**HFVMTF Project**

**Roles and Responsibilities, Authorities and Accountabilities**

Ver. 1.0 (January 2023)

Ver. 2.0 (March 2024)

This document is part of the HFVMTF project description and summarizes the Roles and Responsibilities, Authorities, and Accountabilities (R2A2) of the project management.

The project management is described in the diagram below:

Project Director

G. Velev

Project Manager

V. Nikolic

Mechanical

V. Nikolic

Cryostat

R.Bruce

QP/QM system

C.Arcola

Power Supplies

X. Yuan

Integration

G. Velev and Vlad Nikolic (interim)

Magnet and Cryo

Division Personnel

**Project Director: Gueorgui (George) Velev**

The Project Director assumes the critical role of defining the project scope, schedule, and cost to align with programmatic requirements. Ultimately, the Project Director bears responsibility for the successful delivery of all project components, collectively referred to as the "Cryostat." These components encompass the cryostat itself, the heat exchanger, and the lambda and top plates. Additionally, the Project Director oversees the procurement and integration of essential elements such as power supplies, quench protection, and monitoring systems.

The Project Director operates within the APS-TD Magnet Technology Division (MTD) and holds the position of Deputy Director within this division. The APS-TD MTD serves as the primary organizational entity tasked with the execution and management of the project, thereby establishing it as the key entity responsible for ensuring project success.

Project Manager: Vlad Nikolic

The Project Manager collaborates closely with the Project Director to effectively execute the project scope, schedule, and budget, ensuring alignment with programmatic requirements. In this capacity, the Project Manager assumes responsibility for supervising the individual sub-tasks delineated within the L2 scope of the project. These sub-tasks encompass various project activities aimed at achieving project objectives.

Additionally, the Project Manager holds the position of Deputy Department Head within the APS-TD Magnet Technology Division (MTD), specifically within the Test and Instrumentation Department. This department possesses unique qualifications and expertise essential for supporting and operating the future test facility. As such, the Project Manager plays a crucial role in leveraging the department's capabilities to ensure the successful execution of the project.

**L2 for Mechanical Systems and Interfaces: Vlad Nikolic**

The L2 for Mechanical Systems and Interfaces assumes a critical role in overseeing the civil engineering and procurement processes necessary for the construction of the pit, pit infrastructure, and supporting platforms. Additionally, this role encompasses the comprehensive integration of all mechanical aspects within the pit, ensuring seamless functionality and structural integrity.

Furthermore, the L2 collaborates closely with the APS-TD Support Group to execute various activities within this scope. This collaborative effort ensures that all mechanical components are seamlessly integrated into the overall project framework, contributing to the successful realization of project objectives.

**L2 for Cryostat Design and Cryo Integration: Romain Bruce**

The L2 for Cryostat Design and Cryo Integration assumes a pivotal role in overseeing the comprehensive execution of cryostat design, procurement, and integration activities. Operating within the Cryogenic Technology Division (CTD), this role is entrusted with leveraging the division's specialized expertise in managing and operating Fermilab’s cryogenic systems, including IB1, where the test will be conducted.

Given the extensive experience and capabilities of the APS-TD/CTD staff, the majority of engineering and labor required for these tasks will be sourced from this pool of talent. The L2 is tasked with organizing critical reviews and overseeing the implementation of cryostat integration processes, ensuring that all components are seamlessly integrated and aligned with project objectives. This collaborative effort underscores the importance of effective coordination and utilization of resources to achieve project success.

**L2 for Power Supplies and Integration: Xingchen (Alex) Yuan**

The L2 for Power Supplies and Integration assumes a pivotal role in overseeing the comprehensive process of procurement, design, manufacturing oversight, and integration of power supply systems. Operating within the APS-TD Magnet Technology Division, specifically within the Test and Instrumentation (T&I) Department, this role draws upon extensive experience in overseeing power supply systems within the Magnet Test Facility at Fermilab.

Given the department's specialized expertise in managing the testing of superconducting magnets at Fermilab, the L2 is uniquely qualified for this task. With a deep understanding of power supply systems and integration processes, the L2 ensures seamless coordination throughout the procurement, design, manufacturing, and integration phases. This collaborative effort underscores the importance of effective utilization of resources and expertise to achieve project success.

**L2 for Quench Protection and Quench Monitoring: Cristian Arcola**

The L2 for Quench Protection and Quench Monitoring holds a pivotal role in overseeing the comprehensive implementation of the quench protection and monitoring system. This responsibility encompasses the design, procurement, and seamless integration of the system. Operating within the APS-TD Magnet Technology Division, specifically within the Test and Instrumentation (T&I) Department, the L2 is entrusted with leveraging the department's specialized expertise.

Given the department's extensive experience in managing the testing of superconducting magnets at Fermilab, the L2 is uniquely qualified for this task. With a deep understanding of quench protection and monitoring systems, the L2 ensures seamless coordination throughout the design, procurement, and integration phases. This collaborative effort underscores the importance of effective utilization of resources and expertise to ensure the safety and reliability of the project.

**L2 for Overall Integration: George Velev and Vlad Nikolic (interim)**

The L2 for Overall Integration assumes a critical role in overseeing the final integration of the pit, encompassing various facets such as mechanical, fluid, cryogenic, electrical, and quench protection aspects of the project.

Responsibilities include coordinating the seamless integration of all components within the pit, ensuring their compatibility and functionality in alignment with project specifications. This entails managing the interface between different subsystems, conducting rigorous testing and validation procedures, and resolving any integration challenges that may arise during the implementation phase.

Furthermore, the L2 collaborates closely with other L2s and relevant stakeholders to ensure effective communication and coordination throughout the integration process. By overseeing the holistic integration of diverse subsystems, the L2 plays a crucial role in ensuring the overall success and functionality of the project.