



Road Pavement Forum - 5th May 2021

Laboratory Testers Certification – ISO 17024
Deeming Competent of Personnel

Barry Pearce

Learning Matters etc

NLA-SA

What's to be covered in this presentation...

- Background – the history
- What is ISO 17024?
- The positive effects of Covid-19
- Trial run & feedback
- Full training/certification program option
- What's included in the certification process
- What's still to be done?
- Timeline going forward



Background – the history



- QCTO/AQP/DQP
 - Very slow, ever changing, bureaucratic process that was hugely frustrating
 - Especially the extreme delay (in excess of 3 years) in finally getting the qualification approved by SAQA & registered
 - Finally approved in Dec 2018 & only because they had to reach a target for published qualifications.
 - If that target wasn't in place I doubt it would have been registered.
- NLA-SA in consultation with SABITA (DQP), other MatCivils committee members (SANRAL, Cement & Concrete SA (*exTCI*) & ASPASA)
 - Qualification possibly not the most effective process for the practical nature of laboratory testing
 - Concerns of too much time away from lab in a class room environment to get thru all the theory modules in QCTO process
 - Decision made to drop the qualification & move to certification of personnel
- NLA-SA proposal to replace QCTO qualification with ISO 17024
- Run by industry for industry thru NLA-SA
 - Independent unbiased lab organisation
- NLA-SA already runs a certification for metrologists
 - A metrologist is a person who studies and practices the science of measurement.
 - Also looking at a similar process for stack emission testers as well

What is ISO/IEC 17024:2012?

- **Conformity assessment for competency of personnel**
- General requirements for bodies operating certification of persons
 - Framework for organisation accredited to provide such certification
 - Similar in nature to the framework for ISO 17025
- This International Standard has been developed with the objective of achieving & promoting a globally accepted benchmark for organizations operating **certification of persons**.
- Certification for persons is one means of providing assurance that the certified person **meets the requirements of the certification scheme**.
- Confidence in the respective certification schemes for persons is achieved by means of a **globally accepted process of assessment & periodic re-assessments of the competence of certified persons**.



The positive effect of Covid-19



- During the hard lockdown, the following was achieved:
- Covid assisted it removing me from my normal travel workload to concentrating on getting all the last bits & pieces together.
- Basically setting up a process for NLA-SA to register as a SANAS accredited certification body (ISO 17024) for deeming competent Civils Laboratory testers
 - Similar process for metrologists & stack emission testers.
- All under one roof of the NLA-SA to ensure an unbiased, independent process complying to international standards
- Less time away from laboratory with training occurring inhouse / on-the-job
 - Training budget in SANRAL site lab contracts extremely helpful in this regard
 - BAHSO productions SANS 3001 videos are already in use in these training endeavours
- Assessed independently to a fixed minimum standard as laid out in the NLA-SA framework documentation

Full process trial run & feedback



- Witnessing trial run @ Afrimat, Worcester
 - Dec 2020 - Jan 2021
- SABITA inhouse training component
 - BAHSO Productions SANS 3001 videos available as inhouse aid to assist as part of a blended training program
 - Witnessing onsite after videos available online for 1 month
 - Sample preparation done the day before
 - 3 candidates on day 1
 - 2 candidates on day 2
 - Numbers split to allow evaluator opportunity to get used to the process
 - Evaluator Feedback - 5 possible in 1 day
 - Process needs to be well planned & managed
- Responses from both participants & evaluator very positive
- Both related well to the witnessing process & found it easy to follow
 - Method of evaluation by candidates
 - Forms & process as explained to evaluator
- Benefits of making use of the videos emphasised by candidates
- Marks obtained from theory
 - Lower than expected
 - Participants agreed that the questions were relevant & of an appropriate standard.
 - Option to redo theory immediately after 1st attempt beneficial

Full training / certification program approach option

- **SABITA training**
- Registration thru SABITA for AG module
- Various online training interventions
 - Intro to course & material type \pm 2 hrs
 - Videos provided to watch in own time
 - Multiple choice questions during video
 - Question & answer platform for comms with course presenter
 - Practice methods under inhouse supervision / mentorship
- Onsite check of competence as part of the SABITA training in readiness for certification



- **Registration for ISO 17024 certification thru NLA-SA**
- Theory assessment
- Witnessing
- Moderation (review)
- Certification
- Witnessing
 - Per material type
 - 1 day per candidate
 - Independent evaluator
 - 3 – 5 candidates / day / material type / independent evaluator
 - 80 % of basic methods only at this point
 - Can be expanded over time to the more complex methods
- Right to appeal decision if not successful



What's the certification process??



- Once candidate confident in their ability
- Registration per material type
 - Initially to be hard copy paper based but will move to electronic
 - Aggregates to open 1st followed by other material types in a phased process
 - Dependent on capacity & industry demand
- Schedule witnessing's as candidates register into regions / venue into batches.
 - Most likely to run 3 – 4 witnessing's in a week/venue
 - 3 – 5 candidates on each day/evaluator
 - = 9 – 20 candidates per week/evaluator
- Theory assessments
 - Online assessment per material type
 - To assess candidate readiness to be witnessed approx. 1 month before witnessing planned
 - Pass – allocated slot in planned witnessing.
 - Fail – retake theory in 1 month
 - Fail again – can only retake theory in 3 months
- Witnessing of competence thru NLA-SA
 - Onsite observations for 80 % of basic methods per material type by independent evaluator
- Review (Moderation) of outcomes of theory & witnessing
 - If unsuccessful – will need to reregister
 - Option to appeal decision
- Certification approved & certificate issued for 5 years
- Database of testers.
- Reassessment after 5 years based on
 - Still actively working in the industry
 - Various CPD type activities applicable to testers undertaken during the 5 year period.
 - Possible online theory to assess knowledge is current to any changes made to test methods during the 5 year certification period.

What's still to be done??

- Review (moderation) committee
 - Representation from SANRAL, UT's, Reference Lab, MatCivils, NLA
 - Aim – consistency of evaluators application of the procedures, comments & mark allocation
- Scheme committee
 - Representation
 - Review committee members
 - Industry representation
 - SABITA, ASPASA, TCI, commercial labs
 - Aim – ensure documented procedures applicable to outcomes required by the industry
- Costing
 - Needs to finalise with all costing
 - Scheme committee meeting planned mid-June
 - Bit of a “scientific” thumb suck
 - Might need some fine tuning into 2022
 - Once a few assessment have been undertaken



- CPD activities
 - To be agreed upon by Scheme committee
 - Looking at activities that will be appropriate for civil testers
 - Online quiz/theory questions
 - Continued employment in industry
 - Attendance of seminars /webinars/ conferences /industry forums
- Recertification
 - As per CPD requirements
 - Applicable after 5 years
 - No witnessing activities therefore at a lower cost than initial certification.
- Evaluator training
 - Easy to do online with standard forms
- Sample preparation witnessing facility
 - Attendance: doing the prep 1st time round
 - Standard info available as to what's required

Both these activities will be observed for the 1st round.

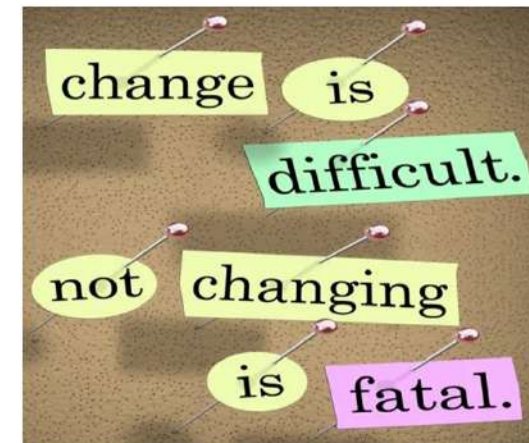


Timeline going forward

- Review committee & Scheme committee members invites going out ***this week***.
- NLA inhouse Costing meeting
 - **21st May**
- Scheme committee meeting
 - Week of **14th / 21st June**
 - To approve proposed changes
 - Costing initial & recertification
 - Splits between theory & witnessing % required to pass
 - CPD activities
 - Order of materials to follow Aggregates



- Planned Rollout
 - from **mid-July 2021**
 - Starting with Aggregate methods





Watch this space.....

Register & get your lab testers certified