Recommended Guidelines for the use of Restricted Access Areas (Red Zones)

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Contents

PREFACE

This document represents ‘best practice’, as agreed by general consensus of the members of the DROPS Workgroup.

Certain processes and procedures detailed here-in may require modification to suit specific locations, activities or facilities. However, the underlying guidelines are considered best practice and are a recommended component of any integrated dropped object management scheme.

These guidelines are subject to regular review and update in response to improved methodologies and technologies. Any comments, suggestions or recommendations should be notified to the issuing authority where thy will be considered as part of the continuous review process

1 INTRODUCTION

The implementation of Restricted Access Areas is an effective tool in reducing the potential risk of personnel exposure to dropped objects. However, it will only prove effective in the presence of the comprehensive awareness, planning, mitigation and control measures associated with a formal Dropped Object Management System.

2 BASIC REQUIREMENTS

A comprehensive review and risk assessment should be undertaken for all areas of the installation or facility to determine the potential for dropped objects. Clearly, there are operations, activities, equipment and architecture that make certain areas more exposed to potential dropped objects than others.

This HAZID process demands input from personnel with strong operational knowledge of the respective areas. The participants should also include HSE and supervisory/managerial representation.

- The HAZID review should identify standard work positions within all areas and should consider relevant documentation and records, including:
- summary of prior incidents
- layout drawings of the respective area(s)
- equipment descriptions, drawings and operating/maintenance manuals
- details of any anti-collision systems
- routine operating procedures for relevant operations.
- The HAZID should identify areas that provide optimum separation between standard operating positions and at-risk areas, emphasizing:
- safe distance between moving or pressurized equipment
- protection from potential falling or overturning objects
- free escape routes.

Important: Where possible, standard operating positions should be relocated outwith any at-risk area.

The output of the review and assessment process should be that all areas of the installation or facility (under normal routine operations) are categorized as one of three zones:

- Green Zone: where the layout and activities of the area present little likelihood of personnel being exposed to potential dropped objects under normal circumstances.
- Yellow Zone: where the layout and activities of the area do present some risk of personnel being exposed to potential dropped objects under normal circumstances.
- Red Zone: where the layout and activities of the area present significant risk of personnel being exposed to potential dropped objects under normal circumstances.

For areas classified as Yellow or Red Zones, a draft zone map should be prepared and consideration should be given to the implementation of appropriate risk-reducing, corrective and/or mitigating measures within the zone.

A physical inspection of the area must be undertaken in order to assess the draft map prior to its final approval. A report should be prepared to summarize and record the foregoing activities and the assumptions included in the risk assessment.

The zone classification is based upon the normal / routine operations in the respective area. It is recognized that changes or non-routine activities within an area can result in a significantly different risk for that area. For this reason, it is necessary to allow for the temporary change of zone classification as part of a formal Management of Change (MOC) process. This is addressed later in these guidelines

3 DESIGNATING AREA AUTHORITIES

For each area designated as a Yellow Zone or a Red Zone, an Area Authority should be designated. The Area Authority should be the supervisor or manager responsible for the main activity in that particular area. Ideally, their common workplace location should be in the vicinity of the respective zone. As an example, on a drilling rig the drill floor would have a designated Red Zone and the Driller would be an appropriate Area Authority.

4 ACCESS DIAGRAMS / ZONE MAPS

Access diagrams or Zone Maps should be prepared and mounted (where practicable) at all access points to Red or Yellow Zones and at the common workplace of the relevant Area Authority. The diagrams should clearly define and demarcate Red, Yellow and Green zones, as well as access and egress routes. They should identify the Area Authority's common workplace location and show green zone access to and from that location.

Figure 1 is an example of an Access Diagram / Zone Map for a typical Drill Floor where the Driller is the Area Authority and his common workplace is the Drillers' Control Room.

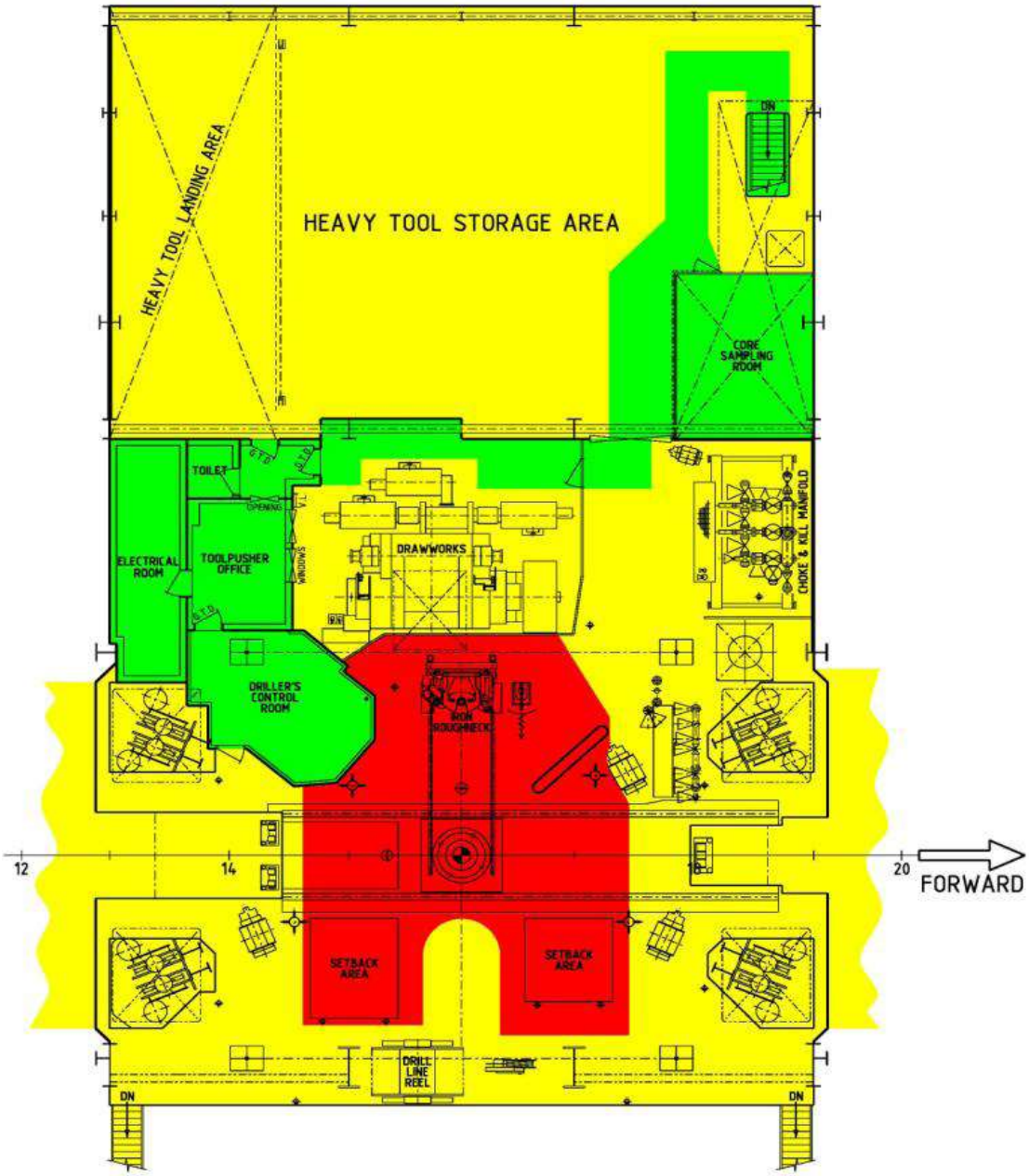

Figure 1 Typical Access Diagram / Zone Map

5 ACCESS TO RESTRICTED AREAS

For Green Zones, anyone may enter as long as no additional barriers are in place.

For Yellow Zones, only personnel with specific tasks in that zone may enter. All other personnel require the Area Authority's permission to enter or work in that zone.

In Red Zones, personnel may be more exposed to falling objects, the movement of remotely operated equipment, high pressure, and/or other hazards as determined by risk assessment. Any personnel in the Red Zone **must** be required for the current operation and **must** be authorized by the Area Authority.

The Area Authority **must** also ensure that any personnel entering a Red or Yellow Zone are aware of moving equipment, eg top drive and/or draw-works, pipe handling equipment, cranes, hoists etc. Furthermore, the Area Authority **must** ensure an appropriate plan is in place for specific operations in a Red or Yellow Zone, eg running casing, completions, maintenance, lifting etc.

Additional personnel may not under any circumstances join a task being conducted in a Red or Yellow Zone until a Time Out For Safety (TOFS) has been called and the plan discussed. They must have a specific responsibility during the task, understand the placement of personnel, and be aware of machinery which may be operated during the task. Potential dropped objects and any other identified hazards must also be discussed.

The Area Authority, once satisfied, must give approval before the task can resume.

6 PERMISSION TO ENTER RESTRICTED AREAS

Every effort should be made to identify and define an access route to the Area Authority's common workplace location within the Green Zone. This will allow personnel access to the Area Authority to request authorization into the Yellow and Red Zones. Authorization requests should be conducted in a manner that provides minimal distraction to the Area Authority.

Personnel not required for current operations **must not** be permitted into Yellow or Red Zones.

For any activities that require entry to a Red Zone, and for non-routine activities within a Yellow Zone, a documented risk assessment must be performed before permission is given.

A Task or Job Risk Assessment should be performed when:

- any part of the activity is not covered by existing procedures
- there is conflict between procedures
- those personnel involved in the task are not familiar with the activities
- those personnel involved in the task have not been involved in this type of operation for a long period.

A Toolbox Talk should be undertaken where a Task or Job Risk Assessment is not required. The Toolbox Talk should fully review the established operating procedure and all participants should have a copy in hand.

When any activity within the Red Zone or a non-routine activity within the Yellow Zone has been completed, the performing individual(s) shall inform the Area Authority. On notification that the task is completed, the Area Authority shall immediately withdraw the permission to enter the zone.

7 CONTROLLING ACCESS TO RESTRICTED AREAS

Access to Red or Yellow Zones **must** be controlled at all times. All access points should be identified and equipped with a physical barrier marking the point at which personnel cannot proceed without approval from the Area Authority. The physical barrier may be a chain, gate, door etc. (Emergency egress must not be impeded.) The barrier shall always be in place at all access points leading directly to Yellow and Red Zones, and at any other access points determined by the Area Authority.

The physical barrier should also include a sign (in both English and the predominant local language) that communicates the zone is a hazardous area and access requires the Area Authority's authorization (see example shown as Figure 2). Additional examples of Zone entry marking techniques are shown in Figure 3.

Figure 2 Example Warning Sign

Figure 3 Example Red Zone Marking Techniques

8 PERMANENT CHANGES TO RESTRICTION CLASSIFICATION

It may become necessary to reclassify a restricted area in response to permanent modifications or changes in operation within that zone. Such permanent changes to zone classification should be captured through the formal Management of Change (MOC) process and will require amendment and reposting of the relevant Access Diagrams.

9 TEMPORARY CHANGES TO RESTRICTION CLASSIFICATION

It may become necessary to temporarily reclassify or restrict an area in response operational, environmental or other conditions, eg scaffold erection maintenance intervention, pressure testing, high winds etc.

In such temporary circumstances, the Area Authority will determine the reclassification and will be responsible for permissions to enter the area. Temporary physical barriers should be placed at all entry points to the reclassified area. Emergency egress must not be impeded and the barriers should be easy to store when access is unrestricted. Signage must also be posted at all access points denoting the temporary zone classification, the restricted access and the respective Area Authority. The temporary sign should be in English and the predominant local language. The Area Authority should arrange for PA announcements reflecting the temporary reclassification and access restrictions.

Temporary barriers and signage should be completely removed when the Area Authority has deemed the area can return to its normal and permanent classification.

10 FURTHER INFORMATION

Other associated DROPS products and guidance include:

- DROPS Recommended Practice (Establishing A DROPS System)
- DROPS Reliable Securing Booklet
- DROPS Pre-Task Prompt Cards
- DROPS Calculators
- DROPS Training
- DROPS Tools at Height Best Practice

For details of these and many more resources, visit www.dropsonline.org