



Report on
Namibia Standards Institution Quality
Management System
to AFRIMETS TC-QS

By

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Agenda

1. Information on the national metrology system (**National Quality Infrastructure**)
2. Quality policy.
3. Organogram of the NMI.
4. QMS processes and steering mechanisms in the organization.
5. Current accreditations/international recognition.
- 6. Current status of transition plan to ISO 17025:2017**
7. List of updated calibration capabilities covered by the QMS
8. Continuous improvement
9. Audits / external review
10. Addressing weak and strong points
11. Addressing solutions for problems encountered

NATIONAL QUALITY INFRASTRUCTURE

Government

NSI (Standards Act)

Certification
(ISO/IEC 17021)

Metrology (NMI,
Trade Metrology
Act, ISO/IEC
17025

Standards (WTO,
ISO)

Testing &
Inspection
(ISO/IEC 17025,
ISO/IEC 17020

Serviced Industries

- Fishing Industry
- Medical Industry
- Regulators
- Government Ministries and Institutions
- Manufactures

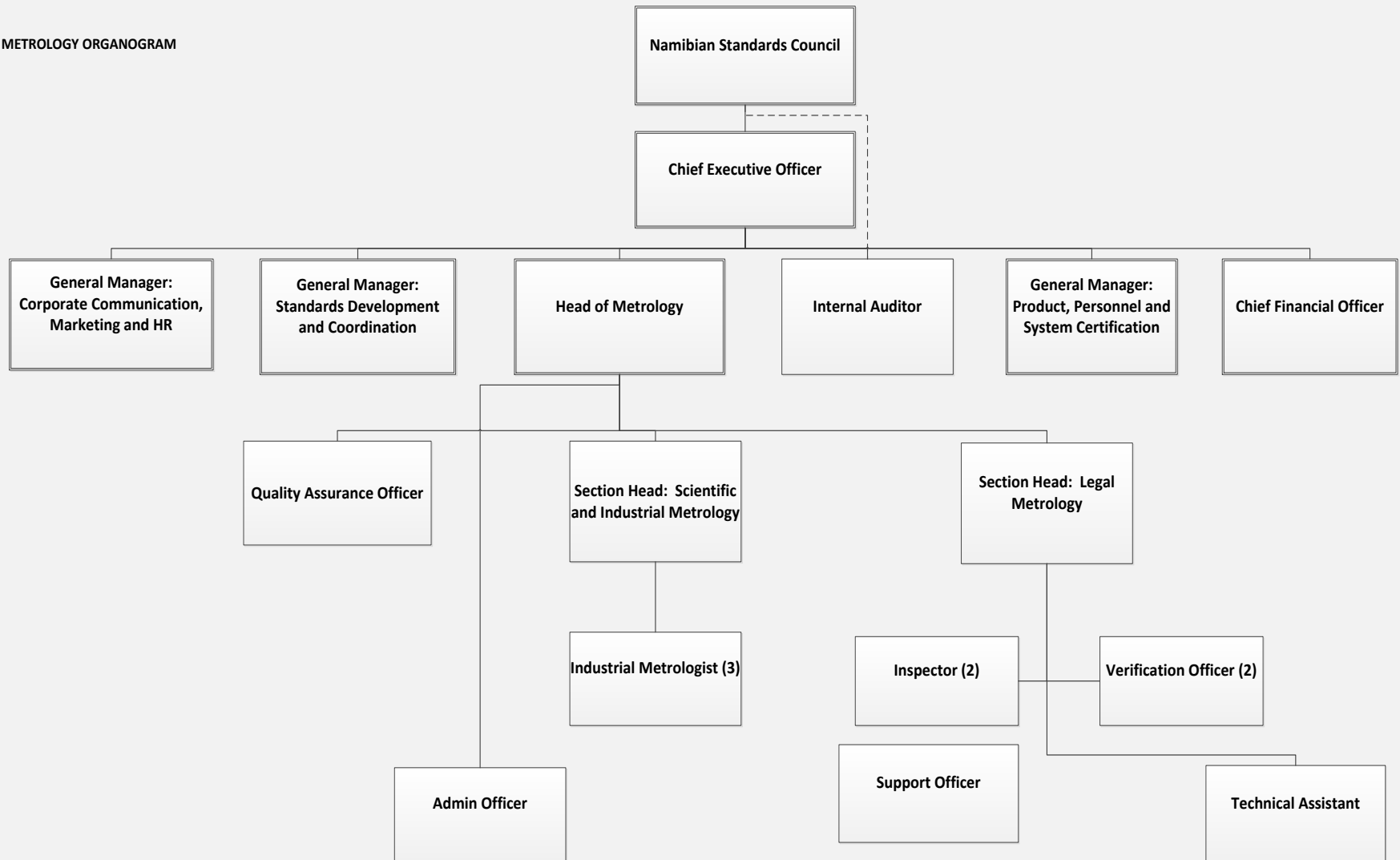
Accreditation
(SADCAS)

QUALITY POLICY

- The NSI Metrology has documented a Quality Policy Statement that is an integral part of the Quality Manual.
- The quality policy issued under the authority of the Laboratory Management and includes Management's commitment to Quality.
- The policy includes the Quality Objectives
- The policy is reviewed as part of transitioning to the new standard to cover risk and management commitment to impartiality.

ORGANOGRAM OF THE NMI

NSI METROLOGY ORGANOGRAM



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QMS PROCESSES AND STEERING MECHANISMS IN THE ORGANIZATION

- Level 1 Company policies
- Level 2 Departmental policies (Quality Manual)
- Level 3 Procedures
- Level 4 Forms and Records

QMS PROCESSES AND STEERING MECHANISMS IN THE ORGANIZATION

- The organisation has the following processes for its QMS:
- Internal audits (1 audit conducted in 2018, 1 gap analysis audit in 2019)
- Customer complaints handling process (On going process)
- Trend analysis of standards for assurance of Quality of results (All Mass standards has been trended after calibration in 2018 and were found to be within OIML R111 MPEs)
- Management Review (1 MRM conducted in 2018)
- Intermediate checks of instruments and equipment (All mass equipment and instruments has been done in 2018)
- Document and records control (On going process)
- Spot and quality checks (On going process)
- Corrective Action (On going process, all findings arising from CA have been addressed)

CURRENT ACCREDITATIONS/INTERNATIONAL RECOGNITION

The NSI Metrology underwent surveillance assessment for reaccreditation in September 2018, the outcomes of the assessment was continued accreditation for both:

Mass Laboratory ([CAL-8 002](#))

Volume Laboratory ([CAL-9 003](#)).

New Accreditation

The facility was underwent initial assessment for the addition of scope (Temperature Metrology) and was granted ([CAL-14 006](#)). Four methods were added namely:

- Digital Thermometry
- Liquid in Glass Thermometry
- Temperature Installations (Single Location)
- Temperature Installations (Multi-location Mapping)

On-site Calibration for Items 1, 3 & 4 above

CURRENT STATUS OF TRANSITION PLAN TO ISO 17025:2017

| Activity | Description | Timelines | Status |
|---|--|--------------------|--|
| Training on ISO/IEC 17025:2017 | The training on the new standard will be given all Scientific and Industrial Metrology personnel and QA, the identified service provider is Steve Sidney Consulting CC | Jan-Feb 2019 | Training completed in February |
| Gap analysis by consultant | The appointed consultant will conduct the gap analysis between ISO/IEC 17025:2005 and ISO/IEC 17025:2017 and pave the way forward | Jan-Feb 2019 | Gap analysis completed in February |
| Document restructuring to the new standards i.e. Quality Manual review. | Re-aligning the current manual to the new standard clause by close taking into consideration the findings of the gap analysis and action plan developed. Development and review of relevant Quality forms. | March - April 2019 | New Management system documented and scheduled for issuing end of July. |
| Internal Audit | Conduct internal audit on the new Quality system developed to establish compliance and adequacy. | May - June 2019 | Delayed by closure of gap analysis findings, rescheduled for end of August |

LIST OF UPDATED CALIBRATION CAPABILITIES COVERED BY THE QMS

Calibration and Measurement Capabilities

Mass and Related Quantities, Namibia, NSI (Namibian Standards Institution)



| Calibration or Measurement Service | | | Measurand Level or Range | | | Measurement Conditions/Independent Variable | | Expanded Uncertainty | | | | | Comments | NMI Internal service identifier |
|------------------------------------|-----------------------------------|---------------------------|--------------------------|---------------|-------|---|----------------|----------------------|-------|-----------------|---------------------|---|-------------------------------|---------------------------------|
| Class | Instrument or Artifact: Measurand | Instrument Type or Method | Minimum value | Maximum value | Units | Parameter | Specifications | Value | Units | Coverage factor | Level of Confidence | Is the expanded uncertainty a relative one? | | |
| Mass | Mass standards | Comparison in air | 1 | 5000 | mg | | | 20 | µg | 2 | 95 % | No | Approved on 03 September 2018 | NSI-01 |
| Mass | Mass standards | Comparison in air | 10 | 10 | g | | | 30 | µg | 2 | 95 % | No | Approved on 03 September 2018 | NSI-01 |
| Mass | Mass standards | Comparison in air | 20 | 50 | g | | | 40 | µg | 2 | 95 % | No | Approved on 03 September 2018 | NSI-01 |
| Mass | Mass standards | Comparison in air | 100 | 200 | g | | | 200 | µg | 2 | 95 % | No | Approved on 03 September 2018 | NSI-01 |
| Mass | Mass standards | Comparison in air | 500 | 2000 | g | | | 2 | mg | 2 | 95 % | No | Approved on 03 September 2018 | NSI-01 |
| Mass | Mass standards | Comparison in air | 5000 | 5000 | g | | | 7 | mg | 2 | 95 % | No | Approved on 03 September 2018 | NSI-01 |
| Mass | Mass standards | Comparison in air | 10000 | 20000 | g | | | 30 | mg | 2 | 95 % | No | Approved on 03 September 2018 | NSI-01 |

CONTINUOUS IMPROVEMENT

The NSI Metrology has the following processes for continuous improvement:

- Evaluation of outcomes of internal audits
- Evaluation of outcomes of external assessments
- management Review meetings and
- Quality Checks.

AUDITS / EXTERNAL REVIEW

One internal Audits was conducted in 2018. The status of findings is summarized in the table below, which compares the year in review against the preceding year.

| NCs | 2017 | 2018 |
|-------------|------|------|
| Total | 14 | 18 |
| Cleared | 14 | 18 |
| Not cleared | 0 | 0 |

AUDITS / EXTERNAL REVIEW

One external assessment was conducted in 2018 for all 3 laboratories, with temperature being a new application. The status of findings is summarized in the table below, which compares the year in review against the preceding year.

| NCs | 2017 | 2018 |
|-------------|------|------|
| Total | 17 | 18 |
| Cleared | 17 | 18 |
| Not cleared | 0 | 0 |

ADDRESSING WEAK AND STRONG POINTS

| Strong points | Weak points |
|---|--|
| Continued efficiency of work and issuing of results as all the Mass Metrologists are technical signatories | Financial challenges due to budget cuts from GRN. |
| Advantage in conducting of internal audits by technical signatories and laboratory personnel that are registered assessors with the accreditation body. | Difficulty with Mass – Weighing instruments comparisons. |
| Accreditation of the Mass, Volume and now Temperature laboratories gives the business and competitive advantage. | |

SOLUTIONS

| Challenges encountered | Solutions |
|--|--|
| Financial challenges due to budget cuts from GRN. | Continuous engagement with the government and increased own generated income and address revenue leakages. |
| Difficulty with Mass – Weighing instruments comparisons. | Approached NLA to get participants to participate in the comparison at NSI |