

Exhibit B

## **SURF Reliability Projects**

Scope of Work

## **Background**

To enable the advancement of the Long-Baseline Neutrino Facility (LBNF) Project, several existing facilities at the Sanford Underground Research Facility (SURF) require rehabilitation, modification, and/or coordination by the South Dakota Science and Technology Authority (SDSTA). SDSTA currently operates SURF in large part through a contract with Fermi Research Alliance (FRA) as funded by the Department of Energy (DOE).

A number of tasks are associated with this rehabilitation. These tasks fit into two categories: “SURF Reliability Projects” and “Work in Support of CD-3a Construction.” SURF Reliability Projects are intended to reduce the risk of equipment failure that could result in construction delays for LBNF and therefore must be completed prior to the start of the project’s construction. Work in Support of CD-3a Construction includes rehabilitation of existing spaces necessary to support construction and installation of utilities within the shafts. In addition, there are “Miscellaneous Projects” that may be performed by SDSTA in support of LBNF that will be based on the availability of resources and funding.

## **General Requirements/Scope of Work**

The tasks for this Scope of Work include work on existing equipment and/or space at SURF that SDSTA is uniquely qualified to manage due to long-term ownership and operation of the equipment and/or spaces. SDSTA’s ownership of the facilities not only implies a right to determine the means, methods, and quality control of task performance, but also implies that their employees are the subject matter experts regarding the specialized SDSTA equipment and systems. The tasks included in this Scope of Work include, but are not limited to: Oro Hondo Fan Refurbishment; Refuge Chamber Capacity Increase at the 4850L; Ross Hoist Motor Rehabilitation; Ross Hoist Variable Speed Drives; Ross Hoist Bearings and Bushings; Ross Hoist Brakes and Clutches; Ross Cage Replacement; Ross Skip Replacement; 4850L Ventilation Rehabilitation; 3650L Ventilation Rehabilitation; Tramway Rehabilitation; Design Support; and Construction Support. A detailed Scope of Work pertaining to a specific task will be issued as part of an RFP specific to that task.

## **Quality Assurance, Reliability & Warranties**

Tasks shall be performed in accordance with the LBNF Quality Assurance Plan, which conforms to and incorporates the FRA Integrated Quality Assurance Program. SDSTA will be required to submit its own Quality Assurance Plan for the execution of tasks within this scope of work upon acknowledgement of this agreement. Also, a Project Quality Control Plan (PQC) must be submitted no later than ten (10) days after receipt of the award of each task.

SDSTA shall perform specified or required tests to verify that quality control measures are adequate and conform to the subcontract requirements. Results of all tests taken, both pass and fail tests, shall be recorded on the Quality Control report for the date taken. Additionally, the following

Completion Inspections will occur during the term of each task order: Delivery Inspection, Punch List Inspection, and Final Acceptance Inspection.

Warranties from any sub-subcontractors will be required for specific equipment and outlined in the technical specifications, for example, for mechanical and electrical equipment. Such requirements will be specifically identified in individual task orders.

SDSTA Quality Control requirements shall be detailed in the Project Quality Control Plan. Additional Quality Control requirements added by FRA will be explained in the Task Order Scope of Work.

## **Environment, Safety, and Health**

The Environmental, Safety, and Health (ESH) objectives for the Far Site Conventional Facilities (FSCF) activities are to ensure that all work is accomplished in accordance with all FRA and SURF environmental, safety, and health expectations, and that there are no injuries or environmental impacts as a result of FSCF construction activities. Site security measures that support ESH objectives shall also be in-place.

The NEPA process was completed for the Long-Baseline Neutrino Facility and the Deep Underground Neutrino Experiment with approval of the Environmental Assessment and FONSI by the DOE FSO Manager on September 25, 2015. Any substantive design changes must be reviewed by the LBNF Project Management team, including the LBNF/DUNE ESH Manager. An FRA Environmental Review Form shall be completed and submitted to the FRA ESH&Q Section's NEPA Coordinator for review in consultation with the DOE FSO NEPA Compliance Officer. A decision of no-further-action-required or an update-required to the Environment-Assessment must be made before any construction work can occur.

The Programmatic Agreement (PA) on Cultural Resources & Historic Properties was approved on October 3, 2015. All tasks shall be reviewed by the SDSTA Environmental Manager to determine if any special actions/measures are required per the PA. If the task is not deemed to be an excluded activity, a Section 106 Project review form shall be submitted to the DOE FSO NEPA Compliance Officer for review.

All construction activities completed by SDSTA or their subcontractors shall be completed in accordance with the Sanford Underground Research Facility Environmental, Safety, and Health policies and practices including the Sanford Underground Research Facility Document-88061 Construction ESH Manual. SDSTA shall provide sufficiently trained personnel and resources to perform the work in a safe manner, and shall comply with DOE Acquisition Regulation (DEAR) 970.5223-1, Integration of Environment, Safety, and Health into Work Planning and Execution.

All tasks are to be executed outside the DOE leased space, and management of the ESH program is the responsibility of the SURF ESH Director, who operates under the regulatory oversight authority of the South Dakota Office of Risk Management.

SDSTA is expected to integrate Environment, Safety and Health into the performance of its work to prevent damage, injury, or loss to individuals, the environment, and the Project, including of

materials and equipment incorporated into the Project. SDSTA assumes responsibility for following all ESH requirements and programs related to the performance of the tasks. SDSTA shall comply with the following ESH requirements and documentation during the completion of the scope of work for each task order issued under this Basic Ordering Agreement (BOA):

- SURF Environmental, Safety, and Health Manual.
- SURF Construction ESH Manual.
- LBNF Construction Environmental, Safety, and Health Plan.
- OSHA 1910 Occupational Safety & Health for General Industry.
- OSHA 1926 Safety and Health Regulations for Construction.
- NFPA-70E (2009) - Standard for Electrical Safety in the Workplace.
- Environmental requirements 40CFR260 Hazardous Waste Management System, 40CFR261 Identification and Listing of Hazardous Waste, the Clean Air Act - 40CFR50, 40CFR60, 40CFR61, and 40CFR63.
- Task specific hazard analysis documentation.
- SDSTA will provide the required site specific ESH Orientation classes to access the surface and underground facilities to all personnel accessing the site.
- SDSTA and their subcontractors are required to provide the required ESH training to their employees based on the individual's exposure to specific hazards related to their work activities.
- SDSTA is responsible for screening their lower tier subcontractors with respect to safety and to adopt a safety selection process consistent with requirements defined in this BOA and the task orders issued hereunder. In addition, SDSTA is responsible for flowing down all ESH requirements of this BOA to its lower tier subcontractors, including monitoring and enforcing compliance.
- Accident Reporting Requirements: SDSTA will immediately report verbally and in writing within twelve (12) hours, any ESH related injury, loss, damage, or incident arising from the Work to the LBNF on-site Conventional Facilities Deputy Project Manager (CFDPM) and the LBNF ESH Manager. In addition, SDSTA and its lower tier subcontractors will immediately report to the FRA CFDPM all non-incidentals spills and all other significant impacts to the environment (soil, water, air) during performance of the Project. SDSTA will also immediately notify the FRA CFDPM of any failure to comply with state and federal environmental laws, rules, and regulations. The SURF ESH Department shall follow their incident investigation policies and procedures and provide final investigation reports.

The LBNF Project will provide field oversight via the LBNF Far Site ESH Coordinator to verify compliance with the BOA and Statement of Work on a regular basis. The LBNF ESH Manager and the FRA ESHQ Section will provide ESH&Q oversight in support of the LBNF Project and FRA, respectively.

## **Superintendence by Subcontractor**

At all times during performance of these Task Orders/Releases and until the work is completed and accepted, the Subcontractor shall directly supervise the work or assign and have on the

worksite a competent Superintendent and any necessary assistants, each of whom must be satisfactory to FRA.

The Superintendent shall not be changed except with the consent of FRA, unless the Superintendent proves to be unsatisfactory to the Subcontractor or ceases to be in its employ.

The Superintendent shall have the authority to act for the Subcontractor in the Subcontractor's absence; and all directions, and instructions given to the Superintendent shall be as binding as if given to the Subcontractor. Mike Headley (or his designee) shall have the binding authority to act for the Subcontractor for all legal notices.

The Subcontractor shall give efficient supervision of the work, using its best skill and attention. It shall carefully study and compare all drawings, specifications, and other instructions and shall at once report to FRA any error, inconsistency, or omission that it may discover.

## **Cognizant FRA Personnel**

The Subcontractor will direct all technical correspondence to Josh Willhite, Fermi Research Alliance Technical Representative at (605) 722-5038 or [willhite@fnal.gov](mailto:willhite@fnal.gov) or his designee.

The Subcontractor will direct all contractual correspondence to James Hohbein, LBNF Senior Project Procurement Administrator at (630) 840-6782 or [hohbein@fnal.gov](mailto:hohbein@fnal.gov) or his designee.

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