

ELECTRICITY INDUSTRY PARTICIPATION CODE
DISTRIBUTED UNMETERED LOAD AUDIT REPORT



For

WAKA KOTAHI OTAGO OTAGONET REGION
AND MANAWA

NZBN: 9429038917912

Prepared by: Steve Woods

Date audit commenced: 20 June 2023

Date audit report completed: 28 July 2023

Audit report due date: 01 June 2018

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EXECUTIVE SUMMARY

This audit of the **Waka Kotahi Otago (OtagoNet region)** DUMML database and processes was conducted at the request of **Manawa Energy Limited (Manawa)** 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 DUMML audits version 1.1.

There are three relevant ICPs, and the table below shows the status and source of the data for each ICP. ICP 0001982578TGB34 is recorded as reconciled elsewhere because the lights are in the Clutha DC database against different ICPs.

ICP	Status	Source of data
0001982578TGB34	Reconciled elsewhere	N/A
0001982403TG9B9	Active	Waitaki DC database
0001982641TG19E	Active	Spreadsheet provided by the NZTA account manager

The database is remotely hosted by thinkproject New Zealand Ltd and is managed by Waitaki DC. Reporting is provided by Waitaki DC to Manawa on a monthly basis. The fieldwork is conducted by Network Waitaki but there isn't a process to update the database. 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.

Whilst the information for ICP 0001982403TG9B9 is currently in the Waitaki DC database, an NZTA database is in the process of being established for all of Otago and Southland and this database will include the lights currently recorded against ICPs 0001982403TG9B9 and 0001982641TG19E.

Manawa reconciles this DUMML load using the STL profile. Submissions are based on the database information or historic information with on and off times derived from data logger information.

I recalculated the submissions for May 2023 using the data logger and the database information. I confirmed that it was calculated accurately based on the database and data logger information.

The audit, including a 100% field audit, found the following:

The table below shows the accuracy of the Waitaki DC database for ICP 0001982403TG9B9 and the spreadsheet for ICP 0001982641TG19E.

ICP	Database or spreadsheet wattage	Field wattage	Annual Impact on reconciliation
0001982403TG9B9	6,556	6,590	Over submission of 145 kWh
0001982641TG19E	985	2,177	Under submission by 5,091 kWh

The following discrepancies were found for ICP 0001982403TG9B9.

Discrepancy	Quantity
NZTA light with council ICP	6
Council light with NZTA ICP	9
Additional light	1
Not found in field	1
Incorrect wattage	1

The following discrepancies were found for ICP 0001982641TG19E.

Discrepancy	Quantity
NZTA lights not recorded in the spreadsheet or in the Central Otago DC database	15
Council light recorded as NZTA	1

It's likely that the annual under submission of approximately 5,000 kWh has been present for several years, and only 14 months' worth will be reconciled, therefore there is a moderate impact of the delayed audit for this database.

The audit found seven non-compliances and makes no recommendations. The future risk rating of 22 indicates that the next audit be completed in three months, however the current data sources are likely to be replaced by an NZTA database for all of Otago and Southland within the next few months, therefore I recommend a 12-month audit period to allow for the new database to supersede the current one.

The matters raised are detailed below:

AUDIT SUMMARY

NON-COMPLIANCES

Subject	Section	Clause	Non-Compliance	Controls	Audit Risk Rating	Breach Risk Rating	Remedial Action
Distributed unmetered load audits	1.10	16A.26 and 17.295F	Audit not conducted in accordance with the Code since 7 April 2016.	Weak	Medium	6	Identified
Deriving submission information	2.1	Clause 11(1) of Schedule 15.3	Inaccurate database information leading to annual under submission of 4,946 kWh per annum. 15 lights were recorded against the incorrect ICP.	Weak	Low	3	Identified
All load recorded in database	2.5	Clause 11(2A) of Schedule 15.3	16 additional lights in the field not in the database.	Weak	Low	3	Identified
Tracking of load changes	2.6	Clause 11(3) of Schedule 15.3	The spreadsheet for ICP 0001982641TG19E does not track load changes in accordance with this clause.	Moderate	Low	2	Identified
Audit trail	2.7	Clause 11(4) of Schedule 15.3	The spreadsheet for ICP 0001982641TG19E does not have an audit trail.	Moderate	Low	2	Identified
Database accuracy	3.1	Clause 15.2 and 15.37B(b)	Inaccurate database information leading to annual under submission of 4,946 kWh per annum. 15 lights were recorded against the incorrect ICP.	Weak	Low	3	Identified
Volume information accuracy	3.2	Clause 15.2 and 15.37B(c)	Inaccurate database information leading to annual under submission of 4,946 kWh per annum. 15 lights were recorded against the incorrect ICP.	Weak	Low	3	Identified
Future Risk Rating						22	

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

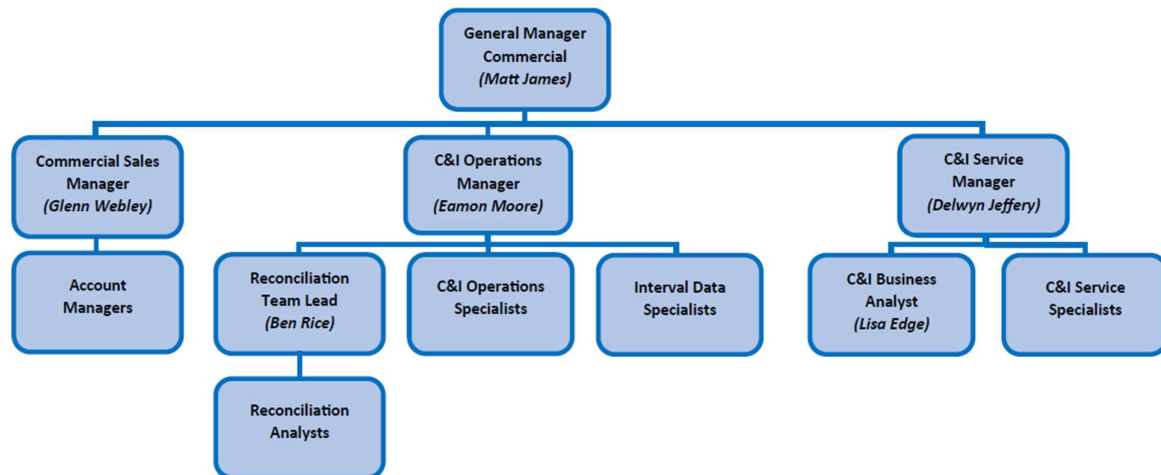
The Electricity Authority's website was reviewed to identify any exemptions relevant to the scope of this audit.

Audit commentary

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

1.2. Structure of Organisation

Manawa provided a copy of their organisational structure.



1.3. Persons involved in this audit

Auditors:

Name	Company	Role
Steve Woods	Veritek Limited	Lead Auditor

Other personnel assisting in this audit were:

Name	Title	Company
Eamon Moore	C&I Operations Manager	Manawa
Jamie Watts	C&I Administrator	Manawa
Kara Atkinson	Director	NZ Streetlighting
Rodger McGaw	Network Infrastructure Engineer	Waitaki DC

1.4. Hardware and Software

The SQL database used for the management of DUML for ICP 0001982403TG9B9 is managed by Waitaki DC and is remotely hosted by thinkproject New Zealand Limited. The database is commonly known as "RAMM" which stands for "Road Assessment and Maintenance Management". The specific data used for DUML is held in the Streetlight tables. thinkproject New Zealand Limited backs up the database and assists with disaster recovery as part of their hosting service.

Access to the database is secure by way of password protection.

Systems used by the trader to calculate submissions are assessed as part of their reconciliation participant audits.

1.5. Breaches or Breach Allegations

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

1.6. ICP Data

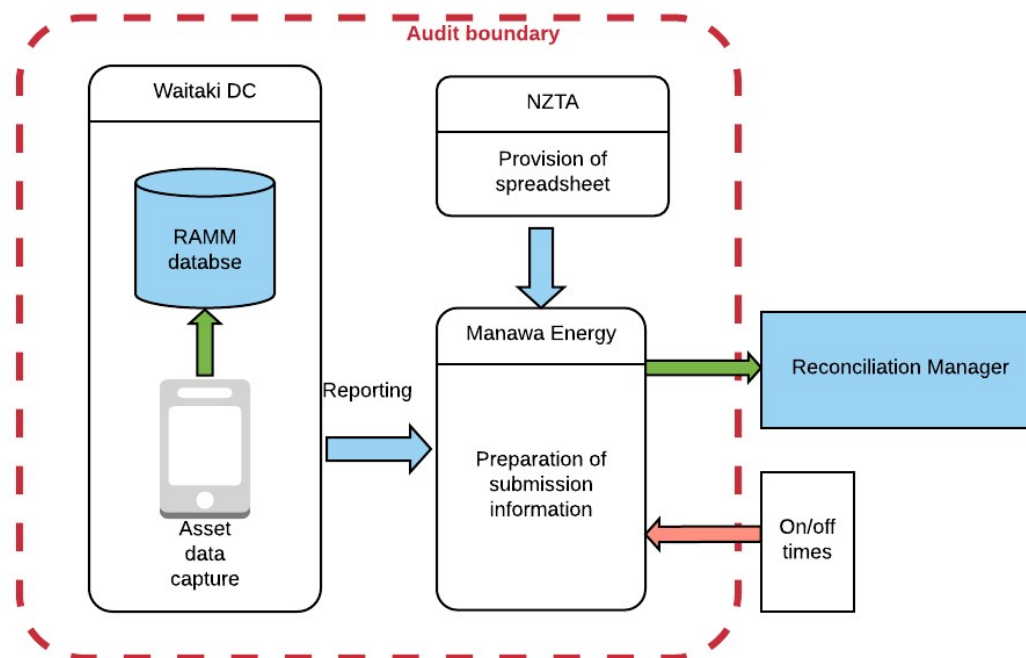
ICP Number	Description	NSP	Profile	Number of items of load	Database wattage (watts)
0001982578TGB34	Reconciled elsewhere.				
0001982403TG9B9	OtagoNet NZTA Waikouiti	HWB0331	STL	87	6,556
0001982641TG19E	OtagoNet NZTA Otarehua	NSY0331	STL	10	985

1.7. Authorisation Received

All information was provided directly by Manawa, Waitaki DC and NZ Streetlighting.

1.8. Scope of Audit

The database is remotely hosted by thinkproject New Zealand Ltd and is managed by Waitaki DC. Reporting is provided by Waitaki DC to Manawa on a monthly basis. The fieldwork is conducted by Network Waitaki but there isn't a process to update the database. 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 field audit was undertaken of all items of load on 23 June 2023.

1.9. Summary of previous audit

The previous audit was completed in April 2016 before the current audit regime for distributed unmetered load commenced. The details of the non-compliances are not still available.

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

Manawa have requested Veritek to undertake this streetlight audit.

Audit commentary

This database has not been audited since 7 April 2016 and has therefore not been audited by 1 June 2018 as required by this clause.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 1.10 With: Clause 16A.26 and 17.295F From: 01-Jun-18 To: 29-Jun-23	Audit not conducted in accordance with the Code since 7 April 2016. 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 recorded as weak because there was data available in the Waitaki DC database that could have been audited earlier than 2023. The impact on settlement and participants is moderate because under submission of approx. 5,000 kWh per annum has occurred for seven years, totaling 35,000 kWh, much of which is outside the 14-month revision cycle.		
Actions taken to resolve the issue		Completion date	Remedial action status
Submit completed audit		31/07/2023	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	

<p>Manawa has implemented a new compliance management system called Totum which is now live. Totum allows us to track Audit due dates, and follow up actions from completed audits, transparently; it also gives us the ability to assign responsibility to these actions.</p> <p>Totum has been live since March 2023</p>	Complete	
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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.

Audit commentary

Manawa reconciles this DUML load using the STL profile. Submissions are based on the database and spreadsheet information with on and off times derived from data logger information.

I recalculated the submissions for May 2023 using the data logger and the database information. I confirmed that it was calculated accurately based on the database and data logger information.

Two issues are recorded in **section 3.1** which are relevant to this section, as follows:

- inaccurate database information leading to annual under submission of 4,946 kWh per annum, and
- 15 lights were recorded against the incorrect ICP.

It is expected that Manawa will resolve the accuracy issues for 14 months through the revision process.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 2.1 With: Clause 11(1) of Schedule 15.3 From: 07-Apr-16 To: 29-Jun-23	Inaccurate database information leading to annual under submission of 4,946 kWh per annum. 15 lights were recorded against the incorrect ICP. Potential impact: Medium Actual impact: Low Audit history: None Controls: Weak Breach risk rating: 3
Audit risk rating	Rationale for audit risk rating
Low	The controls are rated as weak because there are not robust processes in place to ensure data is correct. The impact is assessed to be low, based on the kWh differences described in section 3.1.

Actions taken to resolve the issue	Completion date	Remedial action status
<p>Discrepancies and updated lamp information identified in this audit will be used to update our records within the SLIM system. We will then conduct revisions of previous reconciliations within the available 14-month revision period.</p> <p>Updates within the SLIM system will be completed before revisions are due for submission in August.</p>	04/08/2023	Identified
Preventative actions taken to ensure no further issues will occur	Completion date	
<p>Manawa to work with Waka Kotahi to update RAMM with lamp discrepancies identified in this audit and to improve Database maintenance processes. We will also work with WK to continue their work to amalgamate and update the Otago area ICPs into one database.</p>	01/04/2024	

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 DUMML database must contain:

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

Audit observation

The database was checked to confirm an ICP is recorded for each item of load.

Audit commentary

All items of load had an ICP recorded as required by this clause.

Some ICP errors were present as recorded in **section 3.1**.

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

Audit commentary

Street addresses and GPS coordinates are recorded for all items of load.

Audit outcome

Compliant

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

Lamp type description, lamp wattage and ballast wattage are included in the database. This was populated in the database for all items of load. The accuracy of this is examined 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 all items of load on 23 June 2023.

Audit commentary

The field audit identified 16 additional items of load.

The accuracy of the database 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: 07-Apr-16 To: 29-Jun-23	16 additional lights in the field not in the database. Potential impact: Medium Actual impact: Low Audit history: None Controls: Weak Breach risk rating: 3		
Audit risk rating	Rationale for audit risk rating		
Low	The controls are rated as weak because there are not robust processes in place to ensure data is correct. The impact is assessed to be low, based on the kWh differences described in section 3.1.		
Actions taken to resolve the issue		Completion date	Remedial action status
Discrepancies and updated lamp information identified in this audit will be used to update our records within the SLIM system. We will then conduct revisions of previous reconciliations within the available 14-month revision period. Updates within the SLIM system will be completed before revisions are due for submission in August.		04/08/2023	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Manawa to work with Waka Kotahi to update RAMM with lamp discrepancies identified in this audit and to improve Database maintenance processes. We will also work with WK to continue their work to amalgamate and update the Otago area ICPs into one database.		01/04/2024	

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 RAMM database functionality achieves compliance with the code.

The spreadsheet for ICP 0001982641TG19E does not track load changes in accordance with this clause.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 2.6 With: Clause 11(3) of Schedule 15.3 From: 07-Apr-16 To: 29-Jun-23	The spreadsheet for ICP 0001982641TG19E does not track load changes in accordance with this clause. Potential impact: Medium Actual impact: Low Audit history: None Controls: Moderate Breach risk rating: 2		
Audit risk rating	Rationale for audit risk rating		
Low	The controls are recorded as strong for ICP 0001982403TG9B9 but there is no process in place for ICP 0001982641TG19E, therefore the controls are moderate overall. The impact on settlement and participants is minor; therefore, the audit risk rating is low.		
Actions taken to resolve the issue		Completion date	Remedial action status
Manawa to request additional information regarding load changes for ICP 0001982641TG19E where possible. We recognise due to a lack of maintenance on this database additional information may be difficult to identify. Any additional information received will be applied to SLIM and used to revise submissions within the available 14 months.		31/10/2023	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Manawa to work with Waka Kotahi to apply the same process for tracking load changes across all ICPs, so that calculation of consumption is consistent and accurate.		31/10/2023	

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

RAMM has a complete audit trail of all additions and changes to the database information for ICP 0001982403TG9B9 but the spreadsheet for ICP 0001982641TG19E does not have an audit trail.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 2.7 With: Clause 11(4) of Schedule 15.3 From: 07-Apr-16 To: 29-Jun-23	The spreadsheet for ICP 0001982641TG19E does not have an audit trail. Potential impact: Medium Actual impact: Low Audit history: None Controls: Moderate Breach risk rating: 2		
Audit risk rating	Rationale for audit risk rating		
Low	The controls are recorded as strong for ICP 0001982403TG9B9 but there is no process in place for ICP 0001982641TG19E, therefore the controls are moderate overall. The impact on settlement and participants is minor; therefore, the audit risk rating is low.		
Actions taken to resolve the issue		Completion date	Remedial action status
Manawa to request additional information regarding the audit trail for ICP 0001982641TG19E from WK. We recognise due to a lack of maintenance on this database additional information may be difficult to identify.		31/10/2023	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Manawa to work with Waka Kotahi to apply the same audit trail process across all ICPs.		31/10/2023	

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

A 100% field audit was conducted.

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

The table below shows the accuracy of the Waitaki DC database for ICP 0001982403TG9B9 and the spreadsheet for ICP 0001982641TG19E.

ICP	Database or spreadsheet wattage	Field wattage	Annual Impact on reconciliation
0001982403TG9B9	6,556	6,590	Over submission of 145 kWh
0001982641TG19E	985	2,177	Under submission by 5,091 kWh

The following discrepancies were found for ICP 0001982403TG9B9.

Discrepancy	Quantity
NZTA light with council ICP	6
Council light with NZTA ICP	9
Additional light	1
Not found in field	1
Incorrect wattage	1

The following discrepancies were found for ICP 0001982641TG19E.

Discrepancy	Quantity
NZTA lights not recorded in the spreadsheet or in the Central Otago DC database	15
Council light recorded as NZTA	1

I also checked the data against the contents of the proposed NZTA database with Kara Atkinson from NZ Streetlighting. Veritek's findings match those of NZ Streetlighting, and it appears the new database, which is nearing completion, will contain accurate data with regard to these two ICPs.

When the NZTA database is ready to use, both Central Otago DC and Waitaki DC will need to relabel the items of load currently assigned to NZTA, so there is no risk of double submission. For example, the highway through Ranfurly has 32 lights, 17 of which are in the CODC database but 15 are not in any database. The 17 in the CODC database will need to be relabelled.

Lamp description and capacity accuracy

Wattages for all items of load were checked against the published standardised wattage table produced by the Electricity Authority in the database and found all wattages were correct.

ICP Accuracy

As shown in the table above, 15 lights were recorded against the incorrect ICP.

Change management process findings

The Otagonet region is managed by Downer. Database updates from the field are provided to Downer by the field contractor and Downer populates RAMM.

Audit outcome

Non-compliant

Non-compliance	Description	
Audit Ref: 3.1 With: Clause 15.2 and 15.37B(b) From: 07-Apr-16 To: 29-Jun-23	Inaccurate database information leading to annual under submission of 4,946 kWh per annum. 15 lights were recorded against the incorrect ICP. Potential impact: Medium Actual impact: Low Audit history: None Controls: Weak Breach risk rating: 3	
Audit risk rating	Rationale for audit risk rating	
Low	The controls are rated as weak because historically there has not been robust processes in place to ensure data is correct. The impact is assessed to be low, based on the kWh differences described above.	
Actions taken to resolve the issue		Completion date
Discrepancies and updated lamp information identified in this audit will be used to update our records within the SLIM system. We will then conduct revisions of previous reconciliations within the available 14-month revision period. Updates within the SLIM system will be completed before revisions are due for submission in August.		04/08/2023
Preventative actions taken to ensure no further issues will occur		Completion date
Remedial action status		Identified

<p>Manawa to work with Waka Kotahi to update RAMM with lamp discrepancies identified in this audit and to improve Database maintenance processes. We will also work with WK to continue their work to amalgamate and update the Otago area ICPs into one database and will advise them of the risk of double submission posed by the 17 lamps in the CODC database.</p>	<p>01/04/2024</p>	
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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 all ICPs have 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

Manawa reconciles this DUML load using the STL profile. Submissions are based on the database and spreadsheet information with on and off times derived from data logger information.

I recalculated the submissions for May 2023 using the data logger and the database information. I confirmed that it was calculated accurately based on the database and data logger information.

Two issues are recorded in **section 3.1** which are relevant to this section, as follows:

- inaccurate database information leading to annual under submission of 4,946 kWh per annum, and
- 15 lights were recorded against the incorrect ICP.

It is expected that Manawa will resolve the accuracy issues for 14 months through the revision process.

Audit outcome

Non-compliant

Non-compliance	Description		
<p>Audit Ref: 3.2 With: Clause 15.2 and 15.37B(c)</p> <p>From: 07-Apr-16 To: 29-Jun-23</p>	<p>Inaccurate database information leading to annual under submission of 4,946 kWh per annum.</p> <p>15 lights were recorded against the incorrect ICP.</p> <p>Potential impact: Medium</p> <p>Actual impact: Low</p> <p>Audit history: None</p> <p>Controls: Weak</p> <p>Breach risk rating: 3</p>		
Audit risk rating	Rationale for audit risk rating		
<p>Low</p>	<p>The controls are rated as weak because there are no robust processes in place to ensure data is correct.</p> <p>The impact is assessed to be low, based on the kWh differences described in section 3.1.</p>		
Actions taken to resolve the issue		Completion date	Remedial action status
<p>Discrepancies and updated lamp information identified in this audit will be used to update our records within the SLIM system. We will then conduct revisions of previous reconciliations within the available 14-month revision period.</p> <p>Updates within the SLIM system will be completed before revisions are due for submission in August.</p>		<p>04/08/2023</p>	<p>Identified</p>
Preventative actions taken to ensure no further issues will occur		Completion date	
<p>Manawa to work with Waka Kotahi to update RAMM with lamp discrepancies identified in this audit and to improve Database maintenance processes. We will also work with WK to continue their work to amalgamate and update the Otago area ICPs into one database.</p>		<p>01/04/2024</p>	

CONCLUSION

There are three relevant ICPs, and the table below shows the status and source of the data for each ICP.

ICP	Status	Source of data
0001982578TGB34	Reconciled elsewhere	N/A
0001982403TG9B9	Active	Waitaki DC database
0001982641TG19E	Active	Spreadsheet provided by the NZTA account manager

The database is remotely hosted by thinkproject New Zealand Ltd and is managed by Waitaki DC. Reporting is provided by Waitaki DC to Manawa on a monthly basis. The fieldwork is conducted by Network Waitaki for ICP 0001982403TG9B9, and Downer for the other ICP. 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.

Whilst the information for ICP 0001982403TG9B9 is currently in the Waitaki DC database, an NZTA database is in the process of being established for all of Otago and Southland and this database will include the lights currently recorded against ICPs 0001982403TG9B9 and 0001982641TG19E.

Manawa reconciles this DUML load using the STL profile. Submissions are based on the database information or historic information with on and off times derived from data logger information.

I recalculated the submissions for May 2023 using the data logger and the database information. I confirmed that it was calculated accurately based on the database and data logger information.

The table below shows the accuracy of the Waitaki DC database for ICP 0001982403TG9B9 and the spreadsheet for ICP 0001982641TG19E.

ICP	Database or spreadsheet wattage	Field wattage	Annual Impact on reconciliation
0001982403TG9B9	6,556	6,590	Over submission of 145 kWh
0001982641TG19E	985	2,177	Under submission by 5,091 kWh

The following discrepancies were found for ICP 0001982403TG9B9.

Discrepancy	Quantity
NZTA light with council ICP	6
Council light with NZTA ICP	9
Additional light	1
Not found in field	1
Incorrect wattage	1

The following discrepancies were found for ICP 0001982641TG19E.

Discrepancy	Quantity
NZTA lights not recorded in the spreadsheet or in the Central Otago DC database	15
Council light recorded as NZTA	1

It's likely that the annual under submission of approximately 5,000 kWh has been present for several years, and only 14 months' worth will be reconciled, therefore there is a moderate impact of the delayed audit for this database.

The audit found seven non-compliances and makes no recommendations. The future risk rating of 22 indicates that the next audit be completed in three months, however the current data sources are likely to be replaced by an NZTA database for all of Otago and Southland within the next few months, therefore I recommend a 12-month audit period to allow for the new database to supersede the current one.

Participant response

Manawa would like to thank Veritek for conducting the audit of this DUMML database and for taking the time to travel to Otago to conduct a full field audit; this database has been historically difficult to gain information for, so the audited field information is very helpful.

As expected for this DUMML database inaccuracies have been identified and additional improvements are required. In line with the adjacent Otago Aurora DUMML audit Manawa will work with Waka Kotahi (WK) to improve the accuracy of both databases by working on maintenance processes and requesting additional field audits be conducted. In field work will likely be conducted alongside planned lamp upgrades, and the merger of both the Aurora and Otagonet DUMML databases into one region.

We recognise the historic duplication and understand the ongoing risk of duplicated information as WK continue to pursue amalgamation of DUMML regions; Manawa will raise this with WK and work alongside them to minimise the risk of this occurring going forward.

We acknowledge the delay in conducting this audit and have put additional system controls in place to increase our transparency and traceability of audit timings and actions. Manawa supports the recommendation for the next audit to be completed by June 1st 2024; this will give ourselves and WK a reasonable amount of time to address the non-compliance identified.