



Abu Dhabi EHSMS Regulatory Framework (AD EHSMS RF)

EHS Regulatory Instrument

Code of Practice

**EHS RI - CoP 22.0 – Barricading of
Hazards**

Version 2.0

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ACKNOWLEDGEMENTS

With gratitude Abu Dhabi EHS Center acknowledges the great support provided by the Executive Council in facilitating the issuance of Abu Dhabi Emirate Environment, Health and Safety Management System (AD EHSMS) and its implementation at Emirate level.

The issuance of the system would not have been possible without the supervision, diligent efforts and productive recommendations of the AD EHS Center Board of Directors.

These documents (Regulatory Instruments) constitute the efforts of the Abu Dhabi EHS Center and the concerned Sector Regulatory Authorities who worked together to integrate all relevant regulatory requirements under *AD EHSMS RF*. The input, contribution and constructive views of all sectors is highly appreciated.

May these documents prove to be beneficial and helpful in system implementation and in expanding the knowledge in the EHS field.



مركز أبوظبي للبيئة والصحة والسلامة
Abu Dhabi Environment, Health and Safety Center



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Preface

This Abu Dhabi EHS Regulatory Instrument was developed by the Building and Construction Sector Regulatory Authority as the primary Competent Authority for this topic to set the minimum mandatory requirements.

Every effort was made in developing this document so that it does not conflict with existing local or federal laws and regulations. In case of conflict, requirements of the existing local and federal laws and regulations shall prevail, and all concerned are obliged to bring the same to the attention of AD EHS Center for resolution.

This AD EHS Regulatory Instrument has been developed, reviewed and approved, following the process as described in *AD EHSMS Implementation Guideline: The Integration of EHS Requirements in the Emirate of Abu Dhabi*, by the following stakeholders:

- Abu Dhabi EHS Higher Committee;
- Abu Dhabi EHS Center;
- Environment Agency Abu Dhabi;
- Department of Municipal Affairs;
 - Abu Dhabi City Municipality;
 - Al Ain City Municipality;
 - Western Region Municipality;
- Department of Transport – Abu Dhabi;
- Abu Dhabi Water and Electricity Authority;
- Health Authority - Abu Dhabi;
- Higher Corporation for Specialized Economic Zones (ZonesCorp);
- Center for Waste Management – Abu Dhabi;
- Abu Dhabi Tourism Authority;
- Abu Dhabi Food Control Authority;
- Abu Dhabi Education Council;
- Regulation and Supervision Bureau; and
- Other Relevant Federal and Local Competent Authorities.

The AD EHSMS consists of the following hierarchy of documents:

- AD EHSMS RF Elements - Mandatory System Requirements

EHS Regulatory Instruments:

- Standards and Guideline Values - Mandatory EHS threshold and exposure levels
- Codes of Practice - Mandatory EHS technical requirements – subject specific
- Mechanisms - Mandatory system implementation processes and procedures

Guidelines:

- Technical Guidelines - Non-mandatory guidance on how to implement an EHS Regulatory Instrument
- AD EHSMS Guidance Documents - Non-mandatory guidance and interpretation of an *AD EHSMS RF* concept and/or principle

Further, this document is not intended to conflict with any contractual obligations in effect at the time of its issuance. However, all future contracts shall adhere to applicable requirements stated herein, and existing long term contracts shall be brought into compliance with its requirements as soon as reasonably practicable as stipulated by relevant subject authorities.

This document will be reviewed periodically as part of the continual improvement cycle.

1. Introduction

- (a) This Code of Practice (CoP) applies to all Employers within the Emirate of Abu Dhabi. This CoP is designed to incorporate requirements set by Abu Dhabi EHS Center and Sector Regulatory Authorities in the Emirate of Abu Dhabi.
- (b) This CoP establishes the requirements and standards so that the risks of certain physical hazards can be prevented or reduced through the installation and maintenance of barricades.
- (c) 'Barricading' is a general term referring to a structure consisting of vertical and/or horizontal components (eg. barricade mesh, tape, panels etc), or similar objects, used to create a restricted access area to prevent unauthorised entry into a particular work area or area where a hazard may exist.

2. Training and Competency

- (a) Employers shall ensure that EHS training complies with the requirements of:
 - (i) *AD EHSMS RF – Element 05 – Training and Competency;*
 - (ii) *AD EHS RI – Mechanism 7.0 – AD EHS Professional Entity Registration;* and
 - (iii) *AD EHS RI – Mechanism 8.0 – AD EHS Practitioner Registration.*
- (b) Employers shall ensure employees required to implement the requirements of this CoP are trained in the barricading of hazards and understand the risks associated with using the equipment and the control measures implemented.
- (c) Training for employees shall be competency-based and include:
 - (i) systems of work needed for the safe use of barricades;
 - (ii) types and selection of correct barricades;
 - (iii) barricade equipment; and
 - (iv) care, maintenance and inspection of barricades.
- (d) Employers shall conduct additional retraining whenever a periodic inspection reveals, or there is a reason to believe, that there are deviations from or inadequacies in the employee's knowledge of barricading of hazards.
- (e) Employers shall conduct additional retraining whenever a barricading of hazards procedure fails.
- (f) Employers shall maintain a record of the required training that contains the following information:
 - (i) name and ID number;
 - (ii) Emirates ID number;
 - (iii) subject(s) of training;
 - (iv) date(s) of training; and
 - (v) person(s) providing the training.

3. Requirements

3.1 Roles and Responsibilities

3.1.1 Employer

- (a) Employers shall undertake their roles and responsibilities in accordance with the general requirements of *AD EHSMS RF – Element 01 - Roles, Responsibilities and Self-Regulation* Section 3.2.5.
- (b) Employers shall undertake their specific roles and responsibilities in accordance with the following:
 - (i) maintaining control of access to dangerous or high risk areas or equipment through the use of barricades;
 - (ii) barricades shall be appropriate for the task and in serviceable condition;
 - (iii) all work involving the use of barricades shall be appropriately planned, organized and appropriately supervised;
 - (iv) those involved in the barricading of hazards are trained and competent; and
 - (v) barricades are inspected on a regular basis by a competent person.

3.1.2 Employee

- (a) Employees shall undertake their roles and responsibilities in accordance with the general requirements of *AD EHSMS RF – Element 01 – Roles, Responsibilities and Self-Regulation* Section 3.2.7.
- (b) Employees shall undertake their specific roles and responsibilities in accordance with the following:
 - (i) employees shall report any activity or defect relating to barricades which they believe is reasonably foreseeable to endanger their safety or the safety of another person; and
 - (ii) employees shall follow safe systems of work as instructed by the Entity whilst installing or erecting barricades.

3.2 Planning and Assessment

- (a) Employers shall evaluate each site or operation to determine if hazards are present and the barricade equipment shall be assessed using risk management practices as required by *AD EHSMS RF – Element 02 – Risk Management*.
- (b) Employers shall ensure the following:
 - (i) an assessment of the various risks is undertaken and systems of work which are safe to both employees and the public shall be established;
 - (ii) that effective procedures and control measures are in place which are implemented in order to manage the barricading of hazards;
 - (iii) that for the Building and Construction Sector the management of barricading requirements are included in the Pre-Tender Environment, Health and Safety Plan in accordance with *AD EHS RI – CoP 53.0 – EHS Management during “Construction Work”*; and

- (iv) that associated safe systems of work, and site rules are included in the Environment, Health and Safety Construction Management Plan (EHS-CMP) in the case of the Building and Construction Sector in accordance with *AD EHS RI – CoP 53.0 – EHS Management during “Construction Work”*.

3.3 Assessing the Need for a Barricade

- (a) In accordance with the requirements of *AD EHSMS RF – Element 02 – Risk Management* Employers shall undertake an assessment of the nature of the hazard, the likelihood and consequence of interaction with the hazard and details of the minimum barricading requirements.
- (b) Employers shall evaluate the site and/or operation to determine if hazards are present and the need for barricading to be erected shall be determined. Areas where barricading may be required include:
 - (i) where there is a danger of a person falling;
 - (ii) being struck by falling objects;
 - (iii) pedestrians and vehicles entering site;
 - (iv) where there is a danger of injury from equipment or processes or for maintenance of equipment; and
 - (v) to control access to an identified hazard or hazardous areas.

3.4 Types of Barricades

3.4.1 Soft Barricading

- (a) Employers shall use soft barricading to prevent entry of personnel and equipment as an immediate and short-term control. This barricade type shall be used where risk assessment indicates that the associated risk is low. Examples of soft barricading may include:
 - (i) scissor/expanding barricade;
 - (ii) post and chain;
 - (iii) plastic cone and plank;
 - (iv) flag type bunting; and
 - (v) plastic mesh barriers.

3.4.2 Hard Barricading

- (a) Employers shall use hard barricading to prevent entry of personnel and equipment to areas where a risk assessment indicates the use of solid barricades to provide a physical barrier. Examples of hard barricading may include:
 - (i) construction site barricade eg. mesh or hoarding fence panels;
 - (ii) scaffold tube and fitting;
 - (iii) road traffic control barricade; and
 - (iv) free standing ridged ‘A-Frame’ barricade.

- (b) Employers shall ensure where solid barricades are used they shall be erected by a competent person and accompanied with signs to communicate the hazard information.
- (c) Employers shall ensure designated entry and exit points or gateways are included in the barricade design where entry to the controlled area is required.

3.5 Method of Barricading

3.5.1 General Requirements

- (a) Employers shall ensure the following:
 - (i) where a workplace hazard has been identified, barricading and demarcation appropriate to the hazard shall be installed;
 - (ii) barricades shall be constructed of an approved type and shall be used:
 - 1) to provide a visual barrier;
 - 2) to restrict access to unauthorized persons to worksites and restricted areas;
 - 3) to contain equipment and materials; and
 - 4) to prevent interaction with an identified hazard.
 - (iii) barricades are erected to separate the hazardous area either by integration with existing structures or stand-alone installation;
 - (iv) barricades shall be installed in such a way as to eliminate the possibility of accidental entry into barricade zone;
 - (v) where the general public could become exposed to the hazard, physical barriers shall be used and/or a safety observer appointed where appropriate;
 - (vi) entry points in barricading shall be arranged such that personnel entering the area cannot walk directly into the hazard;
 - (vii) barricading may make use of existing structures where reasonably practicable however, barricading shall not be tied off to electric cables, flexible air hoses, etc; and
 - (viii) where solid barricades are used they shall be accompanied with signs to communicate the hazard information in accordance with the requirements of *AD EHS RI – CoP 17.0 – Safety Signage and Signals*.

3.5.2 Barricade Signs

- (a) Employers shall ensure the following:
 - (i) barricading signs are attached in appropriate numbers to ensure visibility under all circumstances and in accordance to *AD EHS RI – CoP 17.0 – Safety Signage and Signals*; and
 - (ii) barricading signs shall provide the contact person/responsible supervisors name and phone number in addition to the expected duration that the barricading shall be in place. Where appropriate, signs shall also have attached specific hazard information eg. —“*Danger no access-persons working above*”.

3.5.3 Barricade Tape

- (a) Employers shall ensure where barricade tape is used to restrict access to an area:
- (i) the barricaded area shall encompass the entire potentially affected area of the hazards – eg. sparks, falling objects, leaks etc. and take into account reasonably practicable deflection of an object from a structure below if it falls;
 - (ii) where it is used to protect from a trip hazard or unprotected edge, with a fall potential of less than 2 meters, the barricade tape shall be installed at least 2 meters back from the edge or hazard; and
 - (iii) the barricade tape shall be maintained in good condition ensuring it remains effective as a control measure.

3.5.4 Barricade Materials

- (a) Employers shall ensure the following:
- (i) barricading materials such as mesh, and/or tape shall be installed with the top edge at a height between 900 mm to 1200 mm;
 - (ii) when using mesh, it shall be appropriately supported to avoid sagging;
 - (iii) where cone and plank type barriers are used planks shall be fixed in place with proprietary brackets;
 - (iv) road barricading or delineation control measures shall be set at a maximum distance in accordance with the requirements of *AD EHS RI – CoP 33.0 – Working On, or Adjacent to a Road*; and
 - (v) water filled plastic barricades, where they are used with the potential for a vehicle impact shall be linked together and filled with water.

3.5.5 Lighting

- (a) Employers shall ensure the following:
- (i) warning lights, such as amber-flashing beacons, are provided at appropriate intervals where the risk assessment indicates the need to warn people of the presence of a barricade during darkness; and
 - (ii) where barricades are installed across roadways and shall remain in place during hours of darkness, the barricade shall be fitted with flashing lights to identify the barricade/traffic obstruction in accordance with the requirements of *AD EHS RI – CoP 33.0 – Working On, or Adjacent to a Road*.

3.5.6 Prevention of Unauthorized Access

- (a) For the Building and Construction Sector employers shall ensure:
- (i) Construction sites shall be secured with fencing to prevent so far as reasonably practicable unauthorized access to the site;
 - (ii) fencing requirements shall be in accordance with:
 - 1) the relevant Building Code at its Executive Regulation; and
 - 2) Abu Dhabi Law (4) 1983 and its Executive Regulation.

- (iii) a security guard shall be provided to maintain site security out-of-hours where there is an increased risk of unauthorized access such as:
 - 1) the site is located in a residential area and there is a foreseeable risk of children entering the site; and
 - 2) previous experience indicates unauthorized access is reasonable foreseeable in the particular area where the site is located.

3.6 Inspection of Barricading

3.6.1 General Inspections

- (a) Employers shall ensure the following:
 - (i) barricades shall be kept in a condition that doesn't reduce their effectiveness which includes:
 - 1) signed appropriately and clearly visible;
 - 2) effective at preventing accidental contact;
 - 3) visible during the hours of darkness where required; and
 - 4) removed promptly when the work is completed or the hazard has been removed.
 - (ii) barricade components are to be inspected frequently and those with defects shall be withdrawn from service for repair or disposal and tagged or marked as "Dangerous, Do Not Use"; and
 - (iii) as a minimum, a weekly formal inspection shall be undertaken and documented for all barricading carried out under this CoP.
- (b) Employers shall consider the use of inspection tags fixed to each barricade. The inspection tag can be used to record the following information:
 - (i) identification mark of the barricade;
 - (ii) the date the barricading was first erected;
 - (iii) date of the last inspection;
 - (iv) result of inspection; and
 - (v) name of the person carrying out the inspection.

3.6.2 Inspection after Incident

- (a) Employers shall ensure the following:
 - (i) that if a barricade is damaged or involved in any form of incident, it is to be inspected to ensure it remains fit for purpose;
 - (ii) if repair to a damaged barricade component is not reasonably practicable, that component is to be removed from service, marked accordingly and disposed of; and
 - (iii) that only serviceable barricades are available for use.

3.7 Removal of Barricading

- (a) Employers shall ensure all barricading and tape are removed once they are no longer required (eg. hazard controlled / work complete).

4. References

- *AD EHSMS RF – Element 01 – Roles, Responsibilities and Self-Regulation*
- *AD EHSMS RF – Element 02 – Risk Management*
- *AD EHSMS RF – Element 09 – Compliance and Management Review*
- *AD EHS RI – CoP 17.0 – Safety Signage and Signals*
- *AD EHS RI – CoP 33.0 – Working On or Adjacent to a Road*
- *AD EHS RI – CoP 53.0 – EHS Management During “Construction Work”*
- *Abu Dhabi Law (4) 1983 and its Executive Regulation*

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