KURSUS : INDOOR AIR QUALITY (IAQ) MODUL 1

Tarikh : 27hb & 28hb Mei 2014

Tempat : Bilik Latihan Tingkat 19, CKM IPJKR Malaysia

Prepared By: Ir Isfanizam bin Ismail

KURSUS : INDOOR AIR QUALITY (IAQ) MODUL 1

BIODATA PENCERAMAH :

	Tahun	Agensi
	April 05- Sept 09	JPP KeTTHA
	Okt 09 – Dis 11	CKBA JKR
	Jan 12 -	CKM JKR IP

JMK Ir Isfanizam bin Ismail
Unit Pakar Penyaman Udara & IEQ

KURSUS : INDOOR AIR QUALITY (IAQ)
MODUL 1

SILA PERKENALKAN DIRI ANDA:

1)Nama

2)Tempat Bekerja

3) Tugasan & Fungsi

4) Pengalaman dalam bidang IAQ jika ada

KURSUS : INDOOR AIR QUALITY (IAQ)

MODUL 1

- JADUAL:

MASA	PERKARA	PEGAWAI BERTANGGUNGJAWAB
Hari 1 : 27/05/2014		
8.00 pagi - 8.30 Pagi	Pendaftaran Peserta	Urusetia
8.30 pagi - 10.30 Pagi	**SESI 1 :** ● Introduction, Concept & Definition *IAQ* ● Legislative Requirement, COP and Related Standards	Penceramah : Ir. Isfanizam b. Ismail
10.30 pagi-11.00 Pagi	Rehat & Minum Pagi	
11.00 pagi - 1.00 Petang	**SESI 2 :** ● Indoor Air Contaminant and Health Effect ● Causes of IAQ problems	Penceramah : Ir. Isfanizam b. Ismail
1.00 tghri - 2.30 Petang	Rehat & Makan Tengahari	
2.30 ptg - 4.30 ptg	**SESI 3 :** ● *How to overcome IAQ problems in buildings* ● *Control of IAQ Problem* ● IAQ Best Practice & Guides	Penceramah : Ir. Isfanizam Bin Ismail
5.00 petang	Minum Petang	

MASA	PERKARA	PEGAWAI BERTANGGUNGJAWAB
Hari 2 : 28/05/2014		
8.00 pagi	Pendaftaran Peserta	Urusetia
8.30 pagi - 10.30 Pagi	**SESI 1 :** *IAQ Guideline in Government Office Building*	Penceramah : Pn Warnida Abu Bakar
10.30 - 11.00 Pagi	Rehat & Minum Pagi	
11.00 Pagi	**SESI 2 :** *IAQ Element in ACMV Design*	Penceramah : Ir. Muhammad Fadzli Saleh
1.00 Tengahari	Rehat & Makan Tengahari	
2.15 - 4.15 Petang	*Instrumentation and Hands On*	Penceramah : Ir Muhammad Fadzli Saleh Pn Warnida Abu Bakar
4.30 petang	Minum Petang	

KURSUS : INDOOR AIR QUALITY (IAQ)

MODUL 1

PART 1 :
Introduction, Concept & Definition IAQ

How is Air Quality at your home

Background

- Our Home
- Past



- Present



OBJECTIVES

- To explain the overview of indoor air quality
- To define the principle of indoor air quality

WHAT IS IAQ?

Indoor air quality (IAQ) is a term which refers to the air quality within and around buildings and structures, especially as it relates to the health and comfort of building occupants
wikipedia

IAQ is one of many factors that determine building functionality and economics

IAQ is typically addressed through compliance with only minimum code requirements, such as ANSI/ASHRAE Standard 62.1, Ventilation for Acceptable Indoor Air
Quality (ASHRAE 2007a).

WHAT IS IAQ?

- Indoor air quality (IAQ) refers to quality of air inside buildings served by common air-conditioning / mechanical ventilation system
- Usually applied to non-industrial environments, e.g. office buildings
- Good IAQ is desired for healthy indoor environment.
- Poor IAQ can cause variety of health problems such as 'sick building syndrome' (SBS) or 'building related illnesses' (BRI).

WHAT IS IAQ?

- Defined as air in which are no known contaminant at harmful concentrations and with which a substantial majority (usually more than 80%) of the people exposed do not express dissatisfaction

-ASHRAE

- Ada Soalan?
- End of Part 1

Part 2

Legislative Requirement, COP and Related Standard

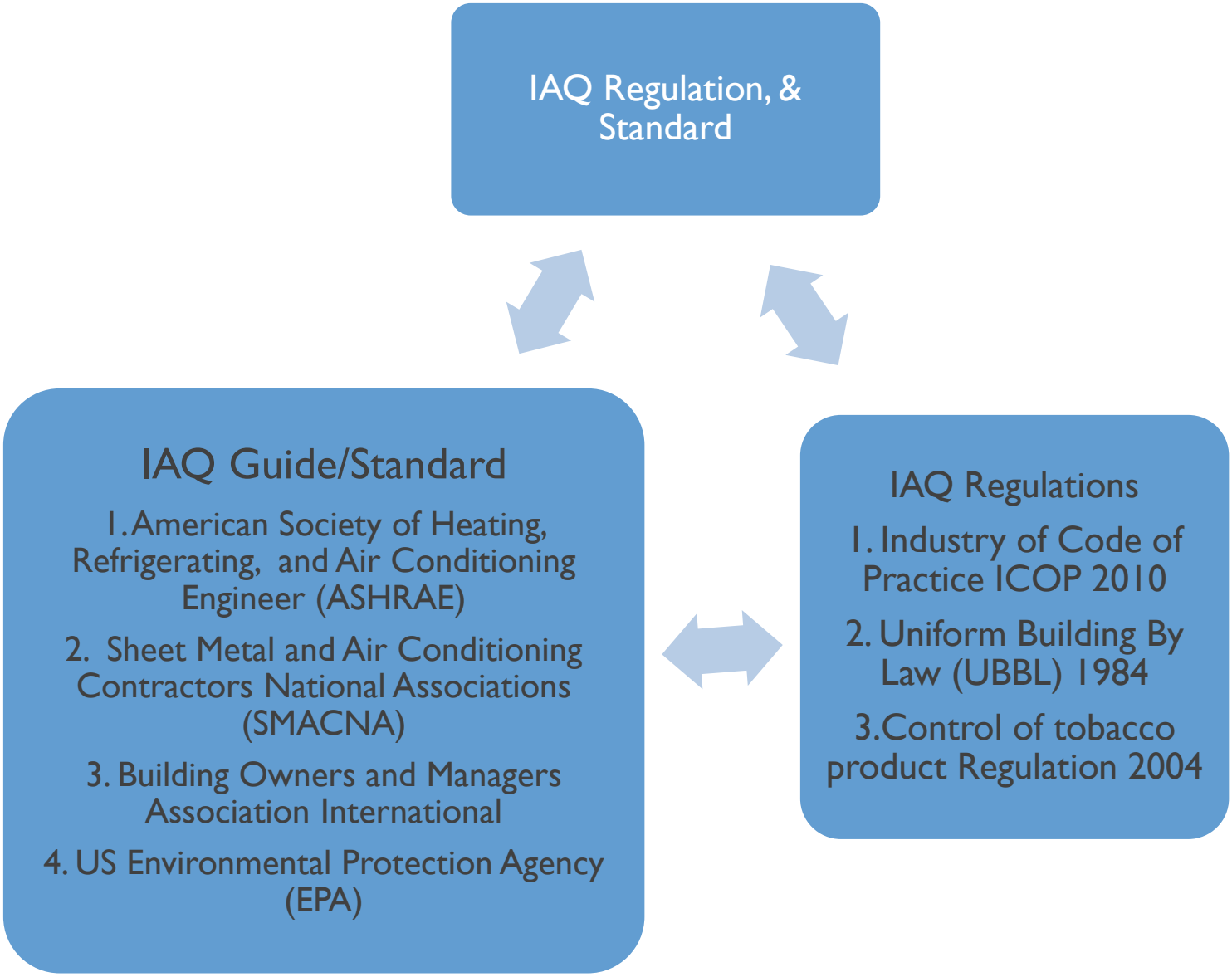
Objective :

Legislative Requirement, COP and Related Standard

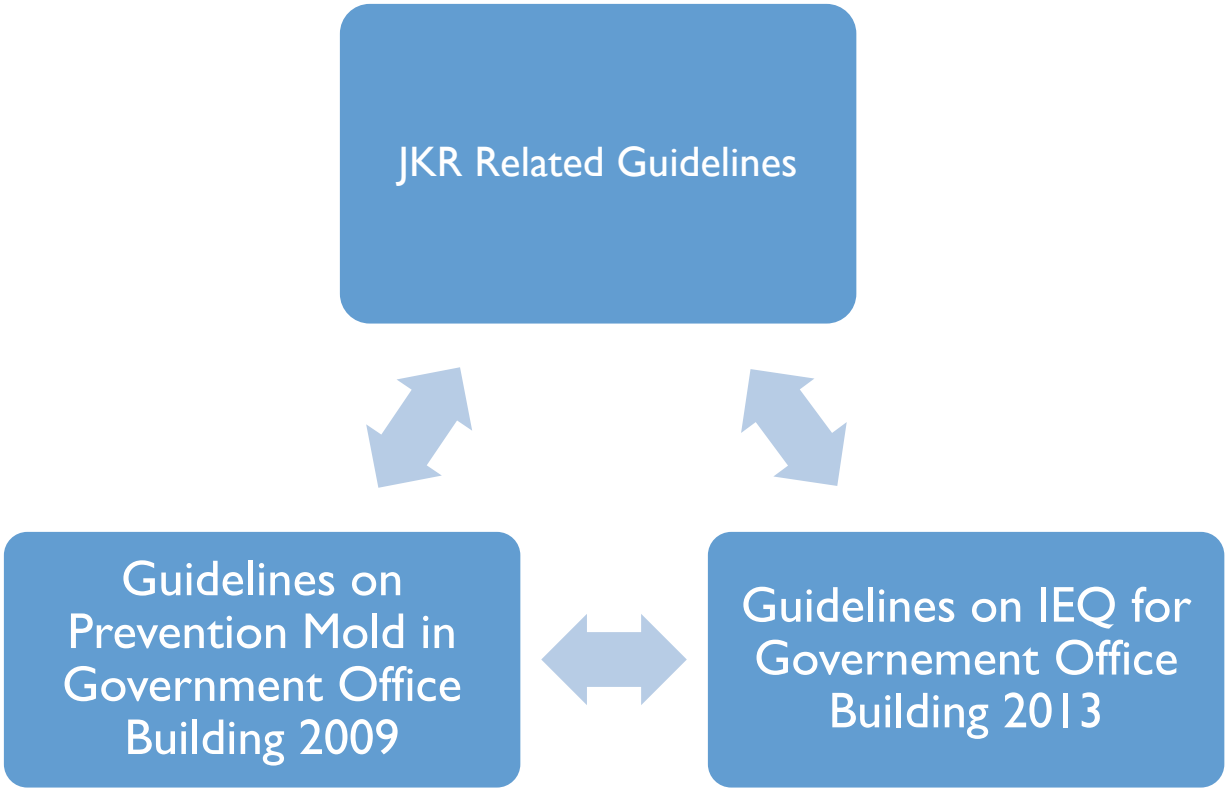
By the end o session participants will be able to :

- State the relevant legislations pertaining to control of IAQ
- Describe the gist of the relevant legislations on IAQ

REQUIREMENT & STANDARD



JKR RELATED DOCUMENT



LEGISLATIVE ASPECTS OF IAQ

- Control of indoor air pollutant
  - Occupational Safety & Health Act 1994
    - OSH (Use & Std. of Exposure of Chemicals Hazardous to Health) 2000
    - Guidelines on OSH in the Office 1996
  - Uniform Building By-Law 1986
- Prohibition or restriction on smoking
  - Control of Tobacco Product Regulations 2004

CONTROL OF TOBACCO PRODUCT REGULATIONS 2004

- A regulation made under the Food Act
- Enforced by Ministry of Health
- Control of smoking at enclosed public places
- Separate smoking area

UNIFORM BUILDING BY LAW

- Enacted by Ministry of Housing & Local Government
- Enforced by local authority
- Ventilation requirement during design and commisioning according to ASHRAE
- No requirement on the inspection and testing of ventilation system

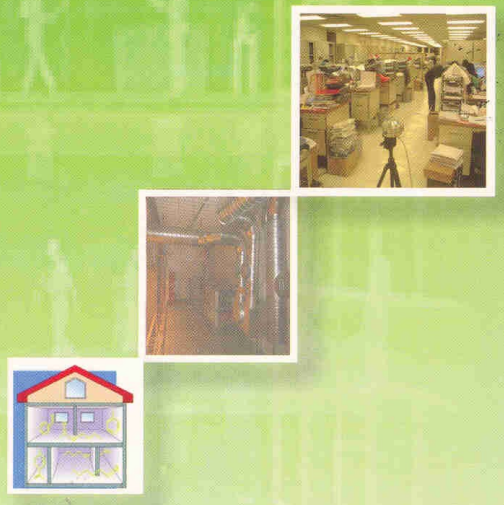
OCCUPATIONAL SAFETY AND HEALTH ACT (OSHA) 1994

- Enforce by DOSH
- General duty of employers
  - To ensure safety&health of eployees at the place of work
- Only applicable to places at work
- To promote the occupational environment adaptable to the person's physio and phycho needs

iCOP 2010

- Apply to all non-industrial
- Establishes a set of minimum exposure limits
- Describes mechanism to identify, evaluate and control indoor air contaminants
- Specifies other appropriate occupational safety and health measures

CODE OF PRACTICE ON INDOOR AIR QUALITY



DEPARTMENT OF OCCUPATIONAL SAFETY AND HEALTH
MINISTRY OF HUMAN RESOURCES
MALAYSIA
2005

ISBN : 983-2014-51-4
JKKP : GP (I)05/2005

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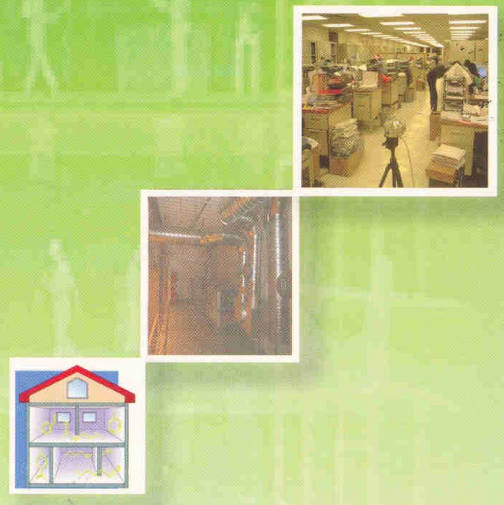

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OSHA SECTION 15: GENERAL DUTIES OF EMPLOYER

- Section 15 - General duties of Employer and Self-employed Person:
  - to ensure, so far as practicable, the safety, health and welfare of all employees
- Section 15 (2)(b) -
  - making of arrangement to ensure safety and absence of risk to health in connection with the use, operation, handling, storage and transport of plant and substances

OSHA SECTION 17 & 18: GENERAL DUTIES OF EMPLOYER

- Section 17 - General duties of Employer and Self-employed Person:
  - to ensure, so far as practicable, the safety, health and welfare other than their employees
- Section 18 – Duties of occupier to person other than his employees (go to premises to carry out work).
  - making of arrangement to ensure safety and absence of risk to health in connection with the use, operation, handling, storage and transport of plant and substances

CONTENT OF COP ON IAQ

- Purpose
- Application
- Assessment of IAQ
- Control of IAQ
- Complaints & investigation
- Information, instruction & training
- Recordkeeping

PURPOSE OF COP

- To set minimum standards that will protect the health of employees and other occupants of an indoor or enclosed environment served by a common mechanical ventilation and/or air conditioning system.

APPLICATION

- COP apply to all non-industrial places of work in industries listed under Schedule 1 of the Occupational Safety and Health Act 1994 (OSHA).

“Non-industrial place of work"

An indoor or enclosed working environment served by a common ventilating &/or air conditioning system, where there are persons at work, such as-

- offices, educational & training facilities, commercial establishments, & health care facilities;
- cafeterias & restaurants;
- gaming establishment, pubs, bar, karaoke lounges & discotheque;

"Non-industrial place of work"

- but does not include premises that are used primarily as manufacturing & production facilities and vehicles

- Office building within factory premise or offices in the same factory building but having separate ventilation/air conditioning system is covered by this code

ASSESSMENT OF IAQ

- Employer to assess risks to health during normal business activity, considering
  - sources of indoor air contaminants;
  - employees exposure to ETS;
  - employees exposure to air contaminants, either from indoor or outdoor sources;
  - prescribed activities;
  - adequacy of mechanical ventilation;
  - necessity to monitor employees' exposure; and
  - necessary actions to be taken to improve IAQ at place of work.

Prescribed Activities

- Any activity that could pose health hazard to the occupants, e.g.:
  - Applying or removing floor coverings including carpeting, floor tiles and other surfaces;
  - Applying wall coverings;
  - Painting;
  - Cleaning carpets.

ASSESSMENT OF IAQ

- Include measurement of indoor air contaminants listed in Table 1
- Conducted by IAQ assessor.
- Assessment report forwarded to employer-1 month upon completion.
- Assessment repeated when there are changes in indoor environment that affect results of latest assessment or 5 five years since last assessment.

REGISTRATION AS AN IAQ ASSESSOR

- Qualifications, experience & training
  - CIH by ABIH
  - Occupational hygienist & full member of MIHA
  - Assessor or HT1+ IAQ training by MIHA or NIOSH
  - At least diploma in pure & applied science + 1 year measurement experience + IAQ training (MIHA/NIOSH)

REGISTRATION AS AN IAQ ASSESSOR

- Procedure
  - Apply to Director General of OSH + certified copies of qualifications, NRIC, work permit (foreigner), certificate of attendance of courses, result of examinations
  - May be asked to
    - Attend interview, or
    - Present the findings of an assessment conducted

REGISTRATION AS AN IAQ ASSESSOR

- Validity
  - Maximum of 3 years
  - May be revoked if
    - Registration obtained by fraud
    - Failed to discharge duties as assessor
    - Convicted of an offence under OSHA or regulations made there under

REGISTRATION AS AN IAQ ASSESSOR

- Renewal
  - Apply at least 3 months before expiration
  - Show proof of engaging in IAQ assessment every year
  - Have undergone continuous education in OSH


THANK
YOU