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**SUBJECT: Proficiency Testing (PT) and Inter/
Intra – Laboratory Comparison
(ILC) Program for DPWH Materials
Testing Laboratories**

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In line with the Department's commitment to improve the construction materials quality assurance program for government infrastructure projects, and consistent with the Department's policy for Star Rating System of DPWH Materials Testing Laboratories, the corresponding guidelines for the participation in Proficiency Testing (PT) and the conduct of DPWH Inter/Intra-Laboratory Comparison (ILC) Program are hereby prescribed.

The Bureau of Research and Standards (BRS), and DPWH Regional and District Materials Testing Laboratories (MTLs) who are processing their ISO/IEC 17025 accreditation, may participate in Proficiency Testing following the requirements prescribed herein. Meanwhile, the BRS, and DPWH Regional MTLs who will meet the criteria to be identified by the DPWH Inter/Intra-Laboratory Comparison Technical Committee (ILC-TC), shall participate in the DPWH ILC Program.

The BRS and DPWH ILC-TC shall develop a PT Program Guide, and ILC Program Guide including the criteria for participation in ILC program, respectively, subject to the approval of the Undersecretary for Technical Services. Furthermore, the DPWH ILC-TC may nominate DPWH Regional MTLs who may participate in pilot testing of the ILC Program for the development and improvement of the program guide.

MANUEL M. BONOAN
Secretary

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Department of Public Works and Highways
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**Guidelines for the Participation in Proficiency Testing (PT) and
the Conduct of Inter/Intra-Laboratory Comparison (ILC) Program for
DPWH Materials Testing Laboratories**

1.0 Definition of Terms

- 1.1 Inter-Laboratory Comparison (ILC) - organization, performance and evaluation of measurements or tests on the same or similar items by two or more laboratories or inspection bodies in accordance with predetermined conditions. ^[6.1]
- 1.2 Intra-Laboratory Comparison (ILC) - organization, performance and evaluation of measurements or tests on the same or similar items within the same laboratory (a body that performs one or more of the following activities: testing, calibration, sampling – associated with subsequent testing or calibration) in accordance with predetermined conditions. ^[6.1]
- 1.3 Materials Testing Laboratory (MTL/MTLs) – laboratory which measures, examines, conducts analyses or otherwise determine the characteristics or performance of construction materials or products. The Materials Testing Laboratories of BRS and DPWH Regional and District Offices shall individually be referred to as BRS, RMTLs, and DMTLs, respectively, and collectively be referred to as DPWH MTLs in this guideline for brevity.
- 1.4 Nucleus Laboratory - laboratory which takes responsibility for the development and operation of an Inter-Laboratory Comparison (ILC) program.
- 1.5 Participant Laboratory - laboratory which takes part in the Inter-Laboratory Comparison (ILC) by conducting analysis of test items received from the Nucleus Laboratory and submitting the results to the same.
- 1.6 Proficiency Testing (PT) - Evaluation of participant's performance against pre-established criteria by means of inter-laboratory comparison. ^[6.1]
- 1.7 Proficiency Testing (PT) Provider - ISO/IEC 17043-accredited organization that provide Proficiency Testing (PT) services for a fee.

2.0 Participation in Proficiency Testing (PT)


- 2.1 DPWH MTLs (BRS, RMTLs and DMTLs) who are processing their ISO/IEC 17025 accreditation may participate in the Proficiency Testing (PT). The corresponding participation fee that may be required for this program may be charged to appropriate funds of their respective Offices, subject to the existing laws, policies or guidelines pertinent to the use of such funds.
- 2.2 Participation in PT shall be made within two (2) years prior to application for ISO/IEC 17025 accreditation. Meanwhile, DPWH MTLs who already attained their ISO/IEC 17025 accreditation shall participate in PT for each laboratory tests of construction materials that are part of the scope of their accreditation, whenever possible.



- 2.3 The PT shall primarily focus on laboratory tests of construction materials that are part of the scope of ISO/IEC 17025 accreditation of the concerned DPWH MTL. Laboratory tests of construction materials that are not part of the scope of their ISO/IEC 17025 accreditation, but are in the process of being included within the next two (2) years may also be added to the PT.
- 2.4 DPWH MTLs shall participate in PT at least once every two (2) years, preferably once a year, to ensure the highest quality of testing while complying with the requirements of ISO/IEC 17025.
- 2.5 DPWH MTLs participating in PT shall ensure that the PT Provider has a valid and updated ISO/IEC 17043 accreditation. They may check the APAC PT 03- APAC Proficiency Testing Directory, European Information System on Proficiency Testing Schemes (EPTIS) database (<http://www.eptis.bam.de>) and/or National Accreditation Bodies such as the Philippine Accreditation Bureau for available PT programs and/or ISO/IEC 17043 accredited PT Providers.
- 2.6 A PT Participation Plan shall be prepared by the concerned DPWH MTL based on the tests they intend to include and the requirements of the PT and the PT Provider. The concerned DPWH MTL shall also submit to the BRS their approved PT Participation Plan for reference purposes.
- 2.7 The PT shall be conducted in accordance with the Standard Test Methods used by the DPWH, unless otherwise specified in the instructions from the PT Provider.
- 2.8 The concerned DPWH MTL shall review their performance for every PT participation. If their performance has unsatisfactory results, they shall conduct a root cause analysis, and prepare and implement a Corrective Action Plan. They shall also furnish a copy of the results of their PT participation and the corresponding Corrective Action Plan (if applicable) to the BRS for evaluation and/or reference purposes.
- 2.9 The concerned DPWH MTL shall participate in PT for test/s with unsatisfactory results upon complete implementation of the Corrective Action Plan.
- 2.10 The BRS shall develop a PT Program Guide, which may include the processes and other specifics of the PT Participation Plan, performance review, and other applicable information that may be used by other DPWH MTL for the preparation and satisfactory participation in PT. The PT Program Guide shall be submitted for review and approval of Undersecretary for Technical Services, and shall form as part of the Department's policy for participation in PT.

3.0 DPWH Inter/Intra-laboratory Comparison (ILC) Program

Participation in Inter/Intra-Laboratory Comparison (ILC) activities is one of the alternative options to comply with the requirements of ISO/IEC 17025 accreditation when there are no PT Providers for a specific test which is part of the scope of accreditation, or in the process of inclusion within the next two (2) years. An ILC Program will also be an avenue to objectively evaluate the competencies of participating laboratories as well as identifying lapses that may



be corrected thru appropriate measures. Considering the above, the guidelines for the conduct of DPWH ILC Program is hereby prescribed.

- 3.1 A DPWH ILC-TC composed of members from BRS and one representative from each of the DPWH Regional MTL shall be established. The ILC-TC shall be responsible for the development of the *DPWH ILC Program* and *DPWH Inter-Laboratory and Intra-Laboratory Comparison Program Guides*, and the oversight on the implementation of activities relative to the ILC, including but not limited to clustering, identifying the nucleus laboratory, monitoring of implementation of Corrective Action Plans, and preparation of consolidated reports of results of ILC. A Technical Working Group (TWG) may be established to assist the DPWH ILC-TC in performing its functions. The composition of the ILC-TC shall be approved by the Undersecretary for Technical Services.
- 3.2 The DPWH ILC Program shall follow the framework of ISO/IEC 17043 to the extent possible. Consequently, the DPWH ILC Program Guide shall be developed to ensure compliance with this requirement. The DPWH ILC Program Guide shall be reviewed at least once a year by the ILC-TC to ensure continuous compliance with the requirements of the ISO/IEC 17043 and to introduce adjustments to the program if necessary.
- 3.3 The DPWH ILC Program Guide shall be submitted for review and approval of Undersecretary for Technical Services, and shall form as part of the Department's policy for the conduct of DPWH ILC Program
- 3.4 The ILC-TC shall also develop the Criteria for Participation for the DPWH ILC Program. These criteria are necessary to evaluate the readiness of DPWH MTLs to participate in the program in order to maintain the integrity of the results of the ILC.
- 3.5 Only the BRS and DPWH RMTLs who meet the Criteria for Participation shall be allowed to participate in the DPWH ILC Program during its development and pilot testing stage. DPWH DMTLs who seek to participate in the DPWH ILC Program during these stages shall acquire the endorsement of the ILC-TC and the approval of the Undersecretary for Technical Services.
- 3.6 The participant laboratory shall review their performance for every DPWH ILC Program participation. If their performance has unsatisfactory results, they shall investigate possible lapses, review their technical competence, and prepare and implement a Corrective Action Plan. The corresponding Corrective Action Plan shall be submitted by the participant laboratory to the ILC-TC for evaluation and consolidation.
- 3.7 The results of the DPWH ILC and the respective Corrective Action Plan submitted by the participant laboratory (if any) shall be reviewed, evaluated and consolidated by the ILC-TC. An audit may be conducted to monitor the implementation of the Corrective Action Plan and to evaluate its effectiveness.



4.0 Performance in PT Participation and DPWH ILC Program

DPWH MTL who successively shows unsatisfactory results, failure to participate, or pattern of erratic results in their participation to PT and/or DPWH ILC Program shall be inspected and audited to identify possible lapses. The ILC-TC shall establish the inspectorate team based on the criteria that will be issued for this purpose.

5.0 Disposal of Test Item(s)

- 5.1 Test item(s) from the PT Participations and DPWH ILC Program shall be checked by the DENR-EMB Recognized Pollution Control Officer of the DPWH Materials Testing Laboratory which participated in PT and/or ILC Programs if the test items are classified as hazardous waste
- 5.2 Test item(s) from the PT Participation and ILC Programs which are not classified as hazardous shall follow the ISO/IEC 17025 - compliant procedure on disposal of test samples.
- 5.3 Test item(s) from the PT Participation and ILC Programs which are classified as hazardous shall follow the DPWH Materials Testing Laboratory's procedure on disposal of hazardous waste as provided for by Department Order No. 74, Series of 2020 (DPWH Guidelines on Chemical and Hazardous Wastes Management for DPWH Offices).

References

1. ISO/IEC 17025:2015 - General Requirements for the Competence of Testing and Calibration Laboratories
2. ISO/IEC 17043:2010 – Conformity Assessment – General Requirements for Proficiency Testing
3. Philippine Accreditation Bureau LA/SR01 - Supplementary Requirements on Participation to Proficiency Testing Programs (Issue No. 2, Effective Date: 27 April 2020)
4. Department Order No. 74, Series of 2020 (DPWH Guidelines on Chemical and Hazardous Wastes Management for DPWH Offices).
5. https://inis.iaea.org/collection/NCLCollectionStore/_Public/47/056/47056988.pdf

