

Electricity Industry Participant Code Audit Report

for



Class B Approved Test House

Prepared by Steve Woods – Veritek Limited

Date of Audit: 22/05/15

Date Audit Report Complete: 28/05/15

Executive Summary

WEL is a Class B Approved Test House and this audit was performed at their request, to encompass the Electricity Industry Participation Code requirement for an audit, in accordance with Clause 2 of schedule 10.3.

WEL is the MEP and ATH for advanced metering installations installed on the WEL network. One reconciliation participant is receiving AMI data and using this data in the reconciliation process. Where this Reconciliation Participant is not the trader at an ICP, the AMI meter (effectively a “check meter”) is installed in series with the existing meter and the installation is appropriately sealed and recertified if necessary.

WEL has demonstrated a high level of compliance during this audit and I have only recorded one minor area of non-compliance in relation to the provision of records to the MEP when the WEL ATH conducts certification, but is not the MEP.

The two recommendations relate to improvements to process documentation and certification records.

WEL has reviewed and improved their quality manual since the last audit. Processes and procedures are now documented in a version of Promapp. The documentation is of a very high standard.

The matters raised are shown in the tables below.

Table of Non Compliance

Subject	Section	Clause	Non compliance	Indicative Impact	Audit History	Procedures	Remedial Action
Availability of records	9.3	14 of schedule 10.4	Records not provided to MEP in situations where certification is conducted by WEL, but WEL are not the MEP.	None	None	Need improvement	Identified

Table of Recommendations

Subject	Section	Clause	Recommendation for improvement	Remedial Action
Compliance with other enactments	3.5	10.41 of part 10	Include PPE requirements in ATH documentation	Identified
Meter certification	8.2	(1)(1)(d)(ii) & 5(1)(b)(v) of schedule 10.8	Ensure records are more explicit regarding certification validity period Develop a type test report checklist	Identified

Persons Involved in This Audit

Auditor:

Steve Woods

Veritek Limited

Electricity Authority Approved Auditor

WEL Test House personnel assisting in this audit were.

Name	Title
Anna Doerr	Metering Services Business Manager
Craig Evans	Smart Metering Support

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1. Scope of Audit

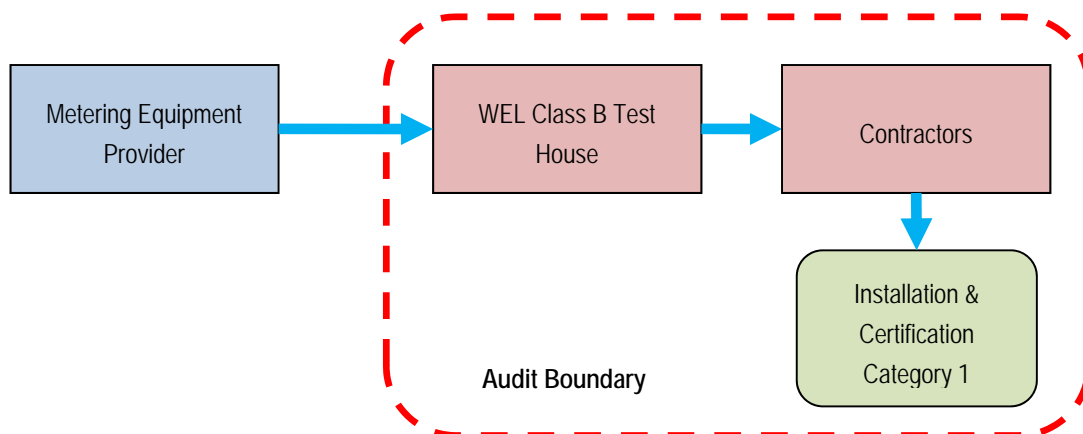
WEL is a Class B Approved Test House and this audit was performed at their request, to encompass the Electricity Industry Participation Code requirement for an audit, in accordance with Clause 2 of schedule 10.3.

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The audit was carried out at the WEL premises in Hamilton on 22/05/15.

WEL’s Test House certification is limited to Category 1 metering; all Category 2 and 3 installation and certification work is conducted by other Test Houses appointed by the MEP.

The boundaries of this audit are shown below for greater clarity.



2. Previous Audit Results

The previous audit was conducted in February 2014 by Veritek Limited. The audit found no non-compliances and three recommendations were made. Two issues from this audit were resolved and one recommendation has been repeated.

Table of Non-compliance

Subject	Section	Clause	Non compliance	Status
			Nil	

Table of Recommendations

Subject	Section	Clause	Recommendation for Improvement	Status
Faulty metering installations	4.2.1	10.43 of part 10	Develop more prescriptive process documentation regarding faulty installations.	Cleared
Load control device certification	4.25.1	33 of schedule 10.7	Ensure relevant fields are visible confirming that control devices are fit for purpose and correctly connected.	Cleared
Certification validity periods	8.2	(1)(1)(d)(ii) & 5(1)(b)(v) of schedule 10.8	Ensure records are more explicit regarding certification validity period.	Still existing

3. ATH Requirements

3.1 Use of Contractors (Clause 10.4(1) of Part 10)

A participant may perform its obligations and exercise its rights under this Part by using a contractor. A participant who uses a contractor to perform their obligation under this Part remains responsible and liable for, and is not released from, the obligation, or any other obligation under this Part.

WEL has three subcontractors operating under their Test House. Able Electrical is engaged to conduct some fault work that involves replacement of ripple receivers. VEMS and Wells are conducting advanced metering installations. The “MEP and Rollout” document contains a section on the selection and management of subcontractors. WEL conducts invasive and non-invasive audits of subcontractor’s work, including site observations. WEL is in the process of enhancing their competency documentation.

In addition to the competency and audit initiatives, WEL also checks photos of each installation as an extra quality control step.

3.2 Provision of Accurate Information (Clause 10.6 of Part 10)

A participant must take all practicable steps to ensure that information that it provides under this Part is:

- Complete and accurate
- Not misleading or deceptive
- Not likely to mislead or deceive.

If a participant, having provided information under this Part, becomes aware that the participant has not complied, the participant must, except if clause 10.43 applies, as soon as practicable provide such further information, or corrected information, as is necessary to ensure that the participant complies.

I did not find any information that was not complete and accurate or likely to mislead or deceive. Processes are in place to identify and correct any information errors. Compliance is confirmed.

3.3 Dispute Resolution (Clause 10.50(1) to (3) of Part 10)

Participants must in good faith use best endeavours to resolve any disputes related to Part 10 of the Code. Disputes that are unable to be resolved may be referred to the Authority for determination. Complaints that are not resolved by the parties or the Authority may be referred to the Rulings Panel by the Authority or participant.

WEL has not needed to resolve any disputes in accordance with these clauses.

3.4 ATH Approval (Clause 10.40 of Part 10)

A person wishing to be approved as an ATH, or an ATH wishing to renew its approval, must apply to the Authority:

- At least 2 months before the intended effective date of the approval or renewal
- In writing
- In the prescribed form
- In accordance with Schedule 10.3.

A person making an application must satisfy the Authority (providing, where appropriate, suitable evidence) that the person:

- Has the facilities and procedures to reliably meet, for the requested term of the approval, the minimum requirements of this Code for the class or classes of ATH for which it is seeking approval
- Has had an audit under Schedule 10.3

- Is a fit and proper person for approval.

WEL has appropriate approval and appropriate facilities and procedures to meet the minimum requirements of the Code.

3.5 ATH Requirements (Clause 10.41 of Part 10)

An ATH must, when carrying out activities under this Part:

- Only carry out activities for which it has been approved by the Authority
- Exercise a degree of skill, diligence, prudence, foresight, and economic management, taking into account the technological complexity of the metering components and metering installations being tested:
 - Determined by reference to good industry practice
 - That would reasonably be expected from a skilled and experienced ATH engaged in the management and operation of an approved test house
- Comply with all applicable safety, employment, environmental, and other enactments
- Exercise any discretion given to it under this Part by:
 - Taking into account the relevant circumstances of the particular instance; and
 - Acting professionally; and
- Record the manner in which it carried out its activities and its reasons for carrying the activities out in that manner.

WEL has only conducted activities that fall within the scope of their approval. I have concluded from this audit that WEL has met the requirements of this clause. I checked compliance with other enactments, specifically the electricity regulations with regard to safety practices and I confirm the following critical points are managed in a robust manner:

- Access to basic insulation
- Livening practices, specifically polarity testing
- Safety practices with regard to the management of asbestos switchboards
- General safety practices and the appropriate use and testing of personal protective equipment (PPE).

Whilst WEL has a strong focus on health and safety management, I have one minor recommendation in relation to PPE. The requirements are included in companywide H&S specific documentation, but I recommend the requirements are mirrored in the ATH specific process documentation as well.

Recommendation	Description	Audited party comment	Remedial action
Regarding: Clause 10.41 of part 10	Include PPE requirements in ATH documentation.	Agreed. Insert relevant section from the WEL H&S manual with regard to the wearing of correct PPE for the installation of metering equipment into the ATH manual.	Identified

3.6 Quality Management Systems (Clauses 3(1) & 4(1) of Schedule 10.3 & Clause 16 of Schedule 10.4)

WEL provided a copy of their previous ISO 9001:2008 audit report, dated July 2014 which was conducted by International Certifications Ltd. The scope was set out as follows:

“...the operation of an Approved Test House Class B and as a Metering Equipment Provider, in accordance with the requirements of Electricity Industry Participation Code.”

The report did not record any issues that related to the ATH operation.

3.7 Organisation and Management (Clause 15 of Schedule 10.4)

An ATH must ensure that it has managerial staff who, unless otherwise permitted in the relevant approval, all have the authority and resources needed to discharge their duties; and the responsibilities, authority, and functional relationships of all its personnel are fully and accurately specified and recorded in the ATH's records. Roles and responsibilities are documented in quality manual and the authority and resources are available to ensure the ATH functions as intended.

An ATH must appoint a technical manager (however named) with overall responsibility for technical operations, who must have appropriate engineering qualifications and experience in the operation of an approved test house; and a quality manager (however named), with responsibility for the quality management certification and the implementation of the quality management system. Anna Doerr is appointed as Technical Manager and Vicky Costain is appointed as Quality Manager. Both have appropriate qualifications.

An ATH must ensure that all staff who perform or supervise work or activities regulated under this Part are technically competent, experienced, qualified, and trained for the functions they perform. I checked the training and competency assessment processes and I confirm compliance with this clause.

3.8 Accommodation & Environment (Clause 1 of Schedule 10.4)

WEL does not operate a laboratory function, because their scope is limited to field installation work.

3.9 Test Equipment (Clause 2 of Schedule 10.4)

An ATH must, at all times, ensure that it has access to all items of equipment required for the performance of the calibrations and tests it is approved to undertake under this Part; and each item of equipment it uses is maintained in accordance with the manufacturer's recommendations, and this Code. WEL does not have any working standards. Individual contractors have responsibility for maintaining their own personal protection equipment.

A class B ATH must have and maintain procedures for the purchase of test equipment and associated consumables. The relevant operating procedure was demonstrated during the audit. The relevant consumables are seals, sealing tools and stickers.

3.10 Calibration of Reference/Working Standards (Clause 3 of Schedule 10.4)

A working standard is a standard that has been calibrated by an ATH or a calibration laboratory that is used routinely for the calibration of metering components and metering installations.

A reference standard means a measuring instrument that has been calibrated by an approved calibration laboratory and is not used as a working standard.

WEL does not have a laboratory and does not use any working standards in the field.

3.11 Calibration Errors (Clause 5 of Schedule 10.4)

A Standard cannot be used if the ATH believes it has a calibration error. If an error is found then all ATH's that have used the standard must be notified. All metering installations certified using the standard must be treated as defective in accordance with Clause 10.43.

WEL does not use any working standards. All metering installations are certified using the selected component method.

3.12 Calibration Methods (Clause 7 of Schedule 10.4)

An ATH must only use components that have been certified by an ATH or calibration laboratory. WEL only uses certified components. This was confirmed by checking some certification records.

3.13 Sealing and Monitoring of Seals (Clause 9 of Schedule 10.4)

An ATH must have a documented system for applying seals to a metering installation that meets the requirements of clause 47 of Schedule 10.7; and is appropriate in the circumstances to ensure:

- The ATH's ability to monitor the metering installation's continued integrity; and
- The relevant metering equipment provider is alerted as soon as practicable to any unauthorised access to the metering installation.

The "Installation Reference Manual" contains instructions and diagrams regarding the application of seals. Numbered plastic seals are used and these have a barcode which is scanned along with the component barcode at the time of certification. If the AMI meter is used as a "check meter" it is still appropriately sealed along with all of the other components that form part of the metering installation.

WEL has specific instructions for situations when seals were found to be broken or missing.

3.14 Services Access Interface (Clause 10 of Schedule 10.4)

An ATH must, when preparing a metering installation certification report, determine, and record in the certification report, the location of the services access interface. The services access interface means the point, at which access may be gained to the services available from a metering installation, that is:

- Recorded in the certification report by the certifying ATH for the metering installation
- Where information received from the metering installation can be made available to another person
- Where signals for services such as remote control of load (but not ripple control) can be injected.

The Services Access Interface is remote in all cases because WEL collects data as an MEP. The location of the Services Access Interface is recorded in the certification report as required by this clause.

3.15 Certification & Calibration Reports (Clause 11 of Schedule 10.4)

An ATH must, for each metering installation that it certifies, produce a certification report in accordance with Schedule 10.7. An ATH must, for each metering component:

- That it calibrates, produce a calibration report in accordance with Schedule 10.8
- That it certifies, produce a certification report in accordance with Schedule 10.

Certification records are produced for all components and installations certified by WEL. These are either hard copy (scanned) or electronic records.

4. Requirements of Metering Installations

4.1 Physical Location of Metering Installations (Clause 10.35 of Part 10)

Reconciliation participants are responsible for the physical location of metering installations. If it is not practical in the circumstances to locate the metering installation at the point of connection the Reconciliation Participant must calculate the quantity of electricity conveyed through the point of connection using a loss compensation process approved by the certifying ATH.

WEL has not been required to conduct any loss compensation calculations.

4.2 Faulty Metering Installations

4.2.1 Investigation of Faulty Metering Installations (Clause 10.43 of Part 10)

If an ATH becomes aware of an event or circumstance that leads it to believe a metering installation is or could be inaccurate, defective or not fit for purpose, they must notify the MEP. WEL has a prescriptive documented process for reporting faults or tampering.

4.2.2 Testing of Faulty Metering Installations (Clause 10.44 of Part 10)

If a report prepared under clause 10.43(4)(c) demonstrates that a metering installation is inaccurate, defective, or not fit for purpose, the MEP must arrange for an ATH to test the metering installation and provide a 'statement of situation'.

If the MEP is advised by a participant under clause 10.44(2)(a) that the participant disagrees that the report that demonstrates that the metering installation is accurate, not defective and fit for purpose, the MEP must arrange for an ATH to:

- Test the metering installation
- Provide the MEP with a statement of situation within 5 business days of:
 - becoming aware that the metering installation may be inaccurate, defective or not fit for purpose: or
 - reaching an agreement with the participant.

The MEP is responsible for ensuring the ATH carries out testing as soon as practical and provides a statement of situation. There is a process in place for dealing with these situations, although there have not been any during the audit period.

4.2.3 Statement of Situation (Clause 10.46 of Part 10)

A statement of situation provided by an ATH under clause 10.44(1)(b) must contain:

- a) Details of the tests carried out
- b) Results of the tests carried out
- c) Full details of what was found
- d) Conclusions of whether the metering installation is accurate, defective, fit for purpose and the reasons for the conclusions
- e) An assessment of the risk to the completeness and accuracy of the raw meter data
- f) The details of any remedial action proposed or undertaken
- g) Any correction factors to apply to raw meter data to ensure that the volume information is accurate
- h) The period over which the correction factor must be applied to the raw meter data.

An MEP must, within 3 business days of receiving the statement of situation, provide copies of it to the relevant affected participants and the market administrator.

WEL's reporting contains the information required for it to be used as a statement of situation.

4.2.4 Correction of Defects (Clause 10.47 of Part 10)

An ATH must, when taking action to remedy an inaccuracy or defect within a metering installation, ensure that records of any modifications that are carried out to the metering installation are kept for each metering component of the metering installation in the metering records, and in a manner reasonable in the circumstances to ensure that further investigation can be carried out.

WEL has a documented process for correcting defects. An example was examined. Compliance is confirmed.

4.3 ATH Design Report Obligations (Clause 3 of Schedule 10.7)

A certifying ATH must, before it certifies a new or modified metering installation, check and approve, in writing, the design report provided under clause 2 (including the configuration scheme and the schematic drawing), to ensure that the proposed new or modified metering installation will function correctly, will provide the required accuracy and complies with this Part.

The WEL MEP and ATH operations are combined and the design reports are approved by the ATH.

4.4 Determination of Metering Categories (Clause 5 of Schedule 10.7)

An ATH must, before it certifies a metering installation, determine the category of the metering installation in accordance with the following:

- Subject to clause 6, if the metering installation incorporates a current transformer, its category must be determined according to the primary current rating of the current transformer and the connected voltage set out in Table 1 of Schedule 10.1:
- If the metering installation does not incorporate a current transformer and the quantity of electricity conveyed is measured by a meter, it must be category 1.

All installations certified by WEL are Category 1 and this is recorded in the certification records.

4.5 Certification as a Lower Category (Clause 6 of Schedule 10.7)

WEL does not certify installations above Category 1; this clause is therefore not relevant to the audit.

4.6 Metering Installation Certification Requirements (Clause 8 of Schedule 10.7)

An ATH must, when certifying a metering installation prepare a certification report for the metering installation, which contains the following information:

- Whether the installation is HHR or NHH
- The location of the services access interface
- Confirmation that each metering component functions correctly
- Confirmation that HHR meters are installed on installations above Category 2
- The category of the metering installation.

I checked the certification records for a large number of Category 1 metering installations and the points noted above were included in all cases.

4.7 Certification Tests (Clause 9 of Schedule 10.7)

An ATH must consider the following points when carrying out a test set out in Table 3 or 4 of Schedule 10.1:

- Prevailing load tests must be conducted on a metering installation or metering component by using a working standard connected to the metering installation. WEL has not been required to conduct any prevailing load tests in accordance with this clause. Only selected component certification is conducted.
- Installation or component configuration tests must ensure that the actual configuration scheme is the same as the scheme for the metering installation or metering component recorded in the design report. The scheme is recorded in the certification records and is checked in WEL's back office for accuracy.
- Raw meter data output tests for a category 1 metering installations or category 2 metering installations, must be conducted by applying a measured increase in load and measuring the increment of the sum of the meter registers, or the accumulation of pulses resulting from the increase in load. All installations are HHR so the clause below is the most relevant, which requires a back office comparison between HHR data and register reads. The test below is conducted and the documented process includes an additional instruction to "make sure the LED is pulsing, speed dependent on load".
- Raw meter data output tests for a HHR metering installation which are category 1 or category 2 must be conducted by either:
 - Comparing the output from a working standard to the raw meter data from the metering installation for a minimum of 1 trading period; or
 - Confirming that the metering equipment provider's back office processes include a comparison of the difference in the increment of the meter registers to the half-hour metering raw meter data, if the raw meter data is to be used for the purposes of Part 15. WEL conducts this test and I observed the process during the audit.
- Raw meter data output tests for category 3 or higher HHR metering installations must compare the output of a working standard to the raw meter data from the metering installation for a minimum of 1 trading period. WEL does not certify installations above Category 1.
- Raw meter data output tests for NHH Category 2 metering installations must compare the output of a working standard to the increment of the sum of the meter registers. WEL does not certify installations above Category 1.

If an ATH performs a raw meter data output test, for a metering installation that will be certified for remote meter reading, the ATH must obtain the raw meter data from the back office system where the raw meter data is held or ensure that the metering equipment provider responsible for the metering installation has a process to validate a meter reading taken at the time of the metering installation certification with a meter reading from the metering equipment provider's back office system. As soon as a device becomes "live" in the back office a comparison is conducted between register advance since commissioning and the sum of the HHR periods.

Compliance is confirmed for all of the points noted above.

If an ATH performs a test that requires a comparison between 2 quantities, the ATH must not certify the metering installation unless the metering installation passes the test. A metering installation passes if the test demonstrates that the difference between the 2 quantities is within the applicable accuracy tolerances set out in Table 1 of Schedule 10.1. All installations are HHR and the main comparison is between HHR data and register reads. These are within the tolerances prescribed.

4.8 Test Results (Clause 10 of Schedule 10.7)

An ATH must, before it certifies a metering installation or any of a metering installation's metering components, review the relevant test results for each of the metering installation's metering components to ensure that the metering component passed all the tests and the metering installation meets the requirements for certification.

Calibration reports are reviewed for metering components and the installation certification records are also reviewed for each metering installation. Compliance is confirmed.

4.9 Selected Component Certification (Clause 11 of Schedule 10.7)

An ATH may use the selected component certification method to certify Category 1, 2 and 3 low voltage metering installations.

An ATH must only use the selected component certification method to certify a metering installation by carrying out the tests set out in Table 3 of Schedule 10.1 and if each of the following metering components in the metering installation has been calibrated in accordance with Schedule 10.8:

(i) Data storage device:

(ii) Meter:

(iii) Measuring transformer.

An ATH must, before it uses the selected component certification method:

- Check the design report of the metering installation to confirm the metering installation functions in accordance with the design report and ensure the metering installation complies with this Part.
- Ensure that each metering component in the metering installation is used only in a permitted combination as set out in Table 1 of Schedule 10.1
- Check and confirm that the metering installation is correctly wired in accordance with all applicable requirements and enactments
- Ensure that each metering component in the metering installation is fit for purpose.

These checks are all conducted as part of the certification process.

4.10 Comparative Recertification (Clause 12 of Schedule 10.7)

An ATH may only use the comparative recertification method to recertify a category 2 metering installation in accordance with this Part if:

- The certification of the current transformers in the metering installation expires before the meter certification expiry date
- Each data storage device and meter in the metering installation has been certified in accordance with Schedule 10.8.

WEL does not conduct comparative recertification.

4.11 Fully Calibrated Installations (Clause 13 of Schedule 10.7)

WEL does not certify any installations using the fully calibrated method.

4.12 Insufficient Load (Clause 14 of Schedule 10.7)

WEL will not certify installations above Category 1.

4.13 Statistical Sampling (Clause 16 of Schedule 10.7)

WEL is not a metering equipment owner for older metering and will not be conducting statistical sampling in the foreseeable future.

4.14 Certification Validity Periods (Clause 17 of Schedule 10.7)

An ATH must, when certifying a metering installation, determine, in accordance with this clause, the date on which the metering installation's certification will expire and record the expiry date in the metering installation certification report.

The expiry date for a metering installation's certification is the earliest of the date falling after the date of its commissioning by the number of months equivalent to the maximum metering installation certification validity period for the relevant category of metering installation, as set out in Table 1 of Schedule 10.1 and the earliest certification expiry date of a metering component in the metering installation and a date determined by the ATH taking into account:

- The condition of each metering component in the metering installation
- All relevant circumstances relating to the metering installation.

WEL correctly records the certification date and the certification expiry date in accordance with this clause. The expiry date for each metering installation in a group of metering installations recertified under clause 16, which does not form a part of the sample, is the earliest expiry date of the metering installations in the sample. WEL has not certified any metering installations using the statistical sampling method.

4.15 Modification of Metering Installations (Clause 19 of Schedule 10.7)

If a metering installation is modified, the certification of the metering installation is automatically cancelled. WEL understands this requirement and I did not find any installations which had been modified.

4.16 Metering Installation Accuracy (Clause 21 of Schedule 10.7)

An ATH must not certify a metering installation if the metering installation exceeds the maximum permitted error for the relevant metering installation category set out in Table 1 of Schedule 10.1, after the application of any external compensation factors.

WEL only conducts selected component certification.

4.17 Error Calculation (Clause 22 of Schedule 10.7)

An ATH must, before it certifies a metering installation using the comparative or fully calibrated methods, calculate the error of the metering installation in accordance with the following:

- The ATH must calculate the percentage error of the metering installation using appropriate mathematical methods, taking account of all sources of measurement error and the estimated total quantity of electricity to be conveyed through the metering installation over the next 12 months
- The error calculation must include uncertainty in measurement
- The ATH must calculate uncertainty at a 95% level of confidence and in compliance with JCGM 100:2008.

The ATH must not certify the metering installation if the uncertainty for the metering installation is greater than the relevant maximum site uncertainty set out in Table 1 of Schedule 10.1 or if the sum of the measured error and the uncertainty of the metering installation is greater than the relevant maximum permitted error set out in Table 1 of Schedule 10.1.

The ATH must record the calculation above in the metering installation certification report.

WEL does not conduct comparative or fully calibrated certification.

4.18 Compensation Factors (Clause 8 of Schedule 10.4 & 24 of Schedule 10.7)

An ATH must, if it is approved to certify metering installations, have a documented process for determining compensation factors. WEL only certifies Category 1 metering installations.

4.19 Installation of Metering Components (Clause 25 of Schedule 10.7)

An ATH must, before it certifies a metering installation, ensure that installation of measuring transformers, and associated burden if required, test facilities, potential fuses, and switchboard wiring, was carried out by a suitably qualified person (for example by a switchboard manufacturer), or an ATH and each metering component in the metering installation, other than a metering component referred to above is carried out by an ATH.

An ATH must, before it certifies a metering installation, ensure that each metering component in the metering installation has been installed in accordance with the design report.

This clause is designed to allow switchboard manufacturers to install measuring transformers in switchboards at the time of manufacture. This clause does not allow the installation of meters or data storage devices.

WEL has not supplied any metering components to other parties for installation.

4.19.1 Meter Requirements (Clause 26 of Schedule 10.7)

An ATH must, before it certifies a metering installation incorporating a meter, if the meter had previously been used in another metering installation, ensure that the meter has been recalibrated since it was removed from the previous metering installation, by an approved calibration laboratory or an ATH.

The ATH must, before it certifies a metering installation incorporating a meter, document in the metering records any regular maintenance required for the meter in accordance with the manufacturer's recommendations and any maintenance that has been carried out on the meter (for example battery monitoring and replacement).

An ATH must, before it certifies a metering installation incorporating a meter, record in the metering installation certification report, the maximum interrogation cycle for the metering installation.

The meters installed by WEL do not have maintenance requirements. The interrogation system has a "low battery" event to monitor battery life. The maximum interrogation cycle is 365 days and this is recorded in the certification records as required by this clause.

4.19.2 Meter Certification Expiry Date (Clause 27 of Schedule 10.7)

An ATH must, before it certifies a metering installation incorporating a meter, determine the meter certification expiry date for each meter in the metering installation in accordance with this clause.

The meter certification expiry date must be the earliest end date of the following periods, calculated from the date of commissioning of the metering installation:

- The maximum metering installation certification validity period set out in Table 1 of Schedule 10.1 for the relevant category of metering installation; or

- The maximum meter certification validity period set out in Table 2 of Schedule 10.1 for the relevant class of meter for the metering installation; or
- The certification period specified in the meter certification report.

The meter certification expiry date for a meter that has been certified and subsequently installed in, and removed from, a category 1 metering installation, remains the meter certification expiry date determined for that meter when it was installed in the category 1 metering installation. Wells understands the requirements of this clause.

If an electromechanical meter is not installed in a metering installation within 24 months of the date of the meter's certification report, the meter must be recertified before it is installed. Wells understands the requirements of this clause but has not dealt with any electromechanical meters in recent times.

The ATH must record the certification expiry date for each meter in a metering installation in:

- The metering installation certification report; and
- The meter certification report.

WEL is correctly calculating the certification expiry date as 15 years from the commissioning date. This is recorded in the combined meter and installation certification record.

4.19.3 Measuring Transformer Requirements (Clause 28 of Schedule 10.7)

An ATH must, before it certifies a metering installation which includes a measuring transformer that had previously been used in another metering installation, ensure that the measuring transformer has been recalibrated, since it was removed from the previous metering installation, by an approved calibration laboratory or an ATH.

The ATH must, before it certifies a metering installation incorporating a measuring transformer, document in the metering records any regular maintenance required for the measuring transformer in accordance with the manufacturer's recommendations and any maintenance that has been carried out on the measuring transformer.

An ATH must, before it certifies a metering installation incorporating a measuring transformer, ensure that the measuring transformer is fitted with a test facility and provision for isolation, which must be installed as physically close to the meter as practical in the circumstances and ensure the test facility has a transparent cover that is not obscured.

Other relevant requirements of this clause are that they must:

- Ensure that the measuring transformer is mounted securely and if practicable, in an enclosure that is sealed in accordance with clause 47 against unauthorised access.
- Ensure that all fuses and circuit breakers are sealed or located in sealed enclosures.
- Ensure that, if an enclosure also contains fuses or circuit breakers supplying other circuits, those supplying metering circuits are individually sealed

- Ensure that if the measuring transformer's secondary circuit in the metering installation is earthed, it is earthed at no more than 1 point
- Ensure that the total burden (magnitude and phase angle, where appropriate) on the measuring transformer does not exceed its name plate rating or an alternative rating lower than the name plate rating, if specified in the metering installation design report

WEL only deals with Category 1 metering installations and has not installed or certified any measuring transformers.

4.19.4 Measuring Transformer Certification Expiry Date (Clause 29 of Schedule 10.7)

An ATH must, before it certifies a metering installation incorporating a measuring transformer, determine the measuring transformer certification expiry date for each measuring transformer in the metering installation in accordance with this clause.

The measuring transformer certification expiry date must be no later than the last day of the measuring transformer certification validity period specified in the measuring transformer certification report, after the date of commissioning.

The ATH must record the measuring transformer certification expiry date for each measuring transformer in a metering installation in the certification report for the metering installation and the certification report for the measuring transformer.

WEL only deals with Category 1 metering installations and has not installed or certified any measuring transformers.

4.19.5 Other Equipment Connected to Measuring Transformers (Clause 30 of Schedule 10.7)

An ATH must, before it certifies a metering installation incorporating a measuring transformer used by other equipment, ensure that the accuracy of the metering installation remains within the maximum permitted error for the relevant metering installation category set out in Table 1 of Schedule 10.1.

WEL only deals with Category 1 metering installations and has not installed or certified any measuring transformers.

4.19.6 Burden & Compensation (Clause 31 of Schedule 10.7)

An ATH must, before it may add or change any burden or compensation factor detailed in the design report, obtain the approval of the metering equipment provider responsible for the metering installation.

WEL will not certify installations above Category 1; this clause is therefore not relevant to the audit.

4.19.7 Data Storage Devices (Clauses 36 & 38 of Schedule 10.7)

An ATH must, before it certifies a metering installation incorporating a data storage device that had previously been used in another metering installation, ensure that the data storage device has been recalibrated since it was removed from the previous metering installation, by an approved calibration laboratory or an approved test laboratory or an ATH.

An ATH must, before it certifies a metering installation incorporating a data storage device, record in the metering installation certification report, the maximum interrogation cycle for the metering installation. WEL has recorded the maximum interrogation cycle in the certification records.

4.19.8 Data Storage Device Certification Expiry Date (Clause 37 of Schedule 10.7)

An ATH must, before it certifies a metering installation incorporating a data storage device, determine, in accordance with this clause, the data storage device certification expiry date for each data storage device contained in the metering installation and record the expiry date in the metering installation certification report.

WEL is correctly calculating the certification expiry date as 15 years from the commissioning date. This is recorded in the combined data storage device and installation certification record.

4.20 Certification Stickers (Clause 41 of Schedule 10.7)

An ATH must, if it has certified a metering installation under this Part, confirm the certification by attaching a metering installation certification sticker as physically close as practicable to (including, if practicable, on) the meter while maintaining reasonable visibility of the certification sticker and the meter.

An ATH attaching a metering installation certification sticker must ensure that it shows:

- The name of the ATH who certified the metering installation; and
- The most recent certification date of the metering installation; and
- The metering installation category for which the metering installation has been certified; and
- The ICP identifier for the metering installation; and
- The certification number for the metering installation; and
- Any other information that the Authority may, from time to time, notify giving reasonable notice.

An ATH must, when certifying a metering installation that includes a metering component that does not have a certification sticker attached:

- Obtain the metering component certification sticker required under clause 8 of Schedule 10.8; and
- Attach it next to the metering installation certification sticker.

WEL's installation certification stickers are compliant with these requirements and I checked some photos to ensure they were correctly applied.

4.21 Metering Component Stickers (Clause 8 of Schedule 10.8)

An ATH must, when certifying a metering component under this Part, confirm the certification by attaching a metering component certification sticker to the metering component or, if not practicable, provide the sticker with the metering component.

An ATH must ensure that a metering component certification sticker shows:

- The name of the metering component owner (if available); and
- If the metering component is a meter or a measuring transformer, the name of the ATH or the approved calibration laboratory who calibrated the metering component; and
- The name of the ATH who certified the metering component; and
- The date on which the metering component was certified; and
- The initials or other unique identifier of the person who carried out the certification of the metering component.

An ATH must ensure that a certification sticker is:

- Made of weather-proof material
- Permanently attached
- Filled out using permanent markings.

WEL has met all of these requirements. Compliance is confirmed.

4.22 Enclosures (Clause 42 of Schedule 10.7)

An ATH must, before it certifies a metering installation, ensure that, if a metering component in the metering installation is housed in a separate enclosure from the meter enclosure, the enclosure is:

- Appropriate to the environment in which it is located; and
- Has a warning label attached stating that the enclosure houses a metering component.

Although this clause only refers to enclosures other than the metering enclosure, I have considered this clause to apply to metering enclosures as well. The documentation contains reference to the requirement to conduct a hazard assessment before work commences. The back office checks also deal with the suitability of enclosures.

4.23 Wiring (Clause 6 of Schedule 10.8)

An ATH must, before it certifies a metering installation, ensure that all wiring in the metering installation is:

- Suitable for the environment in which the metering installation is located
- Fit for purpose
- Securely fastened
- Compliant with all applicable requirements and enactments.

All of these checks are stipulated in the relevant instructions.

An ATH must, before it certifies a metering installation, ensure that the wiring between metering components in the metering installation:

- Is run as directly as practicable
- Is appropriately sized and protected
- Does not, to the extent practicable, include intermediate joints for any measuring transformer circuits
- Includes conductors that are clearly and permanently identified, by the use of any 1 or more of the following:
 - Colour coding:
 - Marker ferrules:
 - Conductor numbering.

These points mainly relate to measuring transformers and WEL does not deal with installations above Category 1.

4.24 Fuses and Circuit Breakers (Clause 7 of Schedule 10.8)

An ATH must, before it certifies a metering installation, ensure that all fuses and circuit breakers that are part of the metering installation are appropriately rated for the electrical duty and discrimination required, clearly labelled and sealed or located in sealed enclosures.

The process documentation includes compliance with this requirement.

4.25 Control Devices

4.25.1 Installations Incorporating Control Devices (Clause 33 of Schedule 10.7)

Reconciliation Participants are responsible for advising the MEP if a control device needs to be certified.

An ATH must, before it certifies a metering installation incorporating a control device:

- Determine the control device certification expiry date for each control device contained in the metering installation as being the same as the metering installation certification expiry date
- Record the expiry date, for each control device, in the metering installation certification report.

If the metering installation contains a control device that had previously been used in another metering installation, the ATH must ensure that the control device has been certified in accordance with Schedule 10.8 after it was removed from the other metering installation.

The ATH must ensure that the metering installation certification report includes confirmation that:

- The control device complies with any applicable standards listed in Table 5 of Schedule 10.1
- The control device is fit for purpose.

The ATH must check that the control device is:

- Likely to receive control signals, as required under clause 34
- Correctly connected
- Correctly programmed.

WEL installs new and refurbished control devices. Certification expiry dates are correctly calculated and recorded. WEL refurbishes control devices and checks their operation with a signal generator. The other requirements are met in all situations for all contractors. The recommendation raised in the last audit to record that control devices are fit for purpose has been adopted.

4.25.2 Control Device Reliability (Clause 34 of Schedule 10.7)

An ATH must, before it certifies a metering installation incorporating a control device determine, in consultation with the relevant distributor if appropriate, if the likelihood of the control device not receiving control signals would affect the accuracy or completeness of the information for the purposes of Part 15.

WEL is also the distributor in situations where they are the MEP and ATH. There are no signal propagation issues on the WEL network; this is checked on an annual basis.

5. Alternative Certification (Clause 32 of Schedule 10.7)

An ATH may, if it cannot comply with the requirements of clause 2 of Schedule 10.8 due solely to its inability to obtain physical access to test an installed measuring transformer in a metering installation, certify the metering installation for a period not exceeding 24 months, if:

- The measuring transformer has not previously been certified under this clause
- The ATH is satisfied, having made due enquiry, that the metering installation will comply with the applicable accuracy requirements as set out in Table 1 of Schedule 10.1
- The ATH has advised the metering equipment provider responsible for the metering installation that this clause applies
- The metering equipment provider has advised the registry of the certification under this clause.

The metering equipment provider must, by no later than 10 business days after the date of certification of the metering installation, advise the market administrator in the prescribed form of:

- All relevant details of the metering installation
- The reason or reasons why the ATH could not obtain physical access to the measuring transformer
- The reason or reasons why the accuracy of the metering installation cannot be outside of the applicable accuracy requirements set out in Table 1 of Schedule 10.1
- The metering installation certification expiry date
- Respond, within 5 business days, to any requests from the market administrator for additional information; and
- Ensure that all of the details are recorded in the metering installation certification report.

If the market administrator subsequently determines that the ATH could have obtained physical access to test an installed measuring transformer in the metering installation, the metering installation is deemed to be defective and the metering equipment provider responsible for the metering installation must comply with clauses 10.43 to 10.48. WEL has not applied alternative certification.

6. Inspections

6.1 General Inspection Requirements (Clause 44 of Schedule 10.7)

WEL has not been requested to conduct inspections by any MEPs. WEL does intend to conduct sample inspections of Category 1 installations.

6.2 Inspections for Category 2 & Above Installations (Clause 46 of Schedule 10.7)

WEL has not been requested to conduct inspections by any MEPs.

7. Sealing

7.1 Sealing Requirements (Clause 47 of Schedule 10.7)

An ATH must, before it certifies a metering installation, ensure that each metering component in the metering installation that could reasonably be expected to affect the accuracy or reliability of the metering installation is sealed.

An ATH must, before leaving a metering installation unattended, ensure that each part and connection of a data storage device that is contained in, or attached to, the metering installation is sealed.

An ATH must, before it certifies a metering installation, ensure that the main switch cover is sealed if the main switch is on the supply side of the metering installation and has provision for sealing.

An ATH must, when applying a seal to a metering component in an enclosure, attach a label in a prominent position inside the enclosure, warning of the presence of a sealed metering component in the enclosure and that care must be taken not to disturb the connections to the metering component.

An ATH must use a sealing system that enables the following information to be determined:

- The ATH who affixed the seal
- The person (or the sealing tool) who applied the seal
- When the seal was applied.

The certification sticker includes a warning label which achieves compliance with this clause. The instructions to field personnel include diagrams stipulating where seals must be applied. This includes the main switch cover. The back office checks include the application of seals. Compliance is confirmed.

7.2 Removal or Breakage of Seals (Clause 48 of Schedule 10.7)

An ATH must, when investigating an unauthorised removal or breakage, assess the accuracy and continued integrity of the metering installation and if, in its opinion, the accuracy and continued integrity is unaffected, replace the removed or broken seals, or if, in its opinion, the accuracy and continued integrity is affected, replace the removed or broken seal and advise the metering equipment provider under clause 10.43.

WEL has appropriate instructions in relation to this requirement and there is the ability to record this information on the commissioning record for the installation.

8. Metering Component Requirements

8.1 Metering Component Certification (Clause 43 of Schedule 10.7)

An ATH must, before it certifies a metering installation, ensure that each metering component that is required to be certified under this Part and which is in the metering installation:

- Is certified by an ATH in accordance with this Part
- Since certification, has been appropriately stored and not used.

Metering components are certified at the time of commissioning so compliance with the clauses above are achieved.

An ATH may certify a category 1 metering installation that contains a meter which has been certified and subsequently installed in, and removed from, another category 1 metering installation, in which case, the ATH must:

- Be satisfied that external factors have not affected the accuracy of the meter
- Check and confirm in the certification report for the metering installation that the date on which the meter was previously installed in the other metering installation is less than 12 months before the commissioning date of the metering installation that the ATH is certifying.

This clause is designed to allow builder's temporary supplies to be portable without the need to calibrate the meter every time. WEL has not certified any installations where a meter has been removed from another installation.

8.2 Meter Certification (Clause 1 of Schedule 10.8)

An ATH must, before it certifies a meter, ensure that:

- An approved test laboratory has:
 - Conducted type-testing that the ATH considers appropriate for the model and version of meter
 - Produced a type-test certificate that:
 - Confirms the meter's technical characteristics
 - Confirms the range of environmental conditions within which the meter has been proven accurate and reliable
 - Confirms that the meter performs the functions for which it was designed
 - Confirms that the meter complies with the requirements of this Part
 - Records the tests undertaken by the approved test laboratory and the reasons why the ATH considers that they are appropriate
- The meter has a current calibration report
- The meter calibration report:
 - Confirms that the meter complies with the standards listed in Table 5 of Schedule 10.1
 - Records the tests the ATH has performed to confirm compliance and the results of those tests
 - Confirms that the meter has passed the tests
 - Records any recommendations on error compensation
 - Includes any manufacturer's calibration test reports
- It produces a meter certification report that includes:
 - The date on which it certified the meter
 - The certification validity period for the meter for each category of metering installation that the meter may be used in
 - The maintenance requirements for the meter
 - The meter calibration report
 - Whether the certification was based on batch test certificates

- If the certification was based on batch test certificates, confirmation that the manufacturer's batch testing facility is, in the ATH's opinion, of an acceptable standard
- The percentage values of current set out in Table 6 or Table 7 of Schedule 10.1, as applicable, are relative to the meter's base or rated current (I_b or I_n) as appropriate, and this current is selected at a level appropriate for the metering installation in which the meter is to be installed.

The certification validity period must not be greater than the maximum certification validity period set out in Table 2 of Schedule 10.1 for the relevant class of meter.

I checked all of the points above and confirm compliance. WEL supplied a type test certificate and calibration report for the most commonly used device and I checked these to confirm compliance.

The meter certification report contains the correct certification dates and expiry dates but I recommend the certification validity period is made more explicit.

I also recommend WEL develops a type test report checklist to ensure they have type test reports in their possession and that they are all checked against the requirements of the Code.

Recommendation	Description	Audited party comment	Remedial action
With: Clause (1)(1)(d)(ii) & 5(1)(b)(v) of schedule 10.8	Ensure records are more explicit regarding certification validity period Develop a type test report checklist.	Agreed. Certification validity period will be added to meter records in WEL systems.	Identified

8.3 Measuring Transformer Certification (Clauses 2 & 3 of Schedule 10.8)

An ATH must, before it certifies a measuring transformer:

- Ensure, by testing, that a current calibration report sets out the measuring transformer's errors at a range of primary values at their rated burdens
- That is a multi-tap current transformer, carry out the calibration tests and only certify the transformer for the ratios that have been calibrated if the test is passed
- Obtain confirmation of accuracies from the measuring transformer's manufacturer if the rated burden is lower than a test point specified in a standard listed in Table 5 of Schedule 10.1
- Determine the measuring transformer certification validity period

An ATH must, before it certifies an epoxy insulated current transformer, ensure that the certification tests allow for, and the metering installation certification report shows, the current transformer's age, temperature, and batch.

An ATH must, before it certifies a measuring transformer, ensure that:

- The measuring transformer has a current calibration report
- The measuring transformer calibration report:
 - Confirms that the measuring transformer complies with the standards listed in Table 5 of Schedule 10.1
 - Records the tests the ATH has performed to confirm compliance and the results of those tests
 - Confirms that the measuring transformer has passed the tests
 - Records any recommendations made by the ATH on error compensation
 - Includes any manufacturer's calibration test reports
- It produces a measuring transformer certification report that includes:
 - The date on which it certified the measuring transformer
 - The certification validity period for the measuring transformer which must be no more than 120 months
 - The measuring transformer calibration report
 - Whether the certification was based on batch test certificates
 - If the certification was based on batch test certificates, confirmation that the manufacturer's batch testing facility is, in the ATH's opinion, of an acceptable standard
- Confirmation that it has inspected the manufacturer's test certificates, and carried out any additional tests it considers necessary, to satisfy itself that the measuring transformer meets the accuracy requirements of this Part.

WEL does not certify measuring transformers.

8.4 Control Device Certification Report (Clause 4 of Schedule 10.8)

An ATH must, before it certifies a new control device, produce a certification report that:

- confirms that the control device complies with the applicable standards listed in Table 5 of Schedule 10.1
- Includes the details and results of any test that the ATH has carried out to confirm compliance
- Confirms that the control device has passed such tests.

An ATH must, before it certifies an existing installed control device, produce a certification report that:

- Confirms that the control device is fit for purpose

- Confirms the control device certification validity period that the ATH considers appropriate, which must be no more than 180 months.

Compliance with these clauses is discussed in Section 4.25.1.

8.5 Data Storage Device Certification (Clause 5 of Schedule 10.8)

An ATH must, before it certifies a data storage device used for storing information that is used for the purposes of Part 15, ensure that:

- An approved test laboratory has:
 - Conducted type-testing that the ATH considers appropriate for the model and version of data storage device
 - Produced a type-test certificate that:
 - Confirms the data storage device's technical characteristics
 - Confirms the range of environmental conditions within which the data storage device has been proven accurate and reliable
 - Confirms that the data storage device performs the functions for which it was designed
 - Confirms that the data storage device complies with this Part
 - Records the tests undertaken by the approved test laboratory to confirm compliance and the reasons why the ATH considers that they are appropriate
 - It produces a certification report that:
 - Confirms the data storage device complies with the applicable standards listed in Table 5 of Schedule 10.1
 - Records the tests the ATH has performed to confirm compliance with the point above and the results of those tests
 - Confirms that the data storage device has passed the tests
 - Includes the date on which it certified the data storage device
 - Includes the certification validity period for the data storage device for each category of metering installation in which the data storage device may be used
 - Records the maintenance requirements for the data storage device
 - Confirms that each period of data is identifiable or deducible by both date and time on interrogation

- Confirms that the time and date of the following event conditions are recorded in an event log:
 - A loss of the power supply to the data storage device
 - Critical internal alarms such as memory integrity checking, battery low, battery failed, and tampering
 - Phase failure to the meter, if the data storage device is integral to the meter
 - Any software configuration changes
 - Results of time setting comparisons and corrections
 - The transition from, and to, New Zealand daylight time, if the data storage device operates in New Zealand daylight time
- Confirms that the data storage device has the available memory capacity required by the type test
- Confirms that the data storage device has the functionality:
 - To validate instructions from an interrogation system
 - For time comparisons and corrections, in response to a valid instruction
- Confirms that all information logged is referenced to New Zealand Standard Time or New Zealand daylight time
- Confirms that the data storage device has data loss protection providing a continued clock and memory operation for a continuous period of at least 15 days when the power supply to the data storage device is lost.

The data storage device certification validity period must be:

- No more than 180 months, if the data storage device is a discrete metering component
- The same as the meter certification validity period, if the data storage device is integral to the meter.

The memory capacity of the data storage device must not be less than 15 days.

Compliance is achieved with all of the points above, although in Section 8.2 I recommend the records are more specific regarding certification validity periods.

With regard to time setting requirements, the devices record time in NZST and I confirmed by checking some records that the devices have the ability to receive clock reset commands.

8.6 On-site Calibration and Certification (Clause 9 of Schedule 10.8)

A certifying ATH may only calibrate a metering component on site in the metering component's normal working environment and by measuring the influence of all on site variables and including their estimated effects in the uncertainty calculation and ensuring that the effects of any departures from the reference conditions specified in the relevant standards listed in Table 5 of Schedule 10.1 can accurately and reliably be calculated and the metering installation, in which the metering component is incorporated, is within the applicable accuracy tolerances set out in Table 1 of Schedule 10.1 after taking into account all known influences including temperature and temperature co-efficient measurements.

If an ATH calibrates a metering component on site using manual methods, computers, or automated equipment for the capture, processing, manipulation, recording, reporting, storage, or retrieval of calibration data, it must ensure that its computer software is documented in the ATH's procedures and can manipulate the variables that affect the performance of the metering component in a manner that will produce results that would correctly indicate the level of compliance of the metering component with this Code.

An ATH who certifies a metering component on site must include in the metering component certification report confirmation that it has calculated the uncertainty of measurement taking into account all environmental factors for both the metering component being calibrated and the working standards and the calculation of the uncertainty comprises all uncertainties in the chain of calibration and the ATH has used a calibration procedure to calibrate the metering component that was included in the ATH's most recent audit and is appropriate for onsite calibration and includes the methodologies, calculations, and assumptions used by the ATH in determining the uncertainty and the ATH believes the methodologies, calculations, and assumptions are appropriate, including reasons for that belief.

WEL certifies metering components on site but only uses the selected component method; therefore the uncertainty related to environmental factors is not relevant.

9. Record Keeping

9.1 ATH Record Keeping Requirements (Clause 12 of Schedule 10.4)

An ATH must ensure it documents and maintains a record system for all records, certificates, and reports for any activity regulated under this Part.

An ATH must ensure that:

- All its records, certificates, and reports are stored securely
- Each of its test records for a metering installation is identified by a unique identifier
- All of its records, certificates, and reports are sufficiently detailed to enable verification of all aspects of all tests it carries out, including the following:
 - Test conditions
 - Specific test equipment used

The most relevant part of this clause for selected component certification is to ensure records are uniquely identified and stored securely. All certificates have a unique identifier and all records are stored on the server which is subject to normal industry practice in terms of back-ups and security.

9.2 Retention of Records (Clause 13 of Schedule 10.4)

An ATH must, for each activity regulated under this Part in relation to a metering installation and metering component that it certifies and a metering component that it calibrates, retain, for at least 48 months after the date of decommissioning the metering installation or removal of a metering component, all of its records, certificates, and reports and all certification reports produced by the ATH.

WEL intends to keep records for 48 months and they confirm they have kept all records since the ATH commenced certification activities.

9.3 Availability of Records (Clause 14 of Schedule 10.4)

An ATH must, within 5 business days of creating a record, certificate, or report for a metering installation that it certifies, send, in electronic form or such other form as may be agreed between the parties, a copy of the record, certificate, or report to the metering equipment provider responsible for the metering installation and ensure that the metering equipment provider receives the record, certificate, or report.

WEL is both the MEP and ATH where Meridian is the trader and records are available to both functions.

In situations where WEL is installing what is effectively a check meter where they are not the MEP, they should be sending a record to the MEP but currently they are not. This is recorded as non-compliance.

Non-compliance	Description		
With: Clause 14 of schedule 10.4 From/to: Entire audit period	Records not provided to MEP in situations where certification is conducted by WEL but WEL are not the MEP. Indicative impact: None Audit history: None Procedures: Need improvement		
Actions taken to resolve the issue		Completion date	Remedial action Status
Agreed. Provide certification and seal info to MEPs where WEL as ATH is carrying out work on sites where WEL is not the MEP. Start with MEPs with larger numbers of sites working towards all other MEPs.		50% of sites done by October 2015, rest by February 2016	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Set up regular monthly reports once reports format with each MEP has been established.		Progressively as per timetable above	

10. Conclusions

WEL has demonstrated a high level of compliance during this audit and I have only recorded one minor area of non-compliance, in relation to the provision of records to the MEP when the WEL ATH conducts certification, but is not the MEP.

The two recommendations relate to improvements to process documentation and certification records.

WEL has reviewed and improved their quality manual since the last audit. Processes and procedures are now documented in a version of Promapp. The documentation is of a very high standard.

The matters raised are shown in the tables below.

Table of Non Compliance

Subject	Section	Clause	Non compliance	Indicative Impact	Audit History	Procedures	Remedial Action
Availability of records	9.3	14 of schedule 10.4	Records not provided to MEP in situations where certification is conducted by WEL but WEL are not the MEP.	None	None	Need improvement	Identified

Table of Recommendations

Subject	Section	Clause	Recommendation for improvement	Remedial Action
Compliance with other enactments	3.5	10.41 of part 10	Include PPE requirements in ATH documentation.	Identified
Meter certification	8.2	(1)(1)(d)(ii) & 5(1)(b)(v) of schedule 10.8	Ensure records are more explicit regarding certification validity period Develop a type test report checklist.	Identified

11. Signatures



Steve Woods
Veritek Limited
Electricity Authority Approved Auditor

Signed By:



Anna Doerr
Metering Services Business Manager
WEL Networks

12. Audit Summary for Electricity Authority Website

As per clause 9 of schedule 10.2 of the Electricity Industry Participation Code, the Authority is required to publish a summary of each audit report.

Date of audit report:	28/05/15
Participant involved:	WEL Networks Limited
Auditor involved:	Steve Woods – Veritek Limited
Scope of the audit:	<p><u>Clause 4(2) of Schedule 10.3 (Class B) - Functions requiring approval:</u></p> <p>(b) installation and modification of metering installations: (c) installation and modification of metering components: (e) certification, using the selected component certification method, of: (i) category 1 metering installations: (h) issuing of certification reports in respect of certifications of metering installations under paragraph (e): (i) inspection of: (i) category 1 metering installations:</p>
Outcome of the audit:	Non compliance is recorded in relation to one clause. Compliance has been achieved with all other parts of the Code.

13. WEL Response