National Ignition Facility Site Management Plan

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NIF Site Management Plan

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Contents

List of Acronyms.....	iii
1.0 Introduction.....	1
2.0 Principal Managers.....	2
2.1 NIF Site Manager.....	2
2.2 The Construction Managers for Conventional Facilities Construction, Installation, and Activation/Start-Up.....	2
2.2.1 Construction Manager for Conventional Facilities Construction (Step 1 Construction Manager).....	3
2.2.1.1 Field Construction Manager.....	4
2.2.2 Construction Manager for Special Equipment Installation (Step 2 Construction Managers).....	4
2.2.2.1 Field Installation Manager.....	5
2.2.3 Construction Manager for Activation/Start-Up (Step 3 Construction Manager).....	5
2.2.3.1 Field Activation Manager and Field Manager for OAB.....	6

Acronyms

APE	Associate Project Engineer
AS	Activation/Start-up
ATPs	acceptance testing procedures
CD	Critical Decision
CF	Conventional Facility
CM	Construction Manager
DOE	Department of Energy
ES&H	environment, safety, and health
ICF	inertial confinement fusion
LTAB	Laser and Target Area Building
NIF	National Ignition Facility
OAB	Optics Assembly Building
OCIP	Owner Controlled Insurance Program
QA	quality assurance
SE	Special Equipment

1.0 Introduction

The purpose of the NIF Site Management Plan is to describe the roles, responsibilities, and interfaces for the major NIF Project organizations involved in construction of the facility, installation and acceptance testing of special equipment, and the NIF activation. The plan also describes the resolution of priorities and conflicts.

The period covered is from Critical Decision 3 (CD3) through the completion of the Project. The plan is to be applied in a stepped manner. The steps are dependent on different elements of the project being passed from the Conventional Facilities (CF) Construction Manager (CM), to the Special Equipment (SE) CMs, and finally to the Activation/Start-Up (AS) CM. These steps are defined as follows:

The site will be coordinated by CF through Project Milestone 310, end of conventional construction. The site is defined as the fenced area surrounding the facility and the CF laydown and storage areas.

The building utilities that are installed by CF will be coordinated by CF through the completion of Project Milestone 310, end of conventional construction. The building utilities are defined as electricity, compressed air, de-ionized water, etc.

Upon completion of the CF work, the Optics Assembly Building/Laser and Target Area Building (OAB/LTAB) will be fully operational. At that time, an Inertial Confinement Fusion (ICF) Program building coordinator will become responsible for utilities and site activities.

- Step 1. Mid-commissioning (temperature stable, +1°C) of an area (e.g., Laser Bay 2, OAB) will precipitate the turnover of that area (within the four walls) from CF to SE.
- Step 2. Interior to the turned-over space, SE will manage all interactions, including those necessary by CF.
- Step 3. As the SE acceptance testing procedures (ATPs) are completed, AS will take over the management of the area and coordinate all interactions necessary by CF and SE.

For each step, the corresponding CMs for CF, SE, or AS will be placed in charge of the integrated activities within a space. That responsible manager will ensure that a work flow for people, equipment, and materials has been addressed and that a work plan has been formulated. The manager will also establish work priorities and resolve conflicts.

This Site Management Plan is a subtier plan to the *NIF Project Execution Plan*, the *NIF Project Management Position Descriptions*, and the *Construction Safety Program for the NIF*.

2.0 Principal Managers

This section describes the roles of the NIF Site Manager and NIF CMs in jobsite management. It also describes the role of Field Managers who report to the CMs.

2.1 NIF Site Manager

The CF Associate Project Engineer (APE) is assigned responsibility for NIF Site Management. The NIF Site Manager has specific responsibility to oversee:

- Mediation and resolution of the NIF site construction, equipment installation, and activation issues that could not previously be resolved. This includes decisions on priority, cost, schedule, and performance.
- Maintenance of Configuration Control including the as-built program and site quality assurance (QA) files.
- Assurance activities working with the Assurance Manager and the DOE to ensure that all site Environment, Safety, and Health (ES&H), QA, and security activities meet federal, state, and local regulatory requirements. Maintenance of training and qualification records is also required.
- Implementation of the construction of the conventional facilities working through the DAPE for Construction.
- Implementation of the installation of the special equipment working through the SE APE and System Engineers.
- Voting as a member of the Level 4 Baseline Change Control Board.

2.2 The Construction Managers for Conventional Facilities Construction, Installation, Activation/Start-Up

This section describes the CMs for each Project step. The role of the Field Managers who directly support the CMs is also described. Their safety role and that of safety coordinators is already spelled out in detail in the *Construction Safety Program*, and only their overall safety responsibility is described below.

2.2.1 Construction Manager for Conventional Facilities Construction (Step 1 Construction Manager)

The CM for CF Construction is responsible for the construction of the NIF experimental and support facilities (LTAB/OAB). He/she reports to the APE for CF and is responsible for coordinating construction site activity (facility construction, special equipment installation, etc.) in Step 1. The CM for CF Construction will:

- Oversee the construction, inspection, testing, and acceptance testing of the conventional facilities. Ensure that cost estimates are prepared in order to compare subcontractor bids and support the Subcontract Administrator in the bid/award process. Ensure that the construction, special equipment installation, and start-up/activation activities are coordinated and resolve interferences in Step 1. Establish daily priorities and work allocations and resolve all conflicts in communicating issues with the NIF Site Manager.
- Manage cost, schedule, and performance of CF construction subcontracts.
- Manage and direct the Field Construction Manager for CF acting as the Contracting Officer's Technical Representative.
- Coordinate preparation of the construction plan and construction and installation schedule, integrating with complementary schedules for special equipment in Step 1.
- Ensure that the required permits (e.g., Storm Water Pollution Prevention Plan, digging, welding) are in place.
- Ensure that construction subcontractors have adequate safety plans (for detail see the *Construction Safety Program for the NIF*).
- Ensure that the CF construction subcontractors are performing all work in accordance with applicable ES&H standards and the *Construction Safety Program for the NIF*.
- Document that CF construction work-in-place meets all contractual requirements and that as-built documentation has been prepared. Document the results of all ATPs.
- Develop and manage the Owner Controlled Insurance Program (OCIP) for CF.
- Ensure that all CF personnel are familiar with the OCIP.

2.2.1.1 Field Construction Manager

The Field Construction Manager is a Sverdrup Facilities, Inc. employee responsible to the DAPE for CF Construction for:

- Chairing Field Coordination meetings to establish priority, work sequence, etc., during Step 1.
- Overseeing the construction activities of the CF construction subcontractors.
- Providing a presence on the jobsite to facilitate rapid resolution of issues arising daily during CF construction.
- Performing inspection, testing, and acceptance of the conventional facilities.
- Supporting the Subcontract Administrator in the bid / award process for CF construction subcontractors.
- Preparing the construction plan and schedule.
- Assisting the CM for CF construction in ensuring that cost, schedule, and performance issues resulting from coordination efforts are clearly identified and managed.

2.2.2 Construction Managers for Special Equipment Installation (Step 2 Construction Managers)

The CMs for SE Installation are responsible for coordinating the activities of special equipment staging (preassembly), installation in the facility, and acceptance testing. During Step 2 of the Project, the CMs are responsible for coordinating all construction activity (facility construction, special equipment installation, and start-up / activation) within a turned-over space. He / she reports to the APE for SE. The CMs for Special Equipment will:

- Integrate the complementary schedules from the CM for Conventional Facilities and the CM for Start-Up / Activation in Step 2.
- Manage and direct the Field Installation Managers for SE.
- Oversee the staging, installation, and acceptance testing of special equipment. Support the Subcontract Administrator in the bid / award process for special equipment installation contractor / subcontractors. Ensure that the construction, special equipment installation, and start-up / activation activities are coordinated and resolve interferences in Step 2. Establish daily priorities and work allocations and resolve all conflicts in communicating issues with the NIF Site Manager.
- Ensure that SE subcontractors have adequate safety plans (for detail see the *Construction Safety Program*).
- Assist System Engineers with documentation that work-in-place meets all contractual requirements and that as-built documentation has been prepared. Document the results of all ATPs.

- Assist System Engineers with ensuring that cost, schedule, and performance issues resulting from coordination efforts are clearly identified and managed.

2.2.2.1 Field Installation Manager

The Field Installation Managers report to the CMs for Installation and are responsible for:

- Chairing Field Coordination meetings to establish priority, work sequence, etc., during Step 2.
- Overseeing the installation activities of the SE technicians and construction subcontractors.
- Providing a presence on the jobsite to facilitate rapid resolution of issues arising daily during Target Area AE Installation.
- Coordinating ATPs for SE.
- Preparing the installation plan and schedule.
- Assisting the CM in ensuring that cost, schedule and performance issues resulting from coordination efforts are clearly identified and managed.

2.2.3 Construction Manager for Activation/Start-Up (Step 3 Construction Manager)

The CM for Activation/Start-Up is responsible for coordinating the activities of operation, construction, and special equipment installation during Step 3 of the Project. He/she reports to the APE for Activation/Start-Up. The CM for Activation/Start-Up is responsible for:

- Preparing the NIF start-up, staffing, and training plans and managing the execution of those plans in accordance with project completion criteria.
- Managing and directing the Field Activation Manager.
- In Step 3 only, integrating the complementary schedules from the CM for Conventional Facilities and the CMs for Installation.
- Overseeing the start-up and activation of the NIF systems. In Step 3, ensuring that the construction, special equipment installation, and operation activities are coordinated and resolving interferences. Establishing daily priorities and work allocations and resolving all conflicts in communicating issues with the Deputy Project Manager.
- Developing and controlling the NIF Integrated Project Schedule.
- Interfacing and coordinating the ICF Program Experimental operations that will occur in parallel with Project activities.
- Developing and executing a training program to bring into existence the operations and maintenance staff.
- Preparing the training, operating, operational test, and maintenance procedures.

- Coordinating with the safety and assurance organizations regarding start-up and testing operations (see *Construction Safety Program*).
- Executing the Operational Readiness Review and coordinating activities with DOE.

2.2.3.1 Field Activation Manager and Field Manager for OAB

The Field Activation Manager and Field Manager for OAB report to the CM for Activation/Start-Up and are responsible for:

- Chairing Field Coordination meetings to establish priority, work sequence, etc., during Step 3.
- Overseeing the NIF start-up, staffing, and training activities of the start-up technicians, SE technicians, and subcontractors on site.
- Providing a presence on the jobsite to facilitate rapid resolution of issues arising daily during activation and start-up.
- Coordinating operational test procedures for start-up.
- Preparing the activation and start-up plan and schedule.
- Assisting the CM for Activation/Start-Up in ensuring that cost, schedule, and performance issues resulting from coordination efforts are clearly identified and managed.