

BUILDING (OIL STORAGE INSTALLATIONS) REGULATIONS1. AMENDED LEGISLATION

1.1 The legislation governing oil storage installations has been amended to impose greater control over their design, construction, maintenance and licensing with the overall aim of minimising the risk of environmental pollution. The changes to the legislation are as follows :-

(a) Buildings (Amendment) Ordinance 1983

(b) Building (Oil Storage Installations)(Amendment) Regulations 1983

and therefore you are advised to obtain copies of these as well as their parent documents, if necessary, in order that their contents are fully realised and understood. Regulation 126 of the Dangerous Goods (General) (Amendment) Regulations 1978 should also be complied with in conjunction with the above requirements.

1.1.1 Buildings (Amendment) Ordinance 1983

The definition of 'building' in section 2 of the principal Ordinance is extended to include 'cavern' in the event that bulk storage of petroleum products is contemplated below ground level; this type of storage is not to be confused with underground storage tanks for vehicle filling stations.

1.1.2 Building (Oil Storage Installations)(Amendment) Regulations 1983

The Regulations have been revised to give the Building Authority additional powers to empty tanks in an installation where an owner is in default of an order under Regulation 9. Also the formats of Forms A and B have been revised.

2. The Code of Practice for the Design, Construction and Maintenance of Oil and Petroleum Feedstock Installations

2.1 Under the Regulations an oil storage installation above ground is deemed to satisfy the requirements of the Regulations if it meets the standards set out in the revised Code of Practice published in 1983. This document comprises four sections dealing with general matters, design and construction, associated equipment and operation and maintenance.

3. Procedures in respect of the Building (Oil Storage Installations) Regulations3.1 Existing Oil Installations

3.1.1 All existing and established oil installations within Hong Kong have been licensed by the Building Authority on the basis that the operators have complied with the statutory requirements of the Regulations and have carried out the necessary remedial works or tests to satisfy the standards of the Code of Practice.

3.2 New Installations and Alterations and Additions to existing Oil Installations involving new tank or tanks

3.2.1 Submissions in respect of oil storage installations are processed in the usual way so Authorised Persons should ensure that the first submission includes :-

- completed Forms 9 and 10
- completed Form 29 as appropriate
- the site formation plans (if required), foundation plans, structural plans and general building plans, drainage plans with supporting calculations for separators.
- site investigation reports including full geotechnical data with permeability test results. These plans will be processed to approval in the normal manner. In this connection you are advised that the general plans should be submitted in sextuplicate. One set of all the plans should be coloured in the usual way.
- if the proposals include marine works e.g. jetty, dolphins etc. then one additional set of plans, site investigation reports and calculations should be submitted.

3.2.2 As soon as possible after the approval of all the plans the prospective licensee's 'Operation Instructions relating to oil pollution control in the operation and management of the installation and its associated structures' should be submitted in duplicate for approval in principle. When the Buildings Ordinance Office is satisfied that the Operation Instructions may be approved in principle, following any amendments to the drawings which the processing of Operation Instructions may reveal to be necessary, one copy of the Instructions will be returned for later submission with the Form A application referred to in (3.2.3) below.

3.2.3 Upon completion of the oil storage installation building works Authorised Persons should then apply on a Form 20 for an occupation permit. Once an occupation permit has been granted a completed Form A (signed by the operator of the installation) should be submitted along with the approved-in-principle Operation Instructions. However both applications may be processed concurrently except that it will not be possible to issue the operating licence, on Form B, until the Demand Note for the statutory fee of \$2000.00, which will be issued with the occupation permit, has been paid.

3.2.4 Once new tankage constructed within an existing licensed installation has been completed according to the approved plans and tested to the satisfaction of the Building Authority the operator should then return the current Form B with the fresh Form A and the Certificate of General Inspection for the new tank/s so that a suitable endorsement to the original licence to include the new tank/s can be made.

3.2.5 If extreme weather conditions are predicted or typhoon alerts are indicated by the Royal Observatory then the A.P. or R.S.E. must ensure that adequate precautions are taken in advance to prevent structural members or component parts of incomplete tank construction or repair being forcibly separated from the parent structure and puncturing or damaging adjacent stocked tanks and pipework. Any such threat must be taken very seriously as there is a real and proven danger of severe damage to partially constructed tankage due to the effect of typhoon winds.

4. Licensing procedure in relation to Regulation No. 8

4.1 Where an authorised person or registered structural engineer is dealing with a licence application for an installation having one or more storage tanks which may be found to contain significant quantities of residual oil sludge, the Building Authority will treat an application for a modification to the requirements of this Regulation under Section 42 of the Buildings Ordinance sympathetically.

4.1.1 In justification of the application for such modification the R.S.E., on behalf of the operator must certify that the tank(s) cannot be inspected without removal of the sludge and state the approximate quantity of sludge still retained within the tank(s) and that there is no environmentally acceptable method for dealing with the problem within Hong Kong at the time of application, known to the applicant or the operator.

4.1.2 However in considering such an application the Building Authority will take into account all prevailing conditions, including sludge disposal facilities available at that time, to ensure that the request is justifiable.

4.1.3 An external inspection of the tank as described in Regulation 8(1)(b) will be required prior to the granting of such a permit and a certificate, (8(1)(b)), duly signed, must be submitted with the licence application and the application for such a modification to these Regulations.

4.1.4 The Permit (Form 30), if granted will, inter alia, state that its granting is subject to the following conditions :-

'that when, in the opinion of the Building Authority, satisfactory means for disposal of oil sludge exist in Hong Kong, the Building Authority shall, with reasonable notice, require the removal of such sludge from the tanks concerned and its proper disposal and thereafter the required internal inspection shall be made and the appropriate certificate(s) signed and forwarded to the Building Authority.'

4.2 Requirements in relation to Regulation No. 8 : Certificate of External Inspection - 8(1)(b)

4.2.1 It is the intention of the Building Authority to make the annual external inspection of the tank shell and the shell/bottom plate joint more comprehensive by identifying specific items of particular interest as having been examined and found satisfactory or in need of corrective attention. The testing of the first and second courses of the tank shell by ultrasonic measurement is considered to be more positive in terms of determining metal thickness than the previous superficial examination, although it is recognised that the probing points can only be taken at specific locations and therefore may overlook thinner areas. However the object is to aim for a more thorough evaluation of the tank shell's structural competence.

4.2.2 All storage tanks including those newly constructed require a certificate of external inspection to be submitted to the Building Authority before a renewal of licence can be considered. The reverse of the certificate summaries the settlement performance within the previous twelve months. The stipulation of exact settlement limits is not considered practical as the choice of the base plate profile, roof type, prevailing ground conditions and type of foundation can influence the criteria. Nevertheless the operator and the R.S.E. must be satisfied that the in-service performance of the tank and the surrounding tanks is not adversely affected by the settlement results otherwise the tank should be withdrawn from service and rectified.

4.2.3 A tank which is to undergo a structural repair because of defective shell plates must upon completion of the remedial works be tested, normally by a radiographic analysis of the welds followed by a water test, and the results submitted to the satisfaction of the Building Authority.

4.2.4 In the event of a sudden or anticipated tank foundation failure or repair requiring the tank to be withdrawn from service the R.S.E. must submit his remedial measures to the Building Authority for approval and then upon completion of the work submit the Certificate of External Inspection.

5. Practice No. 1979.60 is incorporated herein, and is therefore cancelled.



(CHAU Cham-son)
Building Authority

EDD(B) GP/BREG/A/6/1

Revised May 1978
Mar. 1984

Index under : Oil Storage Installations