ELECTRICITY INDUSTRY PARTICIPATION CODE
DISTRIBUTED UNMETERED LOAD AUDIT REPORT

VERITEK

For

NZTA BOP WEST (WESTLINK) AND TRUSTPOWER LIMITED

Prepared by: Rebecca Elliot

Date audit commenced: 11 February 2019

Date audit report completed: 22 March 2019

Audit report due date: 01-Jun-18

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EXECUTIVE SUMMARY

This audit of the NZTA lights in the BOP West area (**NZTA BOP West**) DUML database and processes was conducted at the request of Trustpower Limited (**Trustpower**), 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.

A RAMM database is managed by Westlink on behalf of NZTA and monthly reporting is provided to Trustpower. Westlink manage the maintenance contract, and the maintenance field work is carried out by Horizon. Any new work is managed by NZTA and once completed the information is passed to Westlink to update. Validation of this data occurs prior to being received by Westlink.

Westlink have undertaken a 100% field audit and have this information ready to update RAMM. They have an offer of service to undertake with NZTA, but approval has not been granted. I found a 16% error rate in the field audit and this is reflective of the data not being updated. I recommend that Trustpower work with NZTA to progress the updating of the database to ensure volumes are reconciled as accurately as possible.

The audit found eight non-compliances and makes two recommendations. The future risk rating of 30 indicates that the next audit be completed in three months. The matters raised are detailed below:

AUDIT SUMMARY

NON-COMPLIANCES

Subject	Section	Clause	Non-Compliance	Controls	Audit Risk Rating	Breach Risk Rating	Remedial Action
DUML Audit	1.10	17.295F of part 17	Audit not completed within 12 months of Part 16A coming into effect.	Moderate	Low	2	Investigating
Deriving submission information	2.1	11(1) of Schedule 15.3	The database accuracy is assessed to be 94.5% indicating an estimated over submission of 14,400 kWh per annum. Two items of load with no ICP recorded. Three items of load with zero wattage recorded.	Weak	Medium	6	Unknown
ICP Identifier	2.2	11(2)(a) & (aa) of schedule 15.3	Two items of load with no ICP recorded.	Strong	Low	1	Disputed
Location of each item of load	2.3	11(2)(b) of schedule 15.3	Ten items of load with insufficient location details.	Moderate	Low	2	Identified
Description and capacity of load	2.4	11(2)(c) & (d) of schedule 15.3	Three items of load with zero wattage recorded.	Strong	Low	1	Disputed
All load recorded in database	2.5	11(2A) of Schedule 15.3	14 additional lights found in the field audit.	Weak	Medium	6	Investigating
Database accuracy	3.1	15.2 and 15.37B(b)	The database accuracy is assessed to be 94.5% indicating an estimated over submission of 14,400 kWh per annum. Two items of load with no ICP recorded. Three items of load with zero wattage recorded.	Weak	Medium	6	Disputed
Volume information accuracy	3.2	15.2 and 15.37B(c)	The database accuracy is assessed to be 94.5% indicating an estimated	Weak	Medium	6	Disputed

Subject	Section	Clause	Non-Compliance	Controls	Audit Risk Rating	Breach Risk Rating	Remedial Action
			over submission of 14,400 kWh per annum. Two items of load with no ICP recorded. Three items of load with zero wattage recorded.				
					Future Risk Rating	**30**	

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
Tracking of load change	2.6	Trustpower work with NZTA to get results from 100% field audit updated in RAMM.
		Review process to update new lights in RAMM to ensure database accuracy

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

There are no exemptions in place relevant to the scope of this audit.

1.2. Structure of Organisation

Trustpower provided a copy of their 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
Chris Cummings	Asset Information Manager	Westlink BOP
Phillip Barnes	Maintenance Manager	Westlink BOP
Robbie Diederen	Reconciliation Analyst	Trustpower

1.4. Hardware and Software

The SQL database used for the management of DUML is remotely hosted by RAMM Software Ltd. The database is commonly known as "RAMM" which stands for "Roading Asset and Maintenance Management".

Westlink 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	Profile	Number of items of load	Database wattage (watts)
1000525040PC154	Western Bay NZTA - TGA0111	STL	24	3,937
1000525041PCD11	Western Bay NZTA - TGA0331	STL	171	30,352
1000525042PC1D1	Western Bay NZTA - TMI0331	STL	100	24,744
TOTAL			297	59,033

1.7. Authorisation Received

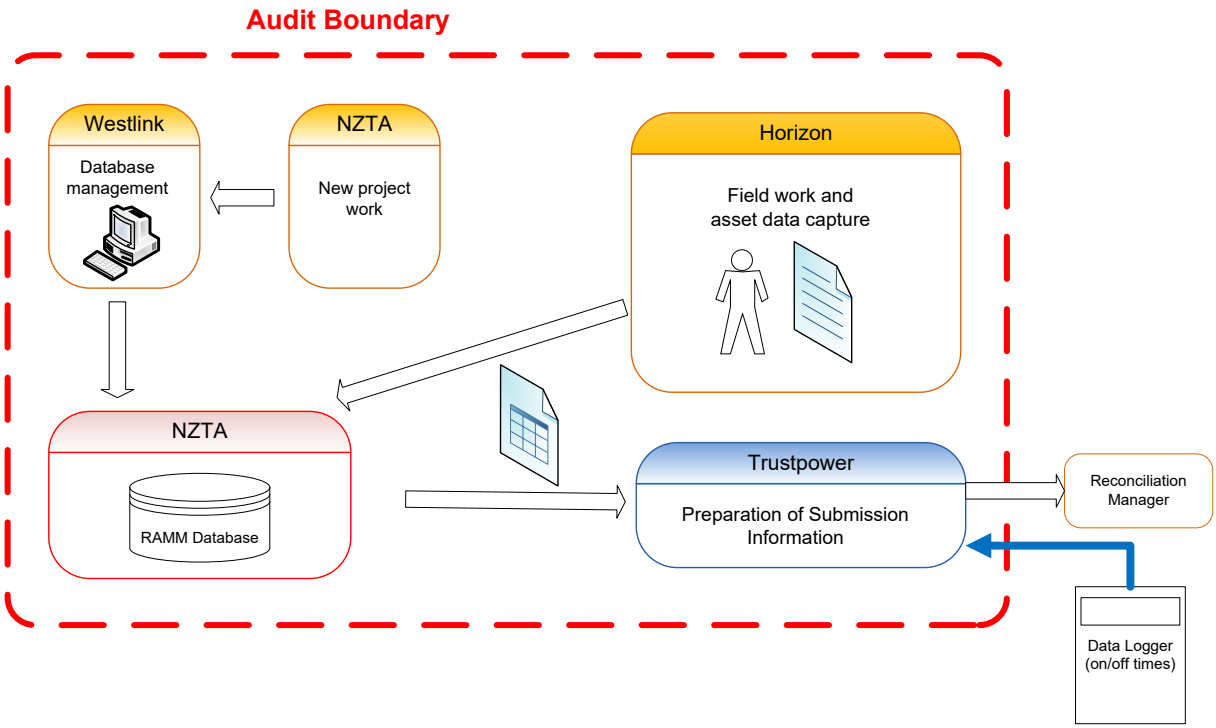
All information was provided directly by Trustpower and Westlink.

1.8. Scope of Audit

This audit of the NZTA lights in the BOP West area (**NZTA BOP West**) DUML database and processes was conducted at the request of Trustpower Limited (**Trustpower**), 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 database is remotely hosted by RAMM Software Ltd. The asset data capture and database population are conducted by Westlink. The maintenance field work is carried out by Horizon. New project work is carried out by NZTA who pass the information to Westlink to load once the project is complete. 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.



The field audit was undertaken of a statistical sample of 130 items of load 6th March 2019.

1.9. Summary of previous audit

This is the first audit of this database undertaken by Trustpower.

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

Trustpower 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. This was not completed by the deadline of 1 June 2018.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 3.2 Clause 17.295F of part 17 From: 01-Jun-18 To: 28-Feb-19	Audit not completed within 12 months of Part 16A coming into effect. Potential impact: Low Actual impact: Low Audit history: None Controls: Moderate Breach risk rating: 2
Audit risk rating	**Rationale for audit risk rating**
Low	The controls are rated as moderate as the audit has been undertaken nine months late. The impact is assessed to be low, as this has no direct impact on reconciliation.

Actions taken to resolve the issue	Completion date	Remedial action status
Database was being validated hence delay in audit.	22 March 19	Investigating
Preventative actions taken to ensure no further issues will occur	**Completion date**	
Cooperation with NZTA to be instigated	ASAP	

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

Trustpower reconciles this DUML load using the STL profile. Trustpower receive monthly wattage reports. Submissions are based on the monthly wattage report, with on and off times derived from data logger information.

I recalculated the submissions for February 2019 using the data logger and database information. I confirmed that the calculation method and result was correct.

A small number of lights have either no wattage recorded (three) or no ICP recorded against them (two) as detailed in **sections 2.2** and **2.3**.

As detailed in **sections 2.5** and **3.1**, the field data was 94.5% of the database data for the sample checked. This will result in estimated over submission of 14,400 kWh per annum (based on annual burn hours of 4,271 as detailed in the DUML database auditing tool).

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 2.1 Clause 11(1) of Schedule 15.3 From: unknown To: 28-Feb-19	The database accuracy is assessed to be 94.5% indicating an estimated over submission of 14,400 kWh per annum. Two items of load with no ICP recorded. Three items of load with zero wattage recorded. Potential impact: High Actual impact: Medium Audit history: None Controls: Weak Breach risk rating: 6
Audit risk rating	**Rationale for audit risk rating**
Medium	The controls are rated as weak as the 16% error rate indicates that tracking of load change management processes are weak. The impact is assessed to be medium, based on the high level of inaccuracy found in the field audit.

Actions taken to resolve the issue	Completion date	Remedial action status
Two items with no ICP are supplied by Genesis and not applicable to this audit. Clearly identified in database.		Unknown
Preventative actions taken to ensure no further issues will occur	**Completion date**	
Will request WestLink remove from Database	31 May 19	

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 but two (pole ID 42958 & 42959 Old Tauranga Road) had an ICP recorded against them. Both of these lights had zero wattage recorded against them. The database indicates that Genesis is the trader for these items of load but they are not the trader for the NZTA lights in this area and without an ICP recorded this cannot be confirmed.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 2.2 Clause 11(2)(a) & (aa) of schedule 15.3 From: unknown To: 28-Feb-19	Two items of load with no ICP recorded. Potential impact: Low Actual impact: Low 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 all but two items of load had an ICP recorded and it is likely these lights no longer exist. The impact is assessed to be low, as this will have a very minor effect on reconciliation if in fact these lights exist.

Actions taken to resolve the issue	Completion date	Remedial action status
These two lamps are not part of the Audit. Database clearly identifies them as supplied by Genesis.		Disputed
Preventative actions taken to ensure no further issues will occur	**Completion date**	
Will request WestLink remove from Database	31 May 19	

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 databases were checked to confirm the location is recorded for all items of load.

Audit commentary

The database contains fields for the street address and the displacement from the end of the road for all but ten items of load.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 2.3 Clause 11(2)(b) of schedule 15.3 From: unknown To: 28-Feb-19	Ten items of load with insufficient location details. Potential impact: Low Actual impact: Low Audit history: None Controls: Moderate Breach risk rating: 2
Audit risk rating	**Rationale for audit risk rating**
Low	The controls are rated as moderate and will mitigate risk most of the time. The impact is assessed to be low, as this will have a very minor effect on reconciliation.

Actions taken to resolve the issue	Completion date	Remedial action status
Will have WESTLINK update locations accordingly.	31 May19	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
Will monitor database updates	Ongoing	

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 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 the manufacturers rated wattage and the ballast wattage. The extract provided has fields for lamp and gear make and model. All but three items of load had a wattage recorded against them (two of these also have no ICP recorded against them as detailed in **section 2.2**).

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 2.4 Clause 11(2)(c) & (d) of schedule 15.3 From: unknown To: 28-Feb-19	Three items of load with zero wattage recorded. Potential impact: Low Actual impact: Low 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 all but three items of load had a valid wattage value recorded. The impact is assessed to be low, as this will have a very minor effect on reconciliation.

Actions taken to resolve the issue	Completion date	Remedial action status
Two items as described in Section 2.2 belong to Genesis and should not be part of this audit. The third item is solar powered and is not included in the reconciliation.		Disputed
Preventative actions taken to ensure no further issues will occur	**Completion date**	
All three items will be removed from Database	31 May 19	

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 130 items of load 6th March 2019.

Audit commentary

The field audit findings for the sample of lamps was accurate with the exception of the streets detailed in the table below:

Road Name	Database Count	Field Count	Count differences	Wattage differences	Comments
029-0021	17	13	-4	1	• 4x 150W HPS not found in the field • 1x 150W HPS light but LED found in the field

Road Name	Database Count	Field Count	Count differences	Wattage differences	Comments
002-0130	64	76	+14 -2	12	• 14x extra LEDs found in the field • 2x 150W HPS not found in the field • 9x recorded as 150W HPS but LED found in the field • 3x recorded as 250W HPS but LED found in the field.
002-0185	36	35	-1	8	• 1x 250W HPS not found in the field • 1x 150W HPS but 70W HPS found in the field • 3x 150W HPS but LED found in the field • 4x 250W HPS but LED found in the field
GRAND TOTAL	**130**	**137**	**21**	**21**	

This clause relates to lights found in the field but not recorded in the database. The field audit found 14 additional lights in the field. The errors in found in the field represent a 16% error rate (based on a percentage of lamp variances of the total lamps counted). Westlink have undertaken a 100% field audit but have not been given the go ahead to load this data, therefore the field audit was carried out against the current inaccurate data set. The additional lights found in the field is recorded as non-compliance below. The database accuracy from the field audit is discussed in **section 3.1**.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 2.5 With: Clause 11(2A) of Schedule 15.3 From: unknown To: 28-Feb-19	14 additional light found in the field audit. Potential impact: High Actual impact: Medium Audit history: None Controls: Weak Breach risk rating: 6
Audit risk rating	**Rationale for audit risk rating**
Medium	The controls are rated as weak as the 16% error rate indicates that tracking of load change management processes are weak. The impact is assessed to be medium as the error rate indicates a high level of inaccuracy in the database content.

Actions taken to resolve the issue	Completion date	Remedial action status
Trustpower to work with NZTA to assist in updating database in a timely manner.	Ongoing	Investigating
Preventative actions taken to ensure no further issues will occur	**Completion date**	

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

On 20th September 2012 the Authority sent a memo to Retailers and auditors advising that tracking of load changes at a daily level was not required as long as the database contained an audit trail. I have interpreted this to mean that the production of a monthly "snapshot" report is sufficient to achieve compliance.

The database tracks additions and removals as required by this clause.

NZTA carry out all new project work in house. Westlink is provided with new lamp information once NZTA have closed the project. This is often some time after the lights have been electrically connected. Validation of this data occurs prior to being received by Westlink. I recommend that the process to update new lights is reviewed to ensure changes are made in a timely way.

Description	Recommendation	Audited party comment	Remedial action
Tracking of load change	Review process to update new lights in RAMM to ensure database accuracy.	Trustpower to try and work with NZTA.	Investigating

Westlink have undertaken a 100% field audit and have this information ready to update RAMM. They have an offer of service to undertake with NZTA, but approval has not yet been granted. I found a 16% error rate in the field audit and this is reflective of data not being updated and these related to new lights roading projects. This is recorded as non-compliance in **sections 2.1,2.5.3.1** and **3.2**. I recommend that Trustpower work with NZTA to progress the updating of the database to ensure volumes are reconciled as accurately as possible.

Description	Recommendation	Audited party comment	Remedial action
Tracking of load change	Trustpower work with NZTA to get results from 100% field audit updated in RAMM.	Trustpower to try and work with NZTA.	Investigating

Horizon carries out the field maintenance for Westlink on behalf of WBOP DC and they update RAMM directly. Westlink have robust controls in their contract with Horizon and this ensures that field maintenance is captured in a timely and accurate manner. Outage patrols are in place with the whole network being checked each month. Additional to this Westlink undertake a 20% validation of all assets they are responsible for on an annual basis.

NZTA BOP West are planning to roll out LED lights, but this is some time away from being deployed.

There are no festive lights connected to the unmetered streetlight circuits and there are no private lights known of.

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 database has a complete audit trail.

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	NZTA BOP West Street Lights
Strata	The databases contain 2,010 items of load for NZTA in the western area of the Bay of Plenty. The processes for the management of all NZTA BOP West items of load is the same and therefore I split the data into three data sets based on the state highway road name.
Area units	I created a pivot table of the roads in each database and used a random number generator in each spreadsheet to select a total of 58 sub-units.
Total items of load	217 items of load were checked.

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

Audit commentary

A statistical sample of 130 items of load found that the field data was 94.5% of the database data for the sample checked. This is not within the required database accuracy of 5%+/-. The statistical sampling tool reported with 95% confidence the precision of the sample was 5.9% and the true load in the field will be between 92.9% to 98.8% of the load recorded in the database. The sample is not sufficiently precise to be able to determine the database accuracy but indicates that the database is likely to be over reporting the kW value.

The tool indicated that there is potentially 14,400 kWh per annum (based on annual burn hours of 4,271 as detailed in the DUML database auditing tool) of over submission. The statistical sampling tool reported with 95% confidence that there is a potential estimated submission variance range of between 3,200 and 18,500 kWh of over submission. I note that the combination of the additional lights (extra load) and incorrect wattages (less load) have effectively offset the inaccuracies found in the field but the volume of variances found in the field indicate that the accuracy of this database is poor.

A small number of lights have either no wattage recorded (three) or no ICP recorded against them (two) as detailed in **sections 2.2** and **2.3**.

The database was checked against the published standardised wattage table and confirmed that ballasts applied, and lamp descriptions were correct.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 3.1 With: Clause 15.2 and 15.37B(b) From: unknown To: 28-Feb-19	The database accuracy is assessed to be 94.5% indicating an estimated over submission of 14,400 kWh per annum. Two items of load with no ICP recorded. Three items of load with zero wattage recorded. Potential impact: High Actual impact: Medium Audit history: None Controls: Weak Breach risk rating: 6
Audit risk rating	**Rationale for audit risk rating**
Medium	The controls are rated as weak as the 16% error rate indicates that tracking of load change management processes are weak. The impact is assessed to be medium, based on the high level of inaccuracy found in the field audit.

Actions taken to resolve the issue	Completion date	Remedial action status
Two lamps are supplied by Genesis and not part of this audit. One lamp is solar powered and is not part of the reconciliation process.		Disputed
Preventative actions taken to ensure no further issues will occur	**Completion date**	
All three lamps will be removed from database.	31 May19	

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

Trustpower reconciles this DUML load using the STL profile. The on and off times are derived from data logger information.

I recalculated the submissions for February 2019 using the data logger and database information. I confirmed that the calculation method and result was correct.

A small number of lights have either no wattage recorded (three) or no ICP recorded against them (two) as detailed in **sections 2.2** and **2.3**.

As detailed in **sections 2.5** and **3.1**, the field data was 94.5% of the database data for the sample checked. This will result in estimated over submission of 14,400 kWh per annum (based on annual burn hours of 4,271 as detailed in the DUML database auditing tool).

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 3.2 Clause 15.2 and 15.37B(c) From: unknown To: 28-Feb-19	The database accuracy is assessed to be 94.5% indicating an estimated over submission of 14,400 kWh per annum. Two items of load with no ICP recorded. Three items of load with zero wattage recorded. Potential impact: High Actual impact: Medium Audit history: None Controls: Weak Breach risk rating: 6
Audit risk rating	**Rationale for audit risk rating**
Medium	The controls are rated as weak as the 16% error rate indicates that tracking of load change management processes are weak. The impact is assessed to be medium, based on the high level of inaccuracy found in the field audit.

Actions taken to resolve the issue	Completion date	Remedial action status
Two lamps are supplied by Genesis and not part of this audit. One lamp is solar powered and is not part of the reconciliation process.		Disputed
Preventative actions taken to ensure no further issues will occur	**Completion date**	
All three lamps will be removed from database.	31 May 19	

CONCLUSION

A RAMM database is managed by Westlink on behalf of NZTA and monthly reporting is provided to Trustpower. Westlink manage the maintenance contract, and the maintenance field work is carried out by Horizon. Any new work is managed by NZTA and once completed the information is passed to Westlink to update. Validation of this data occurs prior to being received by Westlink.

Westlink have undertaken a 100% field audit and have this information ready to update RAMM. They have an offer of service to undertake with NZTA, but approval has not been granted. I found a 16% error rate in the field audit and this is reflective of the data not being updated. I recommend that Trustpower work with NZTA to progress the updating of the database to ensure volumes are reconciled as accurately as possible.

The audit found eight non-compliances and makes two recommendations. The future risk rating of 30 indicates that the next audit be completed in three months.

PARTICIPANT RESPONSE

The two lamps without an ICP are supplied by Genesis and should not be part of this audit. These will be removed from the database.

The third lamp with no wattage data is solar powered and does not form any part of the reconciliation process and should not be included in this audit. This lamp will be removed from the database.

There are a total of 305 lamps shown in the database with 304 supplied by Trustpower plus one solar powered lamp which will be removed from the database. This audit stated 297 total lamps.