Circular Letter No.: 2023.187

Issue Date: 21 July 2023

Application: BEAM Plus NB Version 2.0

Effective Date: 21 July 2023

IDCM 12 Operator Training plus Chemical Storage and Mixing Room

1. The Technical Circular Letter hereby announces an update to the credit content for **IDCM 12 Operator Training plus Chemical Storage and Mixing Room** under BEAM Plus NB v2.0.

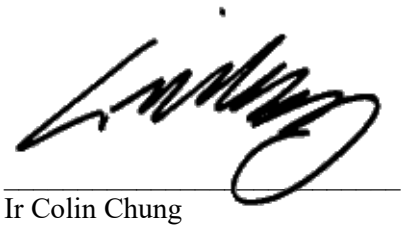
2. The aim of the update is to clarify the assessment criteria of (b) Chemical Storage and Mixing Room under IDCM 12 on the provision of chemical storage area and chemical mixing area in a project development.

3. The requirements given in Section 2.2 of the BEAM Plus NB v2.0 Manual (2021 Edition) are hereby updated with the enclosures in Annex A of this Technical Circular Letter.

    - Pages Annex A-1 to A-5 shall replace all contents in Section 2.2 on IDCM 12 specified in Pages 94 to 98 of the Manual.

4. Approved PA projects: For projects that have already completed PA and have certain assessment approach approved, the Applicant may opt to adopt the same assessment criteria for FA or voluntarily comply with this Technical Circular Letter. For the avoidance of doubt, the Applicant shall provide PA evidence (e.g., extract of the PA report, documents submitted for assessment in PA, etc.) in subsequent assessments to support the intention of using the same assessment methodology as in PA.

5. For the ease of reading, the credit content in Pages Annex A-1 to A-5 of this Technical Circular Letter has incorporated the previously published FAQ #147 for IDCM 12, which was issued on 28 Jan 2022.



Ir Colin Chung
Chairperson of Standards Sub-committee

Annex A:
Updated Credit Content for Section 2.2 under BEAM Plus NB v.2.0

2	**Integrated Design and Construction Management**	**2.2**	**Green Construction Practices**
		IDCM 12	**Operator Training plus Chemical Storage and Mixing Room**

Extent of Application All buildings

Objective Encourage the provision of training for operations and maintenance staff to the minimum specified and demonstrate adequate maintenance facilities are provided for chemical storage and mixing.

Credits Attainable 1

Credit Requirement 1 credit for providing training for operations and maintenance staff to the minimum specified; and demonstrating that adequate maintenance facilities are provided for chemical storage and mixing.

Assessment

(a) Operator Training

1. The training program should be carried out for the appointed Facilities Management Team or client representatives.

2. The training program shall cover as a minimum the items listed below:

   2.1. General purpose of each building system including basic theory of operation, capabilities and limitations, and modes of control and sequences of operation;

   2.2. Review of control drawings and schematics;

   2.3. Procedures for start-up, shutdown, seasonal changeover, normal operation, unoccupied operation and manual operation;

   2.4. Controls set-up and programming;

   2.5. Troubleshooting;

   2.6. Alarms;

   2.7. Interactions with other systems;

   2.8. Operational monitoring and record keeping requirements, and the use of data for analysing system performance;

   2.9. Adjustments and optimising methods for energy conservation;

   2.10. Any relevant health and safety issues;

   2.11. Inspection, service, and maintenance requirements for each system, including any need for specialised services;

   2.12. Sources for replacement parts/ equipment; and

   2.13. Any tenant interaction issues.

3. The demonstration portion of the training program shall include the following:

   3.1. Typical operation examples of each system;

3.2. Start-up and shutdown procedures;

3.3. Operation under all specified modes of control and sequences of operation;

3.4. Procedures under emergency or abnormal conditions; and

3.5. Procedures for effective operational monitoring.

4. Verify that the training of the building's operations and maintenance staff was undertaken for all commissioned systems and major equipment, using the operations and maintenance manual, and the energy management manual as the basis for the training.

5. A permanent room for training is not necessary. Evidence of carrying out operator training (e.g. record of attendance) is required.

(b) Chemical Storage and Mixing Room

1. A chemical storage area and/ or a chemical mixing area should be provided for the project development, for the purpose of housekeeping and/ or mixing of chemical products that create odour during their mixing processes. Chemical products include HVAC and cleaning relates (e.g. refrigerants, cleansing chemicals) for all building's future operation and maintenance items and equipment.

2. The following table sets out the buildings required to provide chemical storage and/or chemical mixing provision;

Parts of the building	Type of A/C System	Requires Chemical Storage Area	Requires Chemical Mixing Area
Domestic[1, 2]	Window-type units	×	×
	Split-Type/ VRF system without fresh air provisions	×	×
	Split-Type/ VRF system with fresh air provisions (including DX-PAU and fresh air processing units)	×	×

Non-Domestic[3]	HVAC plant[4] installed within the assessment boundary	✓	✓
	District cooling system or chiller plant installed outside of the assessment boundary	✓	✗
	Split-Type/ VRF system without fresh air provisions	✓	✗
	Split-Type/ VRF system with fresh air provisions (including DX-PAU and fresh air processing units)	✓	✗

Note:

[1] Domestic refers to the part of a composite building that is constructed or intended for habitation. This may include residential flats and dormitories.

[2] The requirement on chemical storage area and chemical mixing area is exempted for the domestic parts of the building given that the habitant will be responsible for the operation and maintenance of their personal domestic space.

[3] Non-domestic refers to the part of a composite building that is constructed or intended for use otherwise than for habitation. This may include clubhouses, offices, hotel rooms, shopping arcade, cinema, common entrance.

[4] HVAC plant refers to HVAC related plant for cooling and/or heating generation (e.g. chiller plant, heat pump plant, cooling tower plant, etc.)

3. No size requirement for the chemical storage area and/ or chemical mixing area.

4. Submit details in the form of drawings and a report with ventilation calculation [1] to demonstrate the compliance of the following functional requirements of chemical storage and/ or mixing provision where applicable:

   4.1. For chemical storage area

   A lockable room for cleansing services (e.g. janitor room, cleaner's store) or a lockable cabinet within an operation and maintenance facility [2,3]

[1] Ventilation calculation is only required for chemical mixing area serving by both exhaust air and fresh air equipment.
[2] Operation and maintenance (O&M) facility refers to an indoor area having the function compatible to workshop, store room, chiller plant room or A/C plant room. Locations such as RS&MRC; refuse room; toilet; pipe duct; and plant rooms for electrical/ ELV/ fire services are not appropriate for chemical storage.
[3] For project developments which only require to provide chemical storage areas and without the O&M facility mentioned in footnote 2, the Applicant can propose other O&M facility such as plant rooms for plumbing and drainage system, maintenance office etc.

4.2. For chemical mixing area

An area within an operation and maintenance facility equipped with the following building services installation:

a. Separate outside venting or exhaust route to centralised exhaust riser with non-return damper at the branched duct for the designated room; and maintain negative pressure with respect to adjacent spaces when the doors to the room are closed; and

b. Water supply point for mixing and diluting concentrated products; and

c. Drainage point for the appropriate disposal of liquid waste products.

5. Co-location of chemical storage area and chemical mixing area in a single operation and maintenance facility is acceptable so long if all functional requirement has been fulfilled.

Submittals

Supporting Documents *Please provide softcopies with filename prefix as indicated on the leftmost column below.*		**PA**	**FA**
IDCM_12_00	BEAM Plus NB submission template for IDCM 12	✓	✓
IDCM_12_01	Owner's requirements/ specification on the provision of program and records of operation and maintenance training.	✓	-
IDCM_12_02	Copies of Training program (e.g. PowerPoint presentation, training manual, etc.) which cover the items listed in the assessment criteria.	-	✓
IDCM_12_03	Evidence of operator training (e.g. sample record of attendance) verifying that training of the building's operations and maintenance staff was undertaken for all commissioned systems and major equipment, using the operations and maintenance manual, and the energy management manual as the basis for the training.	-	✓
IDCM_12_04	Plumbing and drainage drawing(s) to show the required water supply point and drainage point are provided in the chemical mixing area (if applicable)	✓	✓
IDCM_12_05	MVAC drawing(s) and calculation demonstrating that the designated room with chemical mixing area is equipped with the required ventilation provisions (if applicable).	✓	✓
IDCM_12_06	Architectural drawing(s) to show the chemical storage area indicating the location of the lockable room/ lockable cabinet and/ or chemical mixing area (if applicable)	✓	✓

Remarks

(a) Additional Information

None

(b) Related Credit

None

