GN54B; and • 0000031864GNCD6. The registry was updated between four and 47 business days after the meter was installed.	GSAR r56	4
A small number of inaccuracies in TOU information, meter location and meter replacement dates were identified.	GDRR r26.5	5

1.6 Draft Audit Report Comments

A draft audit report was provided to the industry body (GIC), the allocation agent, and allocation participants that I considered had an interest in the report. In accordance with rule 92 of the 2015 Amendment Version of the Gas (Switching Arrangements) Rules 2008, those parties were given an opportunity to comment on the draft audit report and indicate whether they would like their comments attached as an appendix to the final audit report. The following response was received.

Party	Response	Comments provided	Attached as appendix
GasNet	Yes	Yes	Included in the audited party comments box for each non-conformance and recommendation. Additional comments are attached as appendix 2.

The comments received were considered in accordance with rule 93.1, prior to preparing the final audit report. The following changes to the report were made after considering the comments:

Report section	Requested by	Change
Executive summary	GasNet	Deletion of the issue relating to revising the timeframe for TOU meter installation set out in rule 29.1 of the GDRR, in consultation with Meter Owners.
3.1	GasNet	Clarification that GasNet does not estimate when TOU data is missing, and provides additional information to assist the retailer to estimate.
3.3	GasNet	Clarification that GasNet may use the in stock correctors for upgrades as well as maintenance. Clarification that rule 29.1.1 is in the GDRR.
Appendix 2 – GasNet Comments	GasNet	General comments provided by GasNet.

2. General obligations

2.1 Participant registration information (GSAR r7 and 10)

All Registry participants must supply registration information to the Registry operator. Registration information consists of:

- The name of the Registry participant; and
- The Registry participant's telephone number, physical address, facsimile number, email address, and postal address; and
- Identification as to which class, or classes, of Registry participant (Retailer, distributor or Meter Owner) that the Registry participant belongs.

- Registration information must be given in the form and manner required by the Registry operator as approved by the industry body. Every person who is a Registry participant at the commencement date must supply the registration information within 20 business days of the commencement date. A person who becomes a Registry participant after the commencement date must supply the registration information within 20 business days of becoming a Registry participant.

GasNet's participant registration information was confirmed to be valid.

Compliance is confirmed.

2.2 Obligation to act reasonably (GSAR r34)

Every Registry participant must act reasonably in relation to its dealings with the Registry and, in doing so, must use its reasonable endeavours to co-operate with other Registry participants.

Processes for managing queries and complaints about Registry information were reviewed. No examples of GasNet acting unreasonably were found.

Compliance is confirmed.

2.3 Obligation to use Registry software competently (GSAR r35)

Each Registry participant must ensure that any software for the Registry is used in a proper manner by competent employees or by persons under the supervision of those employees.

No Registry participant may request, permit, or authorise anyone other than the Registry operator to provide support services in respect of any software for the Registry.

Each Registry participant must appoint a nominated manager to be responsible for all that Registry participant's communications with the Registry.

No examples of GasNet using Registry software incompetently were found. Access to modify Registry information is restricted and staff are appropriately trained. GasNet only uses Jade for Registry support services.

Compliance is confirmed.

3. Accuracy of meter information

3.1 TOU downloads (GDRR r26.5)

TOU meter downloads provided to Retailers should be complete, accurate and converted to energy in accordance to NZS5259:2015 (if applicable).

GasNet have 14 ICPs with correctors fitted, all are temperature and absolute pressure corrected. GasNet does not convert the raw volumes to energy; compliance with the NZS5259:2015 gas conversion process was not assessed.

Data for five of the correctors is downloaded by GasNet monthly, and volume data is provided to the Retailer via email. For the other nine ICPs, telemetry is installed, and the Retailer downloads the corrector data directly.

GasNet completes a weekly test download, to check that data is available and identify any issues with the corrector, such as a low battery or other alarms.

If data is missing from the monthly download, GasNet's engineering team will provide additional information (such as mechanical readings) to assist the retailer to create an estimate for the missing periods based on the data which is available. Typically, data will only be missing for part of a day or month, because issues with missing data are identified weekly, and corrected as soon as possible. The Retailer is advised if data is missing from their file. No recent examples of missing data were available for review.

The monthly download data is also reviewed for reasonableness, including checks of unexpected values or zeros. If an anomaly is identified, it is checked against the last few years consumption history. If necessary, the consumption will be queried with the Retailer, and/or a field services job will be raised to investigate.

No recent data accuracy or missing data issues were identified during the audit.

Compliance is confirmed.

3.2 Meter accuracy (GDRR r26.5 and 27)

Processes must be in place to ensure meter accuracy, and compliance with NZS5259:2015.

Processes for ensuring metering accuracy were discussed with the Engineering Manager. GasNet's processes support compliance with NZS5259:2015 and NZS4944 for both new and existing GMS.

A sample of meter paperwork, fault, and testing information was reviewed to confirm that the processes in the standard were being followed.

Faults

Where a Retailer or GasNet staff member identifies a possible meter accuracy issue, a job is raised in the FieldGo system to investigate. The jobs are allocated to technicians, who try to attend meter accuracy faults within one business day.

I reviewed the jobs logged in FieldGo. I found meter accuracy faults were infrequent; most jobs raised related to pressure checks. A sample of six meter accuracy faults were identified over the previous two months:

- Three related to condensation in the index making the meter difficult to read. In all cases, GasNet replaced the meter and allowed the register to dry out before being scrapped, so that a final reading could be provided to the customer. Two meters were replaced within one business day of the fault being logged, one was replaced within four business days.

- One related to a suspected stopped meter. GasNet replaced the meter and confirmed the meter was stopped. The meter was replaced within one business day of the fault being logged.
- Two related to high bills, one fault was raised by a customer, the other by a Retailer. In both cases the meters were checked and found not to be faulty, but were replaced due to age. Both meters were replaced within one business day of the fault being logged.

Maintenance and inspection

A maintenance programme sets out how frequently meters should be inspected and maintained, and is compliant with NZS5259:2015.

Where defects are found during these inspection or maintenance processes, GasNet's defect process is followed.

GasNet has four maintenance categories, each with a different maintenance and testing interval. The items inspected are determined by the standard. Testing intervals are being migrated to the intervals specified by the standard. GasNet's current practices achieve compliance, because the testing intervals are not greater than those required.

Testing

Acceptance and as found testing is carried out in accordance with NZS5259:2015, and review of a sample of testing information confirmed this.

Acceptance testing is completed before a GMS enters service, and when an event that may affect accuracy has occurred.

As found testing applies for meters and TOU devices removed from service where the meter is intended to be re-used, or a request for testing has been received from the Retailer. As found testing will not be completed where the meter or TOU device is due to be scrapped, or damage or corrosion makes testing impractical. Removed meters which pass as found testing may be redeployed.

Statistical samples chosen according to NZS4944 are used to confirm that meters with a fixed meter pressure factor and meter accuracy are within the maximum permissible errors allowed in NZS5259:2015. The accuracy for the sample of meters tested determines when the next statistical sample is tested, and any action required for that metering population.

I reviewed a sample of tests conducted when meters were installed, removed or reinstalled and found that the testing process was being followed as expected.

Compliance is confirmed.

3.3 TOU upgrades (GDRR r29.1.1)

If a consumer installation is, or is expected to, consume more than 10 TJ per annum TOU metering should be installed. Under the Gas (Downstream Reconciliation) Rules 29.1 the Retailer must ensure that a TOU meter is installed as soon as practicable, and no more than 3 months after becoming aware that expected or actual consumption is over 10 TJ.

As part of GasNet's audit, I examined how quickly TOU metering is installed after receiving a request from a Retailer.

Upgrades from non TOU to TOU occur rarely; the last upgrade was on 16/03/2016. The upgrade was completed approximately four months after the Retailer's initial enquiry, and five weeks after the Retailer accepted the quote.

The three month timeframe specified in the rules is difficult to comply with. GasNet normally has two correctors in stock to complete upgrades and maintenance. TOU devices have pressure transducers that should be sized for the site conditions. In order to ensure optimum performance a new TOU device may need to be purchased, which can have a three month lead time.

I recommend that the GIC reconsider the timeframes set in GDRR rule 29.1.1.

Rule issue
I recommend the GIC consider revising the timeframe for TOU meter installation, in consultation with Meter Owners.

4. New connections (GSAR r56)

Meter Owner information must be provided on the Registry within two business days of confirmation that a meter has been installed. If no responsible Meter Owner is populated, the Meter Owner who has installed the meter may populate the Registry to become the responsible Meter Owner.

Since September 15th, 2015, Meter Owners have been able to populate metering details without Retailer nomination of the responsible Meter Owner. However, if the Retailer has populated a different responsible Meter Owner, GasNet will be unable to update any metering details until the responsible Meter Owner is changed to GasNet.

New connections are completed by GasNet's technicians and contractors, and fieldwork is managed using the FieldGo system. GasNet's technicians use hand held devices to record job details, and contractors keep paper records. Files from the devices, and scanned copies of paperwork are received daily by the GasNet administration team, who update MIDaS. Sign off sheets are used to ensure that all applicable data is updated for each job completed. As data is entered it is checked for reasonableness, and any anomalies are queries with the technicians. Changed data flows from MIDaS to the Registry each day.

A Registry event detail report was reviewed for October 2012 to October 2017. 281 new connections had meters installed during that period.

I reviewed a sample of 20 updates for new connections completed more than two days after the meter was installed and found:

- 12 occurred during a period where GasNet was short staffed, which caused some delays.
- 8 were late primarily due to late return of paperwork.

The late update of meter information on the Registry is recorded as non-conformance below.

Non Conformance	Description	Audited party comment
Regarding: GSAR 56 Control Rating: Not adequate	Initial metering information was not updated on the Registry within two business days of becoming aware that the meter had been installed for the following ICPs: • 0000012929GN301 • 0000031864GNCD6 • 0000031896GNC44 • 0000014132GN2B5 • 0000031849GNED8 • 0000013694GN047 • 0000013853GNC69 • 0000031755GN864 • 0000031786GN9E6 • 0000031788GNA7D • 0000031817GN54B; and • 0000031864GNCD6. The registry was updated between four and 47 business days after the meter was installed.	Response: We agree Comments: • We have changed our procedures

5. Registry information management (GDRR r26.5 and GSAR r58)

The Meter Owner must use its reasonable endeavours to maintain current and accurate information in the Registry in relation to the ICPs and the ICP parameters for which it has responsibility.

New connections, meter changes, removals, pressure upgrades and downgrades are completed by GasNet's technicians and contractors. GasNet's technicians use hand held devices to record job details, and contractors keep paper records. Files from the devices, and scanned copies of paperwork are received daily by the administration team, who update MIDaS. Sign off sheets are used to ensure that all applicable data is updated for each job completed. Changed data flows from MIDaS to the Registry each day.

GasNet saves and checks the acknowledgement files from the Registry following each update. If a change is required urgently by another participant, GasNet will update the Registry manually so the change occurs immediately.

Accuracy of Registry information

To test the accuracy of GasNet's Registry information management, I checked the following Registry event data against the source records, including meter dockets and testing paperwork where available.

- An upgrade to TOU
- 20 meter installations for new connections
- 21 meters which had been in service for more than 10 years
- 20 meter changes
- 10 meters which were removed and reinstalled, or are ready to be reinstalled
- 14 removed meters
- Five meter pressure upgrades or downgrades; and
- Mismatches between GasNet's MIDaS data and the Registry, identified through GasNet's fortnightly reconciliation described in **section 5.15**.

GasNet did not have any multipliers greater than one, or meter registers with less than four or more than seven digits.

I found that most information GasNet had recorded on the Registry matched the source information, for the sample of records checked. The following data accuracy issues were identified during the audit:

- ICP 0000031266GN659 was incorrectly recorded on the Registry as non TOU between 30/06/2016 and 30/09/2016. Full TOU information is not maintained in MIDaS, and updates to TOU related fields are handled manually. It appears that a metering field was updated in MIDaS which triggered an update to the metering details on the Registry using the current information recorded in MIDaS. This record should have been manually replaced immediately, but was not detected and corrected until 02/11/2016.
- ICP 0000031942GN908 was recorded on the Registry with a location of RW (right wall), but the installation paperwork showed left wall. A backdated location correction effective from the meter installation date was processed during the audit.
- ICP 0001425592QT59F had its meter replaced on 16/10/2015, but the meter replacement was recorded on the Registry on 20/10/2015. The error occurred because MIDaS recorded the date the change was processed as the event date when generating files for the Registry. At the time of the error, staff manually checked and updated the dates in the files before they were sent to the Registry, but this event was missed due to human error. A system change has been implemented so that the metering files now use the correct meter installation date recorded in MIDaS, and the registry was updated to reflect the correct date after the audit.

These data inaccuracies are recorded as non conformance below.

Non Conformance	Description	Audited party comment
Regarding: GDRR 26.5 and GSAR 58 Control Rating: Not adequate	A small number of data inaccuracies were identified: • ICP 0000031266GN659 is incorrectly recorded on the Registry as non TOU between 30/06/2016 and 30/09/2016. The	Response: Agree with findings Comments: • These have been corrected at Gas Registry

Non Conformance	Description	Audited party comment
	record was corrected on the registry prior to the audit. • ICP 0000031942GN908 was recorded with an incorrect location; the record was corrected during the audit. • ICP 0001425592QT59F had its meter replaced on 16/10/2015, but the meter replacement was recorded on the Registry on 20/10/2015. The record was corrected following the audit.	

Fortnightly, GasNet compares a full export from MIDaS against a Gas Registry list file. Data consistency is also checked, including comparison between the ICP status and meter status. This process is discussed further in **section 5.15**.

I reviewed three of these fortnightly reconciliations. The only meter exception that was not a timing difference related to a Retailer recording an active status for an ICP with no meter. The discrepancy was followed up with the Retailer.

Each of the Meter Owner parameters are discussed individually below.

Timeliness of Registry information

Timeliness of updates for new connections is discussed in **section 4**.

The event detail report from October 2012 to October 2017 was examined to determine the timeliness of Registry updates of metering information. The rules do not specify a clear timeframe for update of metering information not related to new connections.

I reviewed a sample of 20 backdated updates to metering information of between 40 and 716 business days of the event to determine the reasons for the backdated updates.

- 15 related to corrections backdated to the meter start date. Of those, 12 were location corrections; one was a meter correction; and two related to corrections to meter digits, multiplier and pressure.
- One ICP had a typo in the start date. A record with the correct date was entered later, but the incorrect record was not reversed.
- One ICP was updated 42 business days after the event, due to a delay in receiving decommissioning paperwork.
- One correction to metering information was backdated to the meter removal date, when cleansing “no meter” information.
- Two backdated updates added the corrector owner and TOU details.

I also reviewed five late updates to meter pricing information between 187 and 240 business days of the event to determine the reasons for the backdated updates. In four cases, the backdated update occurred because mandatory pricing fields in MIDaS were sent to the Registry when a metering or

status record was updated, along with the last pricing effective date. In one case, the MHQ (maximum hourly quantity) was added.

It is preferable to have a late update and correct information recorded on the Registry, to having no late updates with incorrect information recorded on the Registry.

Overall, my review of the update of registry information for existing connections has identified several instances where updates to existing connection information have taken a considerable amount of time. However, because the rules do not specify a timeframe for the update of this information I have not alleged any breaches

Rule issue
I recommend the GIC consider setting clear timeframes for population of metering data on the Registry.

5.1 Meter Identifier

Meter number discrepancies are reviewed and resolved fortnightly, as discussed in **section 5.15**. No meter number discrepancies were identified through review of metering paperwork.

I did see some examples of meter number corrections, where meter numbers had been verified through checking paperwork, photos, or site visits. Prior to 2014, MIDaS could not record letters in meter numbers and once this issue was resolved, data cleansing was completed.

5.2 Meter Location Code

Meter location discrepancies are reviewed and resolved fortnightly, as discussed in **section 5.15**.

GasNet's prescribed forms for meter fieldwork have been modified over the years to capture more information. For some 2012 and 2013 jobs, meter locations were not available. In these cases, the meter locations recorded on the Registry were checked against GasNet's GIS system. In one case, I could not verify the original location for the removed meter.

In 2015, GasNet cleansed their meter location records to ensure that they were correct and consistent. Corrections were backdated to the meter installation date. A restricted list of approved locations are available in MIDaS to support ongoing data consistency.

One incorrect location code was identified through review of a sample of meter paperwork. ICP 0000031942GN908 was recorded on the Registry with a location of RW (right wall), but the installation paperwork showed left wall. This difference is recorded as non conformance in **section 5**. A backdated location correction effective from the meter installation date was processed during the audit.

5.3 Meter Pressure

Meter pressure discrepancies are reviewed and resolved fortnightly, as discussed in **section 5.15**. No meter pressure discrepancies were identified through review of metering paperwork. For one meter installed in 2006, and one in 2015, the meter pressure was not noted on the paperwork and could not be verified. For both meters, the pressure appeared reasonable based on similar installations.

5.4 Register Multiplier

Register multiplier discrepancies are reviewed and resolved fortnightly, as discussed in **section 5.15**. GasNet does not have any ICPs with multipliers, and all multipliers were found to be one, as expected.

5.5 Meter Pressure Operating at Network Pressure Flag

Meter operating at network pressure is not recorded in MIDaS, and the Registry update files produced are hard coded to record N (no) in this field. Meter operating at network pressure is not reviewed as part of the fortnightly Registry validation checks. No meter operating at network pressure discrepancies were identified during the audit.

5.6 Register Reading Digits

Register reading digits discrepancies are reviewed and resolved fortnightly, as discussed in **section 5.15**. No register reading digits discrepancies were identified through review of metering paperwork.

5.7 Standard Meter

All GasNet meters are standard meters. The standard meter flag is not recorded in MIDaS, and all meter event files record Y for this field if a meter is present. The standard meter flag is not reviewed as part of the fortnightly Registry validation checks.

5.8 Prepay meter

GasNet does not supply any ICPs with prepay meters. The prepay flag is not recorded in MIDaS and all meter event files record N for this field. The prepay meter flag is not reviewed as part of the fortnightly Registry validation checks.

5.9 Advanced Meter & Advanced Meter Owner

GasNet does not supply any ICPs with advanced meters. The advanced meter and advanced meter owner flags are not recorded in MIDaS, and all meter event files record N and NONE for these fields. The advanced meter and advanced meter owner flags are not reviewed as part of the fortnightly Registry validation checks.

5.10 TOU Meter

The TOU meter flag is hard coded in MIDaS and can only be updated by programmers. For this reason, GasNet maintains the TOU meter flag on the Registry manually for their 14 ICPs with correctors installed. The TOU meter flag is not reviewed as part of the fortnightly Registry validation checks.

ICP 0000031266GN659 is incorrectly recorded on the Registry as non TOU between 30/06/2016 and 30/09/2016. Full TOU information is not maintained in MIDaS, and updates to TOU related fields are handled manually. It appears that a metering field was updated in MIDaS which triggered an update to the metering details on the Registry using the current information recorded in MIDaS. This record should have been manually replaced immediately, but was not detected and corrected until 02/11/2016. This is recorded as non conformance in **section 5**.

5.11 Logger Owner

GasNet does not own any data loggers. Logger owner is not recorded in MIDaS and all meter event files record NONE for this field. Logger owner is not reviewed as part of the fortnightly Registry validation checks. No logger owner discrepancies were identified during the audit.

5.12 Corrector Owner

Corrector owner is hard coded in MIDaS and can only be updated by programmers. For this reason, GasNet maintains the TOU meter flag on the Registry manually for their 14 ICPs with correctors installed. The corrector owner is not reviewed as part of the fortnightly Registry validation checks. No corrector owner discrepancies were identified during the audit.

5.13 Telemetry Owner

Telemetry owner is not recorded in MIDaS. Meter event files record GNET if a meter and corrector is present, and NONE where only a meter is present. Telemetry owner is not reviewed as part of the fortnightly Registry validation checks. No telemetry owner discrepancies were identified during the audit; all TOU ICPs have telemetry installed.

5.14 Metering Price Category

Metering price category is set based upon the meter type installed. No meter price category discrepancies were identified through review of metering paperwork. For one meter installed in 2005, and one installed in 2006, the meter price category/type was not noted on the paperwork and could not be verified.

Price category discrepancies are reviewed and resolved fortnightly, as discussed in **section 5.15**.

5.15 Registry validation and correction (GSAR r61.1, 61.2 and 62)

If the Meter Owner becomes aware that Registry information is incorrect or requires updating, the responsible Meter Owner must update or correct the Registry as soon as practicable.

The Meter Owner Registry report should be reviewed, and any corrections required should be entered on the Registry by 4pm on the 15th business day of the month.

Fortnightly, GasNet compares a full export from MIDaS against a Gas Registry list file. GasNet prefers to run their own reports instead of using the monthly report produced from the Registry, to minimise timing differences. The reconciliation compares the MIDaS data against the Registry for the following fields:

- ICP
- Meter identifier
- Location code
- Meter pressure
- Register reading digits
- Meter Owner; and
- Metering price category.

Data consistency is also checked, including comparison between the ICP status and meter status.

I reviewed three of these fortnightly reconciliations. All differences related to timing, apart from one ICP where the Retailer had recorded an active status but the meter was removed. The discrepancy was followed up with the Retailer.

Based on my findings during the audit, I recommend the addition of the following checks:

- A monthly check of TOU ICP details to ensure that any replaced records are identified and corrected.
- A consistency check for meter flags (standard meter, prepay meter, TOU meter, and advanced meter) and TOU equipment owners (logger owner, corrector owner, and telemetry owner) to the fortnightly reconciliation.
- Once populated, add a check for meter pressure operating at network pressure to the fortnightly reconciliation.

Recommendation	Audited party comment
Implement a monthly check of TOU ICP details to ensure that any replaced records are identified and corrected. Add a consistency check for meter flags (standard meter, prepay meter, TOU meter, and advanced meter) and TOU equipment owners (logger owner, corrector owner, and telemetry owner) to the fortnightly reconciliation. Once populated, add a check for meter pressure operating at network pressure to the fortnightly reconciliation.	Response: Agree Comments: • In the process of implementing recommendations

6. Metering Price Codes (GSAR r49)

Each Meter Owner must determine, publish and maintain a schedule of its meter price categories and the respective network price category codes and, except where the Meter Owner requires disclosure on application in accordance with rule 50, the charges associated with each of those codes.

GasNet's meter price codes were last updated effective 1 October 2016.

The pricing for each metering price code is adjusted effective from 1 October each year. Retailers are consulted on pricing changes, and final pricing is provided to Retailers by email by 31 July each year. I reviewed examples of the 2017 emails for 12 Retailers and confirmed that new and previous pricing information was provided.

Compliance is confirmed.

7. Disclosure on application (GSAR r50)

Disclosure on application may only be used where the participant does not have a reasonably practicable alternative method of protecting its commercial interest in that information, and to the extent necessary to reasonably protect that interest.

All meter price codes are available on the Registry; no meter price codes are subject to disclosure on application.

GasNet occasionally receives requests for meter pricing, usually via their GasNet enquiries email. I reviewed two examples of these requests and noted that the pricing information was provided within one business day.

Recommendations

As a result of this audit I recommend the following:

- Implementation of further data checks to reduce the likelihood of future non conformance, including:
  - A monthly check of TOU ICP details to ensure that any replaced records are identified and corrected.
  - A consistency check for meter flags (standard meter, prepay meter, TOU meter, and advanced meter) and TOU equipment owners (logger owner, corrector owner, and telemetry owner) to the fortnightly reconciliation.
  - Once populated, add a check for meter pressure operating at network pressure to the fortnightly reconciliation.

Appendix 1 – Control Rating Definitions

Control Rating	Definition
Control environment is not adequate	Operating controls designed to mitigate key risks are not applied, or are ineffective, or do not exist. Controls designed to ensure compliance are not applied, or are ineffective, or do not exist. Efficiency/effectiveness of many key processes requires improvement.
Control environment is adequate	Operating controls designed to mitigate key risks are not consistently applied, or are not fully effective. Controls designed to ensure compliance are not consistently applied, or are not fully effective. Efficiency/effectiveness of some key processes requires improvement.
Control environment is effective	Isolated exceptions identified when testing the effectiveness of operating controls to mitigate key risks. Isolated exceptions identified when testing the effectiveness of controls to ensure compliance. Isolated exceptions where efficiency/effectiveness of key processes could be enhanced.

Appendix 2 – Additional GasNet comments

- New Connections – Procedures have been changed so that this happens in the appropriate time frame.
- Registry Information Management - Procedures have been changed so that this happens in the appropriate time frame.

Additional Comments

- Section 1.5 (GSAR r56) – Procedures have been changed so that this happens in the appropriate time frame
- Section 1.5 (GDRR r26.5) – Data has been corrected
- Section 3.1 – GasNet does not create estimates for missing TOU data, if data is missing and mechanical meter or dial readings are available they are provided to assist the retailer to estimate the consumption for the missing time frame.
- Section 3.3 – GasNet carries two fully reconditioned TOU units due to the down time in obtaining a new unit. TOU devices have pressure transducers that should be sized for the site conditions. In order to ensure optimum performance a new TOU device may require purchasing specifically for the site; this is where the 3 month lead time occurs.
- Section 3.3 (GDRRr291.1
- Section 3.3 - Office procedures have been changed to make sure information is gathered and entered in a timely manner.
- Section 5 – Discussions with all parties concerned has been held to reduce these issues
- Section 5.10 - With regards to TOU Meter information, if the file is altered or adjusted thus resent to the Registry those adjustment / additions are now categorised as a new event.