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Dear Sirs,

ADVICE ON CARRYING OUT CONSTRUCTION TESTS

In Singapore, many building materials, including those for structural use such as steel reinforcement, prestressing wires, steel sections, etc, are imported. The quality of the materials can vary significantly, depending on the technology used and the quality control of the manufacturers. Poor quality materials, if not detected, can undermine the structural integrity of the building.

2 Under Section 12 of the Building Control Act and Regulation 39 of the Building Control Regulations, the Qualified Person (QP) is required to carry out essential tests on the materials used in the building works and such tests are to be carried out in an accredited laboratory. The regulation also requires that the taking of samples for such tests to be carried out under the supervision and direction of the QP. The relevant sections of the Act and Regulation are attached at Annex A for your reference.

3 QPs should give instructions to site supervisor on the number and frequency of tests to be conducted. Preferably, samples of materials (e.g reinforcement bars) should be sent for testing for each batch of materials delivered to site instead of only one test conducted at the beginning of the project. The mill or manufacturer's certificates should not be taken as proofs that the quality of the material is acceptable. Samples of the materials should be selected randomly by the QP or his site supervisor and not by the builder. When there are doubts on the quality or origin of the material, further tests could be carried out on the material composition.

4 Carrying out sufficient test on material is an important measure to ensure the quality of the structural works. The QP and his site supervisors must take all steps and exercise due diligence in ensuring that the building works are carried out properly and in accordance with approved plans and specifications. In the event of any test failure, the QP should investigate and inform BCA of his action plan.

5 I would appreciate it, if you could disseminate the contents of this letter to your members. Please contact Senior Manager / Chew Keat Chuan at Tel 63257585 if you need further clarification.

6 Thank you.

Yours faithfully

This is a computer-generated document. No signature is required

ONG CHAN LENG

DIRECTOR

BUILDING ENGINEERING DIVISION

for COMMISSIONER OF BUILDING CONTROL

CAP. 29 **Building Control Act**

Tests of or in connection with building works

12. (1) Subject to subsection (3), the qualified person appointed under section 6 (3) in respect of the structural elements of any building works shall carry out or cause to be carried out such tests of or in connection with the building works as may be prescribed or required by the Commissioner of Building Control.

(2) Any tests that may be prescribed, or required to be carried out, under subsection (1) shall be carried out in such manner and at such places and times as may be prescribed in the building regulations.

S 666/2003 **Building Control Regulations**

Construction tests

39. (1) The tests to be conducted of or in connection with building works under section 12 (1) of the Act shall be in accordance with the objectives and performance requirements set out in the Fifth Schedule.

(2) For the purposes of section 12 (2) of the Act, construction tests to be carried out in respect of the materials used in the building works and the building works shall be carried out in the following manner:

- (a) any test that is to be carried out at the premises where building works are carried out shall be carried out under the direction and supervision of the qualified person appointed under section 6 (3) (b) of the Act in respect of the structural elements of those building works;
- (b) any test that is to be carried out in a laboratory shall be carried out in a laboratory approved by the Singapore Accreditation Council under the Singapore Laboratory Accreditation Scheme (SAC-SINGLAS);
- (c) the taking of any sample of subject-matter for carrying out such tests shall be carried out under the supervision and the direction of the qualified person appointed under section 6 (3) (b) of the Act in respect of the structural elements of those building works; and
- (d) any test of materials used in building works shall be conducted on a sample taken from the same materials used or to be used in the building works.