



Authorisation Request for Planned Activities in Sensitive Areas for Helium Spill

The [Memorandum](#) of 10.9.2014 stipulates that work in the vicinity of cryogenic equipment in the arc and LSS of the LHC (on the QRL-side of the accelerator and close to DFB and stand-alone magnets) requires an authorisation by the Complex Manager.

The present request must be completed and submitted with the annexes to the [TE DSO](#), who will recommend authorisation after satisfactory completion of a risk assessment, which may imply changes to the method statement.

1. Identification

Department/ Group /Section	BE/BI/BL	Date	15.01.2015
Person in charge	Ewald Effinger, Bernd Dehning		

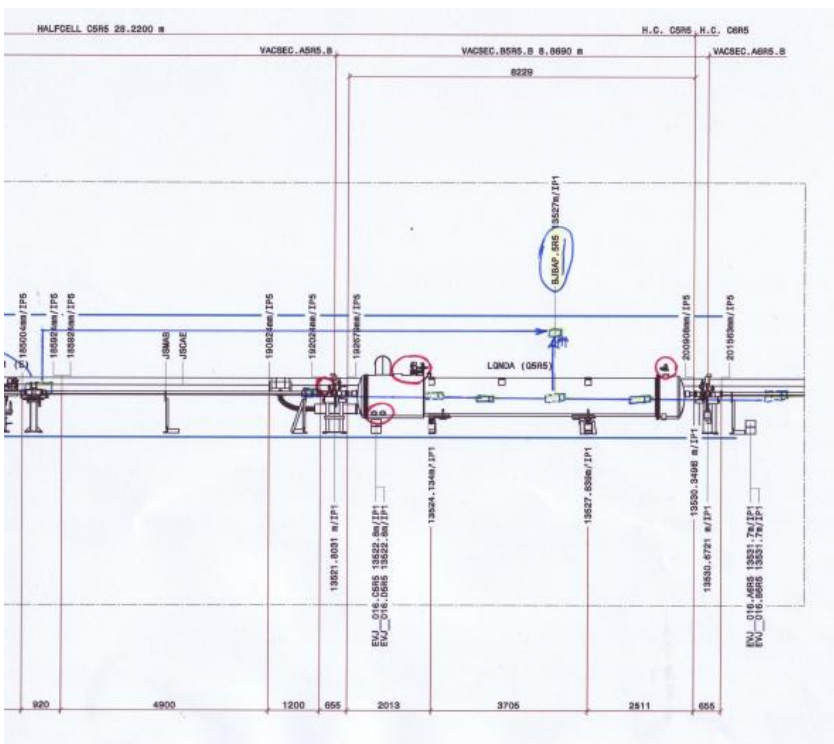
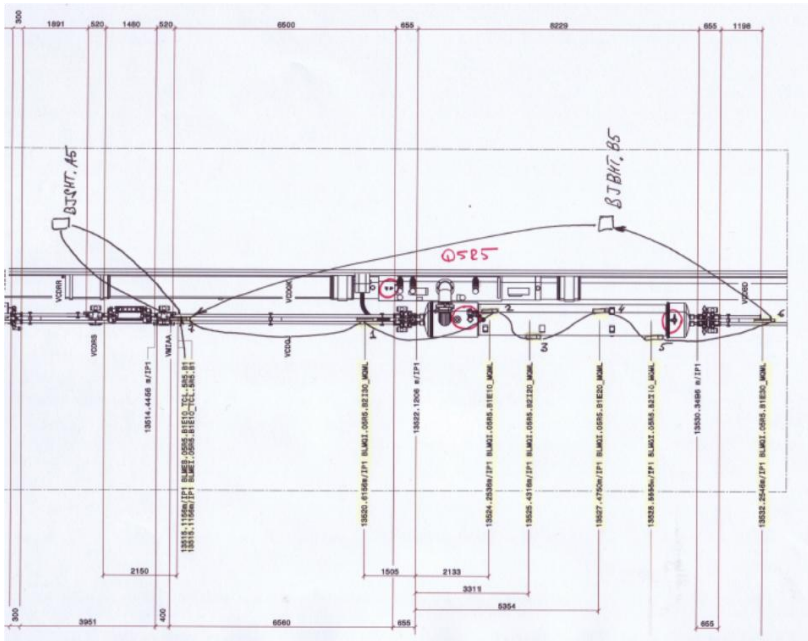
2. Description of Activity

Title:	BE-BI-BL BLM Installation and Maintenance
Short Description:	<ul style="list-style-type: none"> • Installation and maintenance activities on cables between patch boxes mounted on cable trays and ionisation chambers mounted on cryostats or independent support posts. • Installation and maintenance activities on ionisation chambers • Installation and maintenance activities on acquisition crate below the MQ magnets in the arc.
Location in LHC:	ALL LHC Quadrupole magnets (MQ, MQM, ...) and all bending magnets (MB).

3. Attachments

Method Statement / Procédure Opératoire

Personnel in the BE-BI group works on the Beam loss monitors with help of installation drawings highlighting the sensitive cryogenic equipment. Access paths to the BLMs will be chosen in the work preparation phase such as avoiding proximity to the instrumentation. An example of an installation drawing, on which the cryogenic instrumentation is encircled in red is given below.





The work involves only small handheld tools and electronic instruments.

The personnel in the list below is instructed by the supervisor in the use of the installation drawings and the hazard of causing a Helium spill in proximity of cryogenic instrumentation.

Nominative list of intervening personnel

First Name, Family	CERN Group	Contract Type
Bernd, DEHNING	BE-BI	CERN Staff
Steve, DOMINGUES SOUSA	BE-BI	
Ewald, EFFINGER	BE-BI	
Jonathan, EMERY	BE-BI	
Slava, GRISHIN	BE-BI	COAS
Andrey, KOSHELEV	BE-BI	COAS
Emiliano, PISELLI	BE-BI	CERN Staff
Ion, SAVU	BE-BI	CONTRACTOR
Yury, SANDOMIRSKIY	PH-URD	COAS
Adrien, TAMBASCO	BE-BI	CONTRACTOR
Luca, TIMEO	BE-BI	CERN Staff
Raymond, TISSIER	BE-BI	CERN Staff
William, VIGANO	BE-BI	CERN Staff
Chen, XU	BE-BI	FELL
Christos ZAMANTZAS	BE-BI	CERN Staff

4. Recommendation by the TE-DSO

Beam Loss Monitors are located on all LHC cryomagnets, and many of them are by default close to cryogenic instrumentation.

The maintenance and possible exchange of BLMs requires only light, handheld tools and poses in itself no risk to cryogenic instrumentation.

The risk to damage cryogenic instrumentation during access to a BLM located on the QRL-side of the cryostat is not negligible. As an organisational measure, the installation drawings, showing the location and connection of BLMs have been complemented with the indications of cryogenic instrumentation, taken from the document "Local Access Restrictions in LHC below 80 K" (EDMS 1406764 v.2.0).

The supervisors in the BI-BL section will henceforth train every newcomer to identify and avoid cryogenic instrumentation on the access path to BLMs.

Under these conditions, I recommend authorising the activity "BE-BI-BL BLM Installation and Maintenance" in the framework of the activities of the BE-BI-BL section, for the listed personnel and the duration of Run 2.