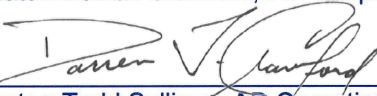


Interface between PIP2IT Control Room and the Main Control Room

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Document Approval

Signatures Required	Date Approved
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Revision History and Version Control

This version of the document may not be the current or approved revision. The current revision is maintained in PIP-II's Document Management System (DocDB) where all internal Project document approvals are managed. DocDB can be accessed through the web by authorized users (<http://pip2-docdb.fnal.gov/>) and this document can be identified by the document and version number as indicated in the Version Control Table below. Note that the version number in the table below and DocDB may not match. The current approved version is always available in DocDB.

DocDB	Version	Responsible Person	Version Date	Description of Changes
4872	1	Darren Crawford	7/16/2020	Original Document

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1. Acronyms and Abbreviations

ACS	Access Control System
AD	Accelerator Division
CMTF	Cryo Module Test Facility
ES&H	Environment Safety & Health
MCR	Main Control Room
PIP-II	Proton Improvement Plan II Project
PIP2IT	Proton Improvement Plan II Injector Test
RGD	Radiation Generating Device
RSO	Radiation Safety Officer

2. Purpose and Scope

The purpose of the document is to define interfaces, responsibilities, and communication between the Cryomodule Test Facility (CMTF) Control Room, from where the PIP-II Injector Test (PIP2IT) radiation generating device (RGD) is operated, and the Fermilab Accelerator Division (AD) Main Control Room (MCR).

NOTE: Throughout this document, “CMTF Control Room” and “PIP2IT Control Room” are synonymous.

3. Management Responsibilities

3.1. PIP-II and AD Division Heads

The PIP-II and AD Division Heads are responsible for:

- a) Approving this document, and;
- b) Ensuring this document is developed, reviewed and approved.

In addition,

- c) The PIP-II Division Head is responsible for supervising the implementation of this document by the PIP-II Operations Coordinator.
- d) The AD Division Head is responsible for supervising the implementation of this document by the AD Operations Department Head.

NOTE: The responsibilities and authorities assigned by this document to the Division Heads may be delegated, in part or in total, at the discretion of the Division Heads.

3.2. PIP-II Operations Coordinator and AD Operations Department Head

The PIP-II Operations Coordinator and the AD Operations Department Head, are responsible for:

- a) Ensuring this document is developed, reviewed, signed and updated;
- b) Arranging for publishing and distribution of this approved document, and;
- c) Supervising the implementation of this document by PIP-II personnel and AD Operations Department personnel.

4. Control Rooms Responsibilities

The PIP2IT Control Room Authorized Operators and the MCR operators shall coordinate activities by phone and maintain proper logbook entries.

4.1. PIP2IT Responsibilities

- 1) PIP-II personnel shall manage the access level (open, supervised, and controlled) for the PIP2IT enclosure.
- 2) The PIP-II Operations Coordinator or designee shall inform the MCR by phone prior to changes in the access level.
- 3) The PIP-II Operations Coordinator, in coordination with the AD Operations Department shall develop and maintain the PIP2IT general Search and Secure Procedure.
- 4) The PIP-II Operations Coordinator or PIP-II ES&H Manager shall request a radiological survey of the PIP2IT enclosure before going into supervised access mode, if required.
- 5) PIP-II personnel shall develop and maintain the PIP2IT Operator On-the-Job Training document and Qualification Procedure(s). The document and procedure(s) will be stored in the PIP-II Document Database.
- 6) PIP-II Operations Coordinator shall certify Fermilab staff as PIP2IT Authorized Operators.
- 7) PIP-II Operations Coordinator shall maintain and provide to the MCR an off-hours call-in list of PIP2IT systems personnel.
- 8) PIP2IT Authorized Operators shall be responsible for:
 - a) Controlling beam and monitoring beam currents, intensity, losses, etc.;
 - b) Operating power supplies, electronics, utilities, control systems, etc. for the PIP2IT RGD;
 - c) Supervision of non-qualified personnel (Fermilab staff or collaborators); and

- d) Operating the PIP2IT RGD with at least one Authorized Operator present in the CMTF control room or an approved Fermilab control room.
 - e) Documenting shift activities in the "Accelerator Projects" Elog with Category "PIP2IT PIP-II Injector Test."
- 9) A PIP2IT Authorized Operator of an upcoming shift shall contact MCR by phone and notify MCR of a new shift.
- 10) Designated PIP2IT personnel shall attend the AD Friday 09:00 Operations meeting.

4.2. AD Operations Department Responsibilities

- 1) The AD Operations Department shall manage the PIP2IT Access Control System (ACS).
- 2) AD Operations personnel shall issue PIP2IT enclosure access keys to qualified personnel.
- 3) AD Operations personnel shall monitor and respond to device alarms during off-hours. After an initial investigation, the MCR shall contact the PIP-II Operations Coordinator, or designee, or the appropriate expert for the system(s) alarming per the provided call-in list.

NOTE: AD Operations Department personnel may train to become PIP2IT Authorized Operators.