ELECTRICITY INDUSTRY PARTICIPATION CODE
DISTRIBUTED UNMETERED LOAD AUDIT REPORT

VERITEK

For

ROTORUA LAKES DISTRICT COUNCIL AND MERCURY NZ LTD

Prepared by: Rebecca Elliot

Date audit commenced: 2 December 2019

Date audit report completed: 21 February 2020

Audit report due date: 01-Mar-20

TABLE OF CONTENTS

EXECUTIVE SUMMARY

This audit of the Rotorua Lakes District Council Unmetered Streetlights (**RLDC**) DUML database and processes was conducted at the request of Mercury Energy 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 conducted in accordance with the audit guidelines for DUML audits version 1.1.

The RLDC DUML volume is reconciled as HHR following the approval by the Electricity Authority of Exemption 233. The installations consist of an approved and certified data logger (to record on and off times) and a database from which the volume is derived.

The issue found in the last audit where the items of load were all reconciled to one GXP has been resolved. Unison has created ten new ICPs and all items of load are confirmed to be mapped correctly.

Database accuracy is described as follows:

These results were categorised in accordance with the "Distributed Unmetered Load Statistical Sampling Audit Guideline", effective from 01/02/19. The table below shows that Scenario A (detailed below) applies, and the best available estimate indicates that the database is accurate within ± 5 %.

- The variability of the sample results across the strata means that the true wattage (installed in the field) could be between 1.2% lower and 0.9% higher than the wattage recorded in the DUML database.
- In absolute terms the installed capacity is estimated to be the same as the database indicates.
- There is a 95% level of confidence that the installed capacity is between 9kw lower and 7 kW higher than the database.
- In absolute terms, total annual consumption is estimated to be 1,200 kWh lower than the DUML database indicates.
- There is a 95% level of confidence that the annual consumption is between 39,700 kWh p.a. lower and 29,000 kWh p.a. higher than the database indicates.

On 18 June 2019, the Electricity Authority issued a memo clarifying the memo of 2012 that stated that a monthly snapshot was sufficient to calculate submission from, and confirmed the code requirement to calculate the correct monthly load must:

- take into account when each item of load was physically installed or removed; and
- wash up volumes must take into account where historical corrections have been made to the DUML load and volumes.

The current monthly report is provided as a snapshot and is non-compliant. Mercury completes revision submissions where corrections are required and confirmed that no corrections have occurred since the ICPs switched to them on 01/10/2019. Mercury has not yet updated their processes to be consistent with the Authority's memo.

Four non-compliances were identified, and no recommendations were raised. The future risk rating of four indicates that the next audit be completed in 24 months and I agree with that recommendation.

The matters raised are detailed below:

AUDIT SUMMARY

NON-COMPLIANCES

Subject	Section	Clause	Non-Compliance	Controls	Audit Risk Rating	Breach Risk Rating	Remedial Action
Deriving submission information	2.1	11(1) of Schedule 15.3	Incorrect kW value applied for ICP 0001264718UN3E4 for the month of November 2019 resulting in under submission of 3,096.34 kWh. The monthly database extract provided does not track changes at a daily basis and is provided as a snapshot. Incorrect profile recorded on the registry for ICP 0001264717UNC3A.	Strong	Low	1	Identified
Location of each item of load	2.3	11(2)(b) of Schedule 15.3	11 items of load with insufficient location details recorded.	Strong	Low	1	Identified
All load recorded in database	2.5	11(2A) of Schedule 15.3	Two additional items of load found in the field.	Strong	Low	1	Identified
Volume information accuracy	3.2	15.2 and 15.37B(c)	Incorrect kW value applied for ICP 0001264718UN3E4 for the month of November 2019 resulting in under submission of 3,096.34 kWh. The monthly database extract provided does not track changes at a daily basis and is provided as a snapshot. Incorrect profile recorded on the registry for ICP 0001264717UNC3A.	Strong	Low	1	Identified
Future Risk Rating						4	

Future risk rating	1-3	4-6	7-8	9-17	18-26	27+
Indicative audit frequency	36 months	24 months	18 months	12 months	6 months	3 months

RECOMMENDATIONS

Subject	Section	Description	Action
		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

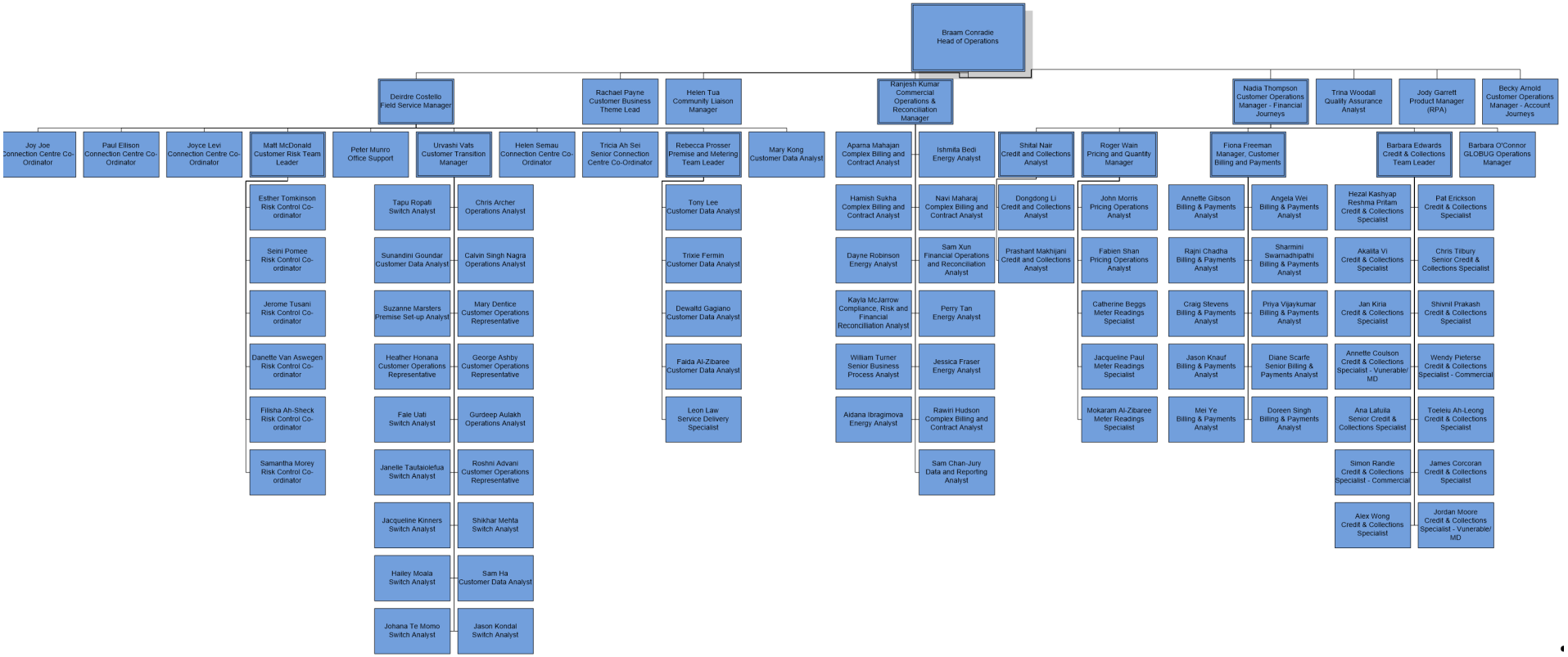
Section 11 of the Electricity Industry Act provides for the Electricity Authority to exempt any participant from compliance with all or any of the clauses.

Audit commentary

Exemption 233 has been granted to allow Mercury to submit HHR data for DUML to the Reconciliation Manager.

1.2. Structure of Organisation

Mercury provided their current organisational structure:



1.3. Persons involved in this audit

Auditor:

Rebecca Elliot

Veritek Limited

Electricity Authority Approved Auditor

Other personnel assisting in this audit were:

Name	Title	Company
Kayla McJarrow	Compliance, Risk & Financial Reconciliation Analyst	Mercury NZ Ltd
Edwin de Beun	Projects Engineer	Power Solutions

1.4. Hardware and Software

Section 1.8 records that Roading Asset and Maintenance Management database, commonly known as RAMM continues to be used the management of DUML. This is remotely hosted by RAMM Software Ltd. The specific module used for DUML is called "SLIMM" which stands for "Streetlighting Inventory Maintenance Management".

Power Solutions confirmed that the database back-up is in accordance with standard industry procedures. Access to the database is secure by way of password protection.

1.5. Breaches or Breach Allegations

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

1.6. ICP Data

ICP Number	Description	NSP	Profile	Number of items of load	Database wattage (watts)
0000043653HR7F7	STREETLIGHTING	ROT0331	HHR	1,574	159,228
0000043654HRA3D	Parks and Amenities	ROT0331	HHR	453	40,626
0000043655HR678	NZTA	ROT0331	HHR	520	99,263
0000043656HRAB8	STREETLIGHTING	OWH0111	HHR	704	55,870
0000043658HR923	AMENITY P & R EASTSIDE	OWH0111	HHR	26	1,326
0000043659HR566	NZTA EASTSIDE	OWH0111	HHR	290	38,028

0000043660HRCCF	STREETLIGHTING - GXP TRK0111	TRK0111	HHR	436	37,401
0000043661HR08A	AMENITY P & R NORTH	TRK0111	HHR	10	861
0000043662HRC4A	NZTA NORTH	TRK0111	HHR	54	7,391
0000043663HR00F	STREETLIGHTING	WRK0331	HHR	14	1,792
0001264717UNC3A	STREETLIGHTING	ROT0111	HHR	2,363	250,562
0001264718UN3E4	AMENITY P & R ROTORUA	ROT0111	HHR	437	373,86
0001264719UNFA1	NZTA ROTORUA	ROT0111	HHR	295	66,874
TOTAL				7,176	796,607

1.7. Authorisation Received

All information was provided directly by Mercury or Power Solutions.

1.8. Scope of Audit

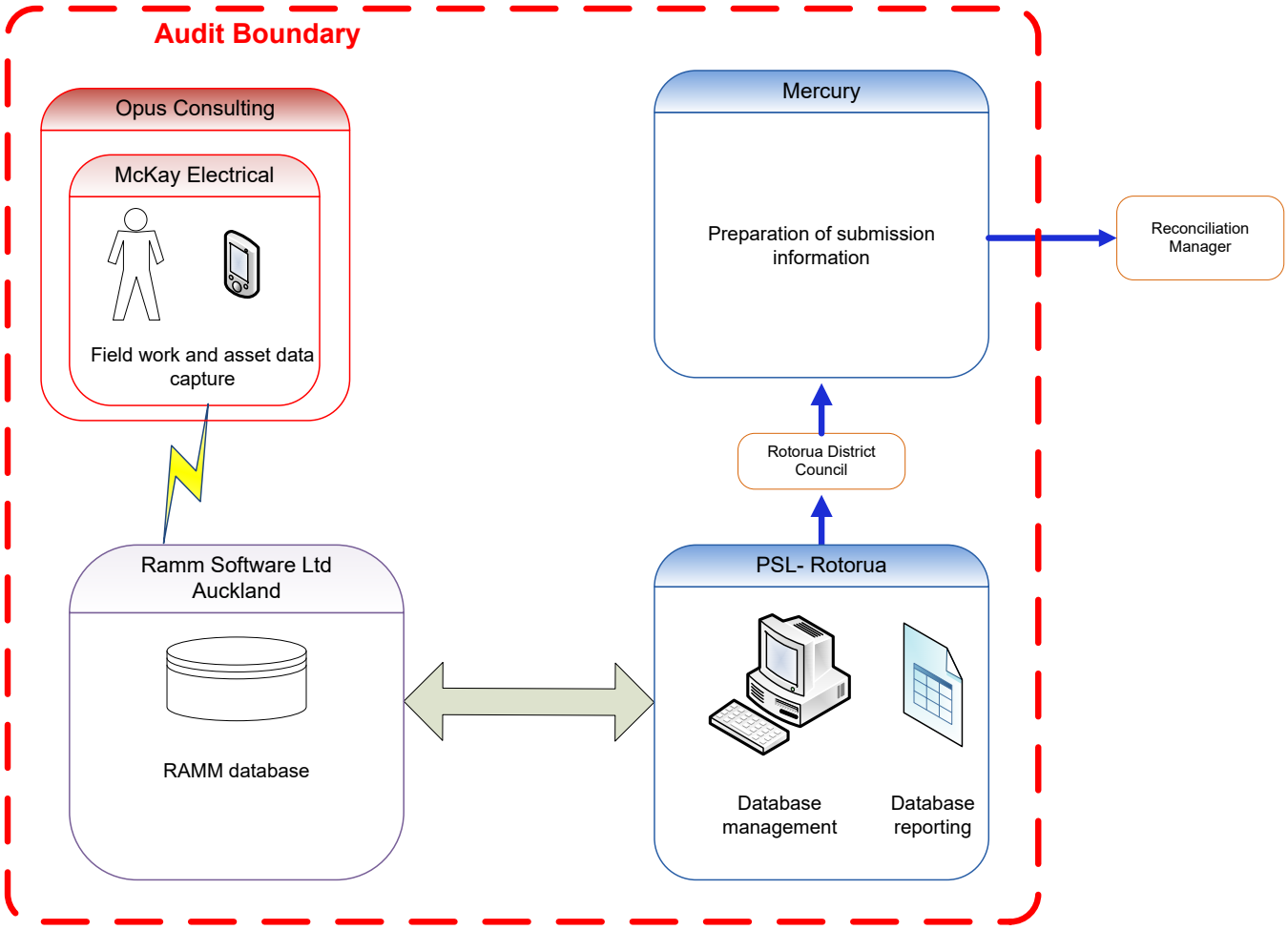
This audit of the Rotorua Lakes District Council Unmetered Streetlights (**RLDC**) DUML database and processes was conducted at the request of Mercury Energy Limited (**Mercury**), in accordance with clause 15.37B. The purpose of this audit is to verify that the volume information is being calculated accurately, and that profiles have been correctly applied.

The audit was conducted in accordance with the audit guidelines for DUML audits version 1.1.

The RLDC DUML volume is reconciled as HHR following the approval by the Electricity Authority of Exemption 233. The installations consist of an approved and certified data logger (to record on and off times) and a database from which the volume is derived.

The database is remotely hosted by RAMM Software Ltd. The field contracts are managed by Opus Consulting. McKay Electrical carry out the maintenance field work. RLDC were intending to progress their LED rollout but have had to make some adjustments and as a result the tender has yet to go to the market. LED lights are being installed in new areas and as a result of maintenance. The field work in is captured using Pocket RAMM. Power Solutions manage the database reporting on behalf of the RLDC and they provide reporting to Mercury on a monthly basis.

The scope of the audit encompasses the collection, security and accuracy of the data, including the preparation of submission information based on the database reporting. The diagram below shows the audit boundary for clarity at the time of the site audit.



The field audit was undertaken of a statistical sample of 359 items of load on January 30th 2020.

1.9. Summary of previous audit

The last audit report undertaken by Rebecca Elliot of Veritek Limited in February 2018 was reviewed. This found five non-compliances and makes two recommendations. The current status of the non-compliances identified in that audit are detailed below:

Table of Non-Compliance

Subject	Section	Clause	Non-compliance	Status
Deriving submission information	2.1	11(1) of Schedule 15.3	The database accuracy is assessed to be 97.4% indicating an estimated over submission of 79,600 kWh per annum (excluding ballast). Incorrect profile recorded on the registry for ICP 0001264717UNC3A.	Cleared Still existing

Subject	Section	Clause	Non-compliance	Status
ICP identifier and items of load	2.2	11(2)(a) and (aa) of Schedule 15.3	2,806 items of load with no ICP recorded.	Cleared
Description and capacity of load	2.4	11(2)(c) and (d) of Schedule 15.3	Ballast is not recorded in the database.	Cleared
Database accuracy	3.1	15.2 and 15.37B(b)	The database accuracy is assessed to be 97.4% indicating an estimated over submission of 79,600 kWh per annum (excluding ballast). The database is not complete as ballasts are not recorded in the RAMM database.	Cleared
Volume information accuracy	3.2	15.2 and 15.37B(c)	The database accuracy is assessed to be 97.4% indicating an estimated over submission of 79,600 kWh per annum (excluding ballast). Incorrect profile recorded on the registry for ICP 0001264717UNC3A. Some of the load not recorded against the correct NSP.	Cleared Still existing Cleared

Table of Recommendations

Subject	Section	Clause	Recommendation for improvement	Status
Deriving Submission Information	2.1	11(1) of schedule 15.3	Liaise with Unison to confirm if the RLDC load is fed by more than one GXP and action accordingly dependant on findings.	Cleared
Capacity of each item of load	2.2.4	11(2)(d of schedule 15.3	Record ballast in RAMM.	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 have requested Veritek to undertake this streetlight 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

Mercury reconciles the RLDC load using the HHR profile. The last audit found that ICP 0001264717UNC3A had a HHR profile but with the NHH submission flag recorded on the registry. This is still the case and is recorded as a non-compliance below.

Ten new ICPs have been created during the audit period to ensure that all items of load are reconciled to the correct GXP. I reviewed the submission information for November 2019 and confirmed that it the calculation methodology was correct. The logger information was correctly applied but I found one calculation variance:

- The incorrect kW value was used for ICP 0001264718UN3E4, resulting in under submission of 3,096.34 kWh. This will be corrected in R3 and is recorded as non-compliance in **section 3.2**.

I checked the submission values for December 2019 and confirmed these to be correct.

On 18 June 2019, the Electricity Authority issued a memo clarifying the memo of 2012 that stated that a monthly snapshot was sufficient to calculate submission from, and confirmed the code requirement to calculate the correct monthly load must:

- take into account when each item of load was physically installed or removed; and
- wash up volumes must take into account where historical corrections have been made to the DUML load and volumes.

The current monthly report is provided as a snapshot and is non-compliant. When a wattage is changed in the database due to a physical change or a correction, only the record present at the time the report is run is recorded, not the historical information showing dates of changes. Mercury completes revision submissions where corrections are required and has not yet updated their processes to be compliant with the Authority's memo.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 2.1 With: Clause 11(1) of Schedule 15.3 From: 01-Feb-19 To: 31-Jan-20	Incorrect kW value applied for ICP 0001264718UN3E4 for the month of November 2019 resulting in under submission of 3,096.34 kWh. The monthly database extract provided does not track changes at a daily basis and is provided as a snapshot. Incorrect profile recorded on the registry for ICP 0001264717UNC3A. Potential impact: Low Actual impact: Low Audit history: Three Controls: Strong Breach risk rating: 1
Audit risk rating	**Rationale for audit risk rating**
Low	The controls are rated as strong as they mitigate risk to an acceptable level as is indicated by the database accuracy. The impact is assessed to be low as the volume of change occurring is minimal until the LED rollout is in progress.

Actions taken to resolve the issue	Completion date	Remedial action status
Human error caused incorrect submission for Nov19. This will be corrected in revision files. Mercury will liaise with RLDC to ensure a complete and updated database is maintained. Profile for 0001264717UNC3A to be corrected once third-party paperwork received and MEP nominated.	June 2020	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
Registry requirements prevent us from correcting the profile. We will continue to liaise with MEPs to ensure requirements are met to allow timely updates.	June 2020	

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 database was checked to confirm the correct ICP was recorded against each item of load.

Audit commentary

All items of load have an ICP recorded.

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 DUML database must contain the location of each DUML item.

Audit observation

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

Audit commentary

The database contains the nearest street address, pole numbers and Global Positioning System (GPS) coordinates for all but 11 items of load. These have a road name but no street number. 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-Feb-19 To: 31-Jan-20	11 items of load with insufficient location details recorded. Potential impact: Low Actual impact: None Audit history: None Controls: Strong Breach risk rating: 1
Audit risk rating	**Rationale for audit risk rating**
Low	The controls are rated as strong as processes in place mitigate this risk to an acceptable level. The audit risk rating is low this affected only 11 items of load and has no direct impact on reconciliation.

Actions taken to resolve the issue	Completion date	Remedial action status
Mercury will liaise with RLDC to ensure a complete and updated database is maintained.	June 2020	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
Mercury will liaise with RLDC to ensure a complete and updated database is maintained.	June 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 database 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

The database contains two fields for wattage, firstly the manufacturers rated wattage and secondly the "ballast wattage". All items of load had values populated. The accuracy of these is discussed in **section 3.1.**

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

The field audit was undertaken of a statistical sample of 359 items of load on 30th January 2020.

Audit commentary

The field audit discrepancies are detailed in the table below:

Street	Database count	Field count	Light count differences	Wattage recorded incorrectly	Comments
CARROLL PL	16	17	+1		1x additional 70W HPS light found in the field
HOMEDALE ST	23	22	-1		1x 70W HPS light not found in the field
LEO PL	1	1		1	1x incorrect light recorded as 70W HPs but LED found in the field
TALLYHO ST	16	16	+1 -1	4	1 LED not found in the field 1 additional LED found in the field 4x incorrect light wattages recorded as 70W HPS but LED found in the field.
TURNER DR	16	16		1	1x incorrect light recorded as 70W HPs but LED found in the field
WINGROVE RD	11	9	-2		2x lights not found in the field
TOTAL	359	360	6	6	

I found two additional lamps in the field than were recorded in the database. This is recorded as non-compliance below. The accuracy of the database is discussed in **section 3.1**.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 2.5 With: 11(2A) of Schedule 15.3 From: 01-Feb-19 To: 31-Jan-20	Two additional items of load found in the field. Potential impact: Low Actual impact: None Audit history: None Controls: Strong Breach risk rating: 1
Audit risk rating	**Rationale for audit risk rating**
Low	The controls are rated as strong as processes in place mitigate this risk to an acceptable level. The audit risk rating is actually none as the database falls within the allowable variance threshold, but none is not an option, so I have selected the lowest available rating.

Actions taken to resolve the issue	Completion date	Remedial action status
Mercury will liaise with RLDC to ensure a complete and updated database is maintained.	June 2020	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
Mercury will liaise with RLDC to ensure a complete and updated database is maintained.	June 2020	

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 database was examined.

Audit commentary

The database functionality achieves compliance with the code.

The change management process and the compliance of the database reporting provided to Mercury is detailed in **sections 3.1** and **3.2**.

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 database was checked for audit trails.

Audit commentary

The RAMM database has a complete audit trail of all additions and changes to the database information.

Audit outcome

Compliant

3. ACCURACY OF DUML 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 DUML database is complete and accurate.

Audit observation

The DUML Statistical Sampling Guideline was used to determine the database accuracy. The table below shows the survey plan.

Plan Item	Comments
Area of interest	Rotorua Lakes region
Strata	The database contains items of load in Rotorua Lakes area. The processes for the management of RLDC items of load are the same, but I decided to place the items of load into four strata, as follows: 1. Road names A-G 2. Road names H-O 3. Road names P-Y 4. NZTA
Area units	I created a pivot table of the roads in each area and I used a random number generator in a spreadsheet to select a total of 51 subunits.
Total items of load	359 items of load were checked.

Wattages were checked for alignment with the published standardised wattage table produced by the Electricity Authority against the database or in the case of LED lights against the LED light specification.

The change management process and timeliness of database updates was evaluated.

Audit commentary

Field audit findings

A field audit was conducted of a statistical sample of 359 items of load. The "database auditing tool" was used to analyse the results, which are shown in the table below.

Result	Percentage	Comments
The point estimate of R	100	Wattage from survey is the same as that recorded in the database
R_L	98.8	With a 95% level of confidence it can be concluded that the error could be between -1.2% and +0.9%
R_H	100.9	

These results were categorised in accordance with the "Distributed Unmetered Load Statistical Sampling Audit Guideline", effective from 01/02/19. The table below shows that Scenario A (detailed below) applies, and the best available estimate indicates that the database is accurate within ± 5 %.

- The variability of the sample results across the strata means that the true wattage (installed in the field) could be between 1.2% lower and 0.9% higher than the wattage recorded in the DUML database.
- In absolute terms the installed capacity is estimated to be the same as the database indicates.
- There is a 95% level of confidence that the installed capacity is between 9kw lower and 7 kW higher than the database.
- In absolute terms, total annual consumption is estimated to be 1,200 kWh lower than the DUML database indicates.
- There is a 95% level of confidence that the annual consumption is between 39,700 kWh p.a. lower and 29,000 kWh p.a. higher than the database indicates.

Scenario	Description
A - **Good accuracy, good precision**	This scenario applies if: (a) R_H is less than 1.05; and (b) R_L is greater than 0.95 The conclusion from this scenario is that: (a) the best available estimate indicates that the database is accurate within +/- 5 %; and (b) this is the best outcome.
B - **Poor accuracy, demonstrated with statistical significance**	This scenario applies if: (a) the point estimate of R is less than 0.95 or greater than 1.05 (b) as a result, either R_L is less than 0.95 or R_H is greater than 1.05. There is evidence to support this finding. In statistical terms, the inaccuracy is statistically significant at the 95% level
C - **Poor precision**	This scenario applies if: (a) the point estimate of R is between 0.95 and 1.05 (b) R_L is less than 0.95 and/or R_H is greater than 1.05 The conclusion from this scenario is that the best available estimate is not precise enough to conclude that the database is accurate within +/- 5 %

Compliance is confirmed.

Light description and capacity accuracy

These were checked and found all lights descriptions, wattages and ballasts to be correct.

Change Management

New lamp connections are captured in RAMM as soon as the as-builts are received by the council. RLDC liaises with Unison to liven the lights. The new connection process has improved during the audit period with livening dates being provided and this is captured in the database. This is reflected in the overall improvement in the database accuracy results detailed above.

Outage patrols occur on a rolling basis and part of this process is to check the accuracy of the database. This is effectively a "rolling" database audit.

The processes were reviewed for ensuring that changes in the field are notified through to Power Solutions. All field data is entered directly into a PDA that then automatically populates the database. Opus Consulting carry out a 10% spot audit to confirm claims for work done are correctly carried out and all the relevant information is captured.

RLDC do not connect any festive lighting into the unmetered streetlight circuits.

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 database extract combined with the burn hours against the submitted figure to confirm accuracy.

Audit commentary

The last audit found that ICP 0001264717UNC3A had a HHR profile but with the NHH submission flag recorded on the registry. This is still the case and is recorded as non-compliance below.

Ten new ICPs have been created during the audit period to ensure that all items of load are reconciled to the correct GXP.

I reviewed the submission information for November 2019 and confirmed that it the calculation methodology was correct. The logger information was correctly applied but I found one calculation variance:

- The incorrect kW value was used for ICP 0001264718UN3E4, resulting in under submission of 3,096.34 kWh. This will be corrected in R3 and is recorded as non-compliance in **section 3.2**.

On 18 June 2019, the Electricity Authority issued a memo clarifying the memo of 2012 that stated that a monthly snapshot was sufficient to calculate submission from, and confirmed the code requirement to calculate the correct monthly load must:

- take into account when each item of load was physically installed or removed; and
- wash up volumes must take into account where historical corrections have been made to the DUML load and volumes.

The current monthly report is provided as a snapshot and is non-compliant. When a wattage is changed in the database due to a physical change or a correction, only the record present at the time the report is run is recorded, not the historical information showing dates of changes. Mercury completes revision submissions where corrections are required and has not yet updated their processes to be compliant with the Authority's memo.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 3.2 With: Clause 15.2 and 15.37B(c) From: 01-Feb-19 To: 31-Jan-20	Incorrect kW value applied for ICP 0001264718UN3E4 for the month of November 2019 resulting in under submission of 3,096.34 kWh. The monthly database extract provided does not track changes at a daily basis and is provided as a snapshot. Incorrect profile recorded on the registry for ICP 0001264717UNC3A. Potential impact: Low Actual impact: Low Audit history: Three Controls: Strong Breach risk rating: 1
Audit risk rating	**Rationale for audit risk rating**
High	The controls are rated as strong as they mitigate risk to an acceptable level as is indicated by the database accuracy. The impact is assessed to be low as the volume of change occurring is minimal until the LED rollout is in progress.

Actions taken to resolve the issue	Completion date	Remedial action status
Human error caused incorrect submission for Nov19. This will be corrected in revision files. Mercury will liaise with RLDC to ensure a complete and updated database is maintained. Profile for 0001264717UNC3A to be corrected once third-party paperwork received and MEP nominated.	June 2020	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
Registry requirements prevent us from correcting the profile. We will continue to liaise with MEPs to ensure requirements are met to allow timely updates.	June 2020	

CONCLUSION

The RLDC DUML volume is reconciled as HHR following the approval by the Electricity Authority of Exemption 233. The installations consist of an approved and certified data logger (to record on and off times) and a database from which the volume is derived.

The issue found in the last audit where the items of load were all reconciled to one GXP has been resolved. Unison has created ten new ICPs and all items of load are confirmed to be mapped correctly.

Database accuracy is described as follows:

These results were categorised in accordance with the "Distributed Unmetered Load Statistical Sampling Audit Guideline", effective from 01/02/19. The table below shows that Scenario A (detailed below) applies, and the best available estimate indicates that the database is accurate within ± 5 %.

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- In absolute terms the installed capacity is estimated to be the same as the database indicates.
- There is a 95% level of confidence that the installed capacity is between 9kw lower and 7 kW higher than the database.
- In absolute terms, total annual consumption is estimated to be 1,200 kWh lower than the DUML database indicates.
- There is a 95% level of confidence that the annual consumption is between 39,700 kWh p.a. lower and 29,000 kWh p.a. higher than the database indicates.

On 18 June 2019, the Electricity Authority issued a memo clarifying the memo of 2012 that stated that a monthly snapshot was sufficient to calculate submission from, and confirmed the code requirement to calculate the correct monthly load must:

- take into account when each item of load was physically installed or removed; and
- wash up volumes must take into account where historical corrections have been made to the DUML load and volumes.

The current monthly report is provided as a snapshot and is non-compliant. Mercury completes revision submissions where corrections are required and confirmed that no corrections have occurred since the ICPs switched to them on 01/10/2019. Mercury has not yet updated their processes to be consistent with the Authority's memo.

Four non-compliances were identified, and no recommendations were raised. The future risk rating of four indicates that the next audit be completed in 24 months and I agree with that recommendation.

PARTICIPANT RESPONSE

Mercury will continue to liaise with RLDC to ensure a complete and updated database is maintained to allow for correct submission.