

ELECTRICITY INDUSTRY PARTICIPATION CODE
DISTRIBUTED UNMETERED LOAD AUDIT REPORT



VERITEK

For

ACACIA COVE RETIREMENT VILLAGE AND
MERCURY NZ LTD

Prepared by: Steve Woods

Date audit commenced: 29 April 2020

Date audit report completed: 25 May 2020

Audit report due date: 01-Jun-20

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EXECUTIVE SUMMARY

This audit covers the Acacia Cove Retirement Village (Acacia Cove) DUML database and processes was conducted at the request of Mercury NZ Limited (Mercury) in accordance with clause 15.37B. The purpose of this audit is to verify that the volume information is being calculated accurately, and that profiles have been correctly applied.

The audit was largely conducted in accordance with the audit guidelines for DUML audits version 1.1. A field audit was not undertaken due to the restrictions imposed by the Covid-19 lockdown; therefore, I checked the results of the 2019 field audit to ensure the database reflected those findings.

The spreadsheet is maintained by Mercury and the customer is expected to advise Mercury of any changes that occur. The spreadsheet was updated after the last audit and some items of load have been confirmed by Acacia Cove as being connected to a metered circuit. The database is now largely compliant, with the exception of some of the location details.

Improvements were made to the audit trail requirements during the audit period.

The future risk rating indicates that the next audit be completed in 24 months. I agree with this recommendation.

The matter raised is detailed below:

AUDIT SUMMARY

NON-COMPLIANCES

Subject	Section	Clause	Non-Compliance	Controls	Audit Risk Rating	Breach Risk Rating	Remedial Action
Location of each item of load	2.3	11(2A) of Schedule 15.3	11 items of load with insufficient location details because they are recorded as "scattered around"	Weak	Low	3	Identified
Future Risk Rating						15	

Future risk rating	0	1-4	5-8	9-15	16-18	19+
Indicative audit frequency	36 months	24 months	18 months	12 months	6 months	3 months

RECOMMENDATIONS

Subject	Section	Recommendation
		Nil

ISSUES

Subject	Section	Description	Issue
		Nil	

1. ADMINISTRATIVE

1.1. Exemptions from Obligations to Comply with Code

Code reference

Section 11 of Electricity Industry Act 2010.

Code related audit information

Section 11 of the Electricity Industry Act provides for the Electricity Authority to exempt any participant from compliance with all or any of the clauses.

Audit observation

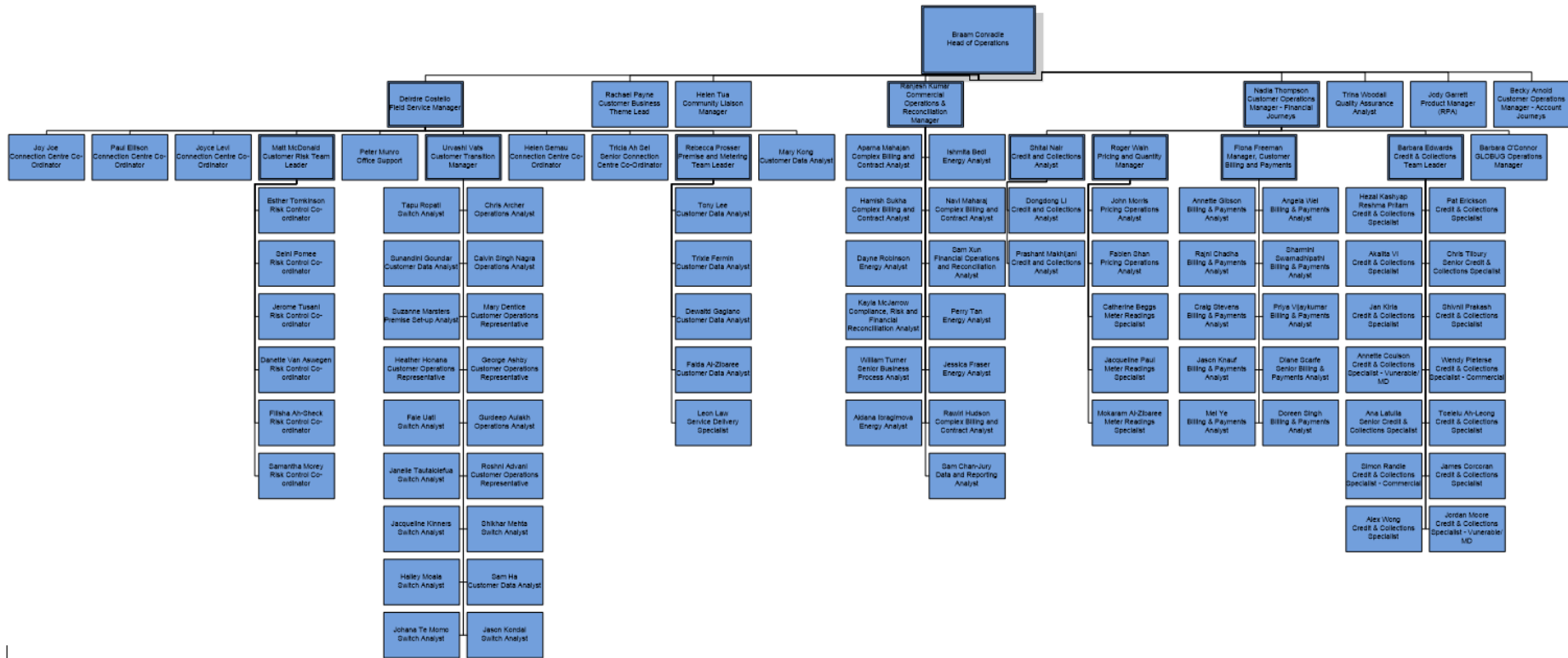
The Electricity Authority's website was reviewed to identify any exemptions relevant to the scope of this audit.

Audit commentary

Mercury has no exemptions in place in relation to the ICP covered by this audit report.

1.2. Structure of Organisation

Mercury provided an organisational structure:



1.3. Persons involved in this audit

Auditor:

Steve Woods

Veritek Limited

Electricity Authority Approved Auditor

Other personnel assisting in this audit were:

Name	Title	Company
Kayla McJarrow	Compliance, Risk and Financial Reconciliation Analyst	Mercury NZ Ltd

1.4. Hardware and Software

The streetlight data for Acacia Cove is held in an excel spreadsheet. This is backed up in accordance with standard industry procedures. Access to the spreadsheet is restricted by way of user log into the computer drive.

1.5. Breaches or Breach Allegations

There are no breach allegations relevant to the scope of this audit.

1.6. ICP Data

ICP Number	Customer	Description	NSP	Profile	Number of items of load	Database wattage (watts)
0949731528LC8CO	ACACIA VILLAGE	Wattle Farm Rd	TAK0331	RPS	99	5,842

1.7. Authorisation Received

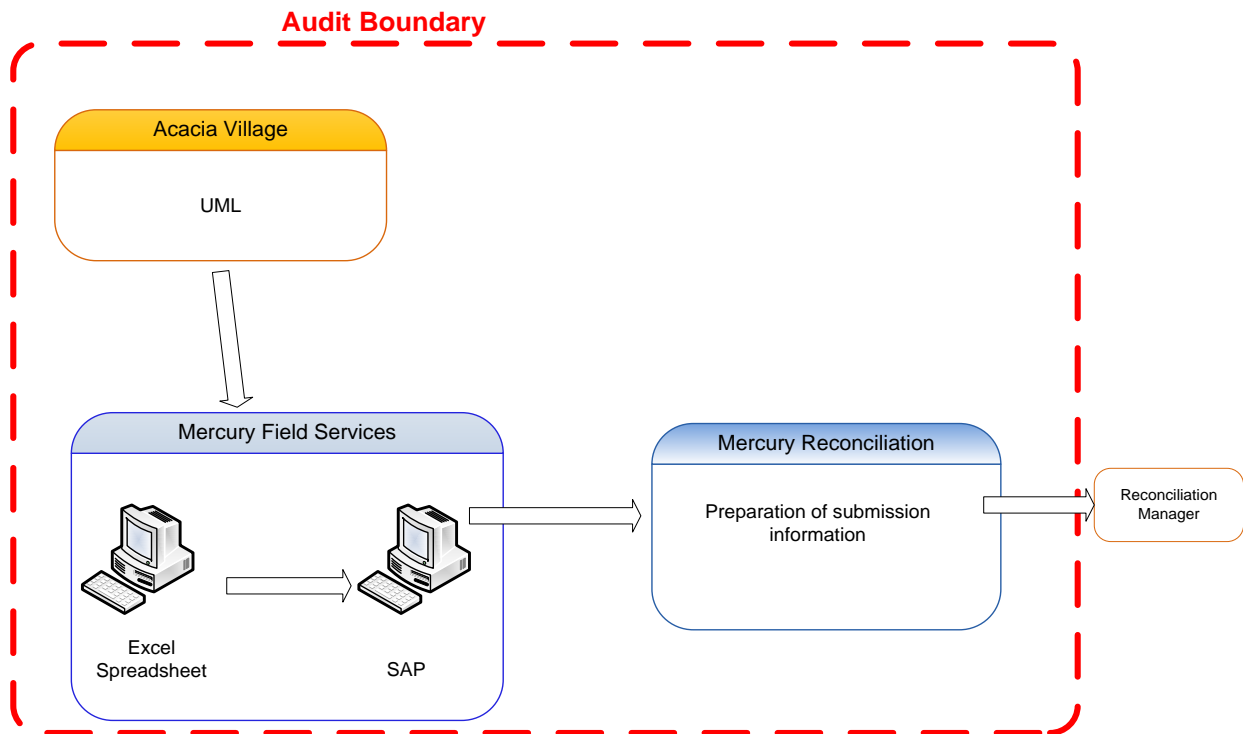
All information was provided directly by Mercury.

1.8. Scope of Audit

This audit covers the Acacia Cove Retirement Village (Acacia Cove) DUML database and processes was conducted at the request of Mercury NZ Limited (Mercury) in accordance with clause 15.37B. The purpose of this audit is to verify that the volume information is being calculated accurately, and that profiles have been correctly applied.

The audit was largely conducted in accordance with the audit guidelines for DUML audits version 1.1. A field audit was not undertaken due to the restrictions imposed by the Covid-19 lockdown; therefore, I checked the results of the 2019 field audit to ensure the database reflected those findings.

The spreadsheet is maintained by Mercury and the customer is expected to advise Mercury of any changes that occur.



1.9. Summary of previous audit

The previous audit was completed in May 2019 by Rebecca Elliot of Veritek Limited. Six non-compliances were identified, and one recommendation was made. The current status of the non-compliances in relation to the Acacia Cove lights are detailed below.

Table of Non-Compliance

Subject	Section	Clause	Non-compliance	Status
Deriving submission information	2.1	11(1) of Schedule 15.3	Estimated under submission of 10,549 kWh due to: <ul style="list-style-type: none"> load being excluded from the spreadsheet; and additional lights found in the field.	Cleared
Location of each item of load	2.3	11(2A) of Schedule 15.3	41 items of load with insufficient location details.	Still existing to a lesser extent
All load recorded in the database	2.5	11(2A) of Schedule 15.3	27 additional lights found in the field.	Cleared

Subject	Section	Clause	Non-compliance	Status
Audit trail	2.7	11.4 of Schedule 15.3	The audit trail does not include the details of the person making the change in the spreadsheet.	Cleared
Database accuracy	3.1	15.2 and 15.37B(b)	The field audit found 27 additional lights resulting in a potential under submission of 7,346 kWh per annum.	Cleared
Volume information accuracy	3.2	15.2 and 15.37B(c)	Estimated under submission of 10,549 kWh due to: <ul style="list-style-type: none"> load being excluded from the spreadsheet; and additional lights found in the field.	Cleared

1.10. Distributed unmetered load audits (Clause 16A.26 and 17.295F)

Code reference

Clause 16A.26 and 17.295F

Code related audit information

Retailers must ensure that DUML database audits are completed:

- 1. by 1 June 2018 (for DUML that existed prior to 1 June 2017)*
- 2. within three months of submission to the reconciliation manager (for new DUML)*
- 3. within the timeframe specified by the Authority for DUML that has been audited since 1 June 2017.*

Audit observation

Mercury has requested Veritek to undertake this street lighting audit.

Audit commentary

This audit report confirms that the requirement to conduct an audit has been met for this database within the required timeframe.

Audit outcome

Compliant

2. DUML DATABASE REQUIREMENTS

2.1. Deriving submission information (Clause 11(1) of Schedule 15.3)

Code reference

Clause 11(1) of Schedule 15.3

Code related audit information

The retailer must ensure the:

- *DUML database is up to date*
- *methodology for deriving submission information complies with Schedule 15.5.*

Audit observation

The process for calculation of consumption was examined and the application of profiles was checked. The database was checked for accuracy.

Audit commentary

This clause requires that the distributed unmetered load database must satisfy the requirements of schedule 15.5 regarding the methodology for deriving submission information. Mercury reconciles this DUML load using the RPS profile. The daily kWh figure recorded in SAP, which is derived from the spreadsheet used for submission. I checked the accuracy of the submission information by multiplying the daily kWh by the number of hours in the month and comparing it to the figure submitted in the AV080 for the month of March 2020. This confirmed the volume was calculated correctly from the registry figure.

The database is confirmed as accurate; therefore, volume information is also accurate.

Audit outcome

Compliant

2.2. ICP identifier and items of load (Clause 11(2)(a) and (aa) of Schedule 15.3)

Code reference

Clause 11(2)(a) and (aa) of Schedule 15.3

Code related audit information

The DUML database must contain:

- *each ICP identifier for which the retailer is responsible for the DUML*
- *the items of load associated with the ICP identifier.*

Audit observation

The spreadsheets were checked to confirm the correct ICP was recorded correctly for the load.

Audit commentary

The spreadsheet records the correct ICP relative to the load.

Audit outcome

Compliant

2.3. Location of each item of load (Clause 11(2)(b) of Schedule 15.3)

Code reference

Clause 11(2)(b) of Schedule 15.3

Code related audit information

The DUMML database must contain the location of each DUMML item.

Audit observation

The spreadsheet was checked to confirm the location is recorded for all items of load.

Audit commentary

The spreadsheet contains the street name and number for most items of load with the exception of one group of 11 LED lights where the description is “scattered around”. This is recorded as non-compliance.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 2.3 With: 11(2)(b) of Schedule 15.3 From: 01-Jun-17 To: 29-Apr-20	11 items of load with insufficient location details because they are recorded as “scattered around” Potential impact: Low Actual impact: Low Audit history: Twice previously Controls: Weak Breach risk rating: 3		
Audit risk rating	Rationale for audit risk rating		
Low	The controls in place are rated as weak as the database is not being maintained as expected. The volume associated with these lights is small therefore the audit risk rating is low.		
Actions taken to resolve the issue		Completion date	Remedial action status
We have contacted our customer and requested further detail of the location of these items be provided.		May 2020	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
We have contacted our customer and requested further detail of the location of these items be provided.		May 2020	

2.4. Description and capacity of load (Clause 11(2)(c) and (d) of Schedule 15.3)

Code reference

Clause 11(2)(c) and (d) of Schedule 15.3

Code related audit information

The DUML database must contain:

- a description of load type for each item of load and any assumptions regarding the capacity
- the capacity of each item in watts.

Audit observation

The spreadsheet was checked to confirm that it contained a field for lamp type and wattage capacity and included any ballast or gear wattage and that each item of load had a value recorded in these fields.

Audit commentary

Each item of load contains the lamp type, wattage and ballast in the spreadsheet.

Audit outcome

Compliant

2.5. All load recorded in database (Clause 11(2A) of Schedule 15.3)

Code reference

Clause 11(2A) of Schedule 15.3

Code related audit information

The retailer must ensure that each item of DUML for which it is responsible is recorded in this database.

Audit observation

I compared the field audit findings from the 2019 audit against the database provided in April 2020.

Audit commentary

The previous audit found 27 additional lights in the field compared to the database. The database has been updated with some additional lights, and the other lights were confirmed by the property manager as being connected to the metered supply in the main building. I've recorded the metered lights below to ensure the connection arrangements are checked during the next field audit.

Street/Area	Database Count	Field Count	Total wattage	Comments
Outside 205	0	1	83	Additional 70W HPS (confirmed as metered by Acacia Cove)
Outside 204	0	1	83	Additional 70W HPS (confirmed as metered by Acacia Cove)
Outside 203	0	1	83	Additional 70W HPS (confirmed as metered by Acacia Cove)
Inside garden outside main building	0	4	332	Additional 70W HPS (confirmed as metered by Acacia Cove)

Street/Area	Database Count	Field Count	Total wattage	Comments
On lawn left of main building	0	2	166	Additional 70W HPS (confirmed as metered by Acacia Cove)
On lawn to right of main building	0	1	83	Additional 70W HPS (confirmed as metered by Acacia Cove)
Round light in garden to right of main building	0	1	83	Additional 70W HPS (confirmed as metered by Acacia Cove)
LEDs on path to bowling green	0	5	60	Additional 12W LED (confirmed as metered by Acacia Cove)
TOTAL	0	16	973	

The accuracy of the database is detailed in **section 3.1**.

Audit outcome

Compliant

2.6. Tracking of load changes (Clause 11(3) of Schedule 15.3)

Code reference

Clause 11(3) of Schedule 15.3

Code related audit information

The DUML database must track additions and removals in a manner that allows the total load (in kW) to be retrospectively derived for any given day.

Audit observation

The process for tracking of changes in the spreadsheets was examined.

Audit commentary

Any changes that are made during any given month take effect from the beginning of that month. The information is available which would allow for the total load in kW to be retrospectively derived for any day.

Audit outcome

Compliant

2.7. Audit trail (Clause 11(4) of Schedule 15.3)

Code reference

Clause 11(4) of Schedule 15.3

Code related audit information

The DUML database must incorporate an audit trail of all additions and changes that identify:

- *the before and after values for changes*

- *the date and time of the change or addition*
- *the person who made the addition or change to the database.*

Audit observation

The spreadsheets were checked for audit trails.

Audit commentary

During the previous audit, it was found that the changes made were detailed and dated, but no record of the person who has made the change was recorded. This has been remedied and the database now contains the details of the person making the change.

Audit outcome

Compliant

3. ACCURACY OF DUMML DATABASE

3.1. Database accuracy (Clause 15.2 and 15.37B(b))

Code reference

Clause 15.2 and 15.37B(b)

Code related audit information

Audit must verify that the information recorded in the retailer's DUMML database is complete and accurate.

Audit observation

I compared the field audit findings from the 2019 audit against the database provided in April 2020.

Wattages were checked for alignment with the published standardised wattage table produced by the Electricity Authority.

Audit commentary

The field audit findings from 2019 are detailed in **section 2.5**. The discrepancies found during the previous audit have been resolved and some lights are now confirmed as being metered.

The check of wattages and ballasts confirmed compliance.

An annual audit is expected to be carried out by the property owner to confirm that the database is correct. The customer is expected to advise if any changes occur so that the database can be updated accordingly, and notes of the light type, wattage and ballast and the date of change are recorded. Notes in the database indicate this process is working as expected.

Audit outcome

Compliant

3.2. Volume information accuracy (Clause 15.2 and 15.37B(c))

Code reference

Clause 15.2 and 15.37B(c)

Code related audit information

The audit must verify that:

- *volume information for the DUML is being calculated accurately*
- *profiles for DUML have been correctly applied.*

Audit observation

The submission was checked for accuracy for the month the database extract was supplied. This included:

- checking the registry to confirm that the ICP has the correct profile and submission flag; and
- checking the expected kWh against the submitted figure to confirm accuracy.

Audit commentary

Mercury reconciles this DUML load using the RPS profile. The daily kWh figure recorded in SAP, which is derived from the spreadsheet is used for submission. I checked the accuracy of the submission information by multiplying the daily kWh by the number of hours in the month and comparing it to the figure submitted in the AV080 for the month of March 2020. This confirmed the volume was calculated correctly from the registry figure.

The database is confirmed as accurate; therefore, volume information is also accurate.

Audit outcome

Compliant

CONCLUSION

This audit covers the Acacia Cove Retirement Village (Acacia Cove) DUML database and processes was conducted at the request of Mercury NZ Limited (Mercury) in accordance with clause 15.37B. The purpose of this audit is to verify that the volume information is being calculated accurately, and that profiles have been correctly applied.

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Improvements were made to the audit trail requirements during the audit period.

The future risk rating indicates that the next audit be completed in 24 months. I agree with this recommendation.

PARTICIPANT RESPONSE