



MICE Safety Instruction 002
Working in Specific confined spaces in the MICE experiment and
general implementation of SC11 and SC09

MICE 002 Revision B (draft)

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Document Approval

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Document Control

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1. Introduction

This document sets out how STFC safety codes 11, Working in confined spaces, (SC11) and STFC Safety code 9, working at height (SC09) will be implemented within the MICE experiment and in particular it describes the special requirements for working inside and above the partial return yoke (PRY)

The above codes require that steps are taken by STFC to ensure that all employees and visitors *do not* work in confined spaces, or at height when it can be avoided, but when such work cannot be avoided, it must be controlled by a suitable system of work that includes a risk assessment and authorisation to work that describe escape and emergency procedures

This instruction supplements the above safety codes, but does not replace them

Confined space permits to work are only issued by suitably trained personnel who are not directly connected with the task in hand. Permits to work are only issued on receipt of risk assessments and method statements that are deemed acceptable by the Hall Manager

Names and contact details of those with positions of responsibility are given in appendix A

2. Related Documents

STFC SHE Code 11 (SC11), Working in confined spaces

STFC SHE Code 9 (SC09), Working at Height

3. Definitions

Definitions of personnel duties and workplace situations are as described in SC11, above, but with the addition of:

MICE User

Any participant in the MICE experiment who is not responsible for issuing permits to work; this includes STFC employees and all registered collaborating visitors to the MICE experiment

MICE Premises

All areas of MICE's RAL experimental and administrative infrastructure, included in RAL buildings R5.2, R9, R76, and R78. The Partial Return Yoke (PRY) is described uniquely as a hazardous area.

MICE Hall Manager

Responsible for the safe day-to-day working in MICE premises, as defined above; responsible for issuing and cancelling confined space permits to work as described in SC11

Crane Operator

Those in possession of an up to date STFC crane driving licence and medical. Equivalent qualifications from collaborating institutes are *not* acceptable. The crane operator must be experienced in driving a crane in the restricted areas of R5.2

PRY Fitter

To be specifically trained and experienced in all aspects of fitting and dismantling the PRY and must have completed the STFC Working in Confined Spaces and working at height courses

MICE Duty Coordinator

Responsible for the safe operation of MICE's experimental and commissioning activities. The Duty Coordinator is empowered to stop operations of any type if She/He feels it is unsafe to continue.

4. Detailed considerations for working in and around the PRY

4.1 Pre-conditions for working in the PRY

Only the specific tasks described in section 4.3 shall be carried out, each task has its own standing risk assessment and method statement. Any new tasks must be agreed between the Duty Coordinator and the Hall Manager beforehand and suitable risk assessment and method statement compiled.

The Hall Manager and the MICE User carrying out the work must confer before work starts and the MICE User has the absolute right to decline the work if he/she feels they are unfit to do so, or that their ability to escape would be compromised.

The Hall Manager and the MICE user carrying out the work must satisfy themselves that the PRY can be vacated safely in the event of a fire alarm or site emergency

The Hall Manager and the MICE User shall jointly decide on the PPE to be worn, after balancing the often conflicting requirements of ease of access, mobility and protection. Minimally the PPE must include polycarbonate-capped safety shoes, bump cap and head torch.

Access to the interior of the completely assembled PRY when it is in use is only via the gated walkways onto the solenoid access galleries, which are accessible from the North and South mezzanines. Crossing from North to South & vice-versa by climbing over the magnets is not permitted.

If it is required to remove the sloping guard panels to gain access to low-level equipment inside the PRY, this is only to be done within the description of the specific task in the following table and is strictly at the discretion of the Duty Coordinator

When the Hall Manager is satisfied that the above conditions have been met, he can issue a permit to work at his discretion

4.2 Emergency measures for working in the PRY

In the event of a person being injured or trapped while working inside the PRY, the PRY platework will be dismantled in emergency. To enable this, a dedicated set of lifting gear and dismantling tools shall be kept in a cupboard specifically for this purpose. As detailed in section 4.3, a crane operator and PRY fitters must be on duty while certain tasks are being performed. First aid and any more advanced medical requirements will be dealt with through the established STFC Occupational Health and first aid framework.

4.3 Lone working

For all tasks and situations described below in table 4.4, absolutely no lone working shall be permitted

4.4 List of Specific PRY-related operations

Task	Persons	Training required	Access conditions	Crane operator present	PRY fitter present
PRY modification and assembly	Govans Surman Capocci Habernicht Nichols Tarrant	Confined spaces working	All over	Yes	Yes
Absorber change and module installation	Govans Surman Capocci Habernicht	Confined spaces working	End plates removed, North centre plates removed South centre plate removed	Yes	Yes
Cryo-head and pipe servicing Magnet general commissioning work	Magnet team	MICE Magnet training Confined space working Working at height	Top only	Yes	No
Vacuum connections & maintenance	Tucker Govans Corthold	Confined spaces working	End plates removed North panel removed	Yes	Yes
Tracker & diffuser maintenance	Barber Tacon Macwaters	None	End plates removed	No	No
Installation & removal of LH2 system	Bayliss Tucker Warburton Courthold	ATEX, DSEAR	Top only	Yes	No
Connect RF couplers & cooling	Stanley Whyte Ronald	Confined	All over North & South panels	Yes	Yes

	Moss Keelan Govans	spaces working	removed End plates removed		
Access to low-level vacuum valves and equipment	Tucker Bayliss	Confined spaces working	PRY complete Mesh guard panels removed. Telescopic access ladder present	No	Yes
Ferromagnetic sweep of PRY	Govans Nichols	Confined spaces working	All over PRY complete	Yes	Yes

Appendix A – Key staff and contact details

Name	Role	Contact	Location
J.Govans	Hall Manager/ Crane operator	1804	R5.2
C.Macwaters	Duty Coordinator *		R5.2
P.Hodgson	Duty Coordinator *		R5.2
V.Blackmore	Duty Coordinator *		R5.2
H.Nebrensky	Duty Coordinator *		R5.2
M.Surman	Crane operator/ PRY Fitter		R5.2
E.Capocci	Crane Operator/ PRY Fitter		R5.2
S.Habernicht	PRY Fitter		R5.2

(* note that the Duty Coordinator is a rotating post; the acting Duty Coordinator name at any time is posted at the MICE control room)