

General Services Agreement: FY20 (October 1, 2019 - September 30, 2020)

This document establishes the General Services Agreement for the period October 1, 2019 through September 30, 2020 between the **South Dakota Science and Technology Authority (SDSTA)**, operator of the Sanford Underground Research Facility (Laboratory) and Fermi Research Alliance, LLC (FRA), the M&O Contractor for Fermilab, on behalf of the **Long Baseline Neutrino Facility (LBNF)/Deep Underground Neutrino Experiment (DUNE)** (Experiment). For reference, the initial expectations and resources required for the project are outlined in a Memorandum of Understanding (MOU-xxx).

The SDSTA indirect rate projected for the agreement period is **55.2%** and will be applied to all allowable costs as required by the federal office of Management and Budget (OMB) Circular A-87. The rate of indirect charges is formally reviewed on an annual basis and established using an audit process. FRA will be notified of any rate change. Due to the process of establishing the rate, the final overhead rate may not be available at the time of billing for any additional services procured by FRA through SDSTA subcontract, in which case retroactive adjustments may be applied to future billing.

The services and other liabilities and responsibilities described herein under the heading "Laboratory" will be provided by or otherwise the responsibility of the SDSTA, subject to the availability of funding. The services and other liabilities and responsibilities described herein under the heading "Experiment" will be provided by or otherwise the responsibility of FRA, subject to the availability of funding. This document may be modified by the mutual consent of SDSTA and FRA.

1. General	Laboratory	Experiment
General Equipment	Liabile for damages due to handling by Laboratory personnel or their agents as covered by existing Laboratory general liability policies.	Liabile for damages due to handling by Experiment collaborators or their agents such as sub-contractors or equipment service personnel.
Communication Equipment	Equipment, maintenance and management of: <ul style="list-style-type: none"> • Standard phones and similar devices in common spaces. Installation and maintenance. • Wireless access point(s) in common spaces. • Phones in the Ross Dry. 	Equipment, maintenance and management of: <ul style="list-style-type: none"> • Network switches in leased spaces, including connection to REED. • Wireless access point(s) in leased spaces. • Intercom system(s). • Internal cabling from Experiment equipment.

IT Resources		<ul style="list-style-type: none"> • All additional equipment, including system maintenance and security patches.
Electrical	<ul style="list-style-type: none"> • ESH oversight in areas outside of easement and leased spaces. 	<ul style="list-style-type: none"> • Perform inspections of electrical equipment per applicable ESH Manual.
Chemical and Hazardous Waste	<ul style="list-style-type: none"> • Reporting to State. • ESH oversight in areas outside of easement and leased spaces. • 	<ul style="list-style-type: none"> • Transportation and disposal arrangements. • Waste containers and transportation vehicles. • Waste handling equipment, storage and disposal costs. • Training.
Industrial Hygiene	<ul style="list-style-type: none"> • ESH oversight in areas outside of easement and leased spaces. 	<ul style="list-style-type: none"> • Monitoring and equipment.
Cranes, Hoists and Rigging (excluding shaft hoists)	<ul style="list-style-type: none"> • ESH oversight in areas outside of easement and leased spaces. 	<ul style="list-style-type: none"> • All equipment. • Inspections per applicable ESH Manual. • Training.
Pressure Systems	<ul style="list-style-type: none"> • ESH oversight in areas outside of easement and leased spaces. 	<ul style="list-style-type: none"> • Inspections and associated costs per applicable ESH Manual. • Training.
Gases & Cryogenics	<ul style="list-style-type: none"> • ESH oversight in areas outside of easement and leased spaces. 	<ul style="list-style-type: none"> • All delivery/supply arrangements. • Transportation to designated area, including any special transport vehicle(s). • All regulators and flow monitoring devices. • All gases and cryogenics, including distribution and dewar/cylinder costs. • Training.
Radioactive Sources and Equipment	<ul style="list-style-type: none"> • ESH oversight in areas outside of easement and leased spaces. • Basic regulatory monitoring equipment. 	<ul style="list-style-type: none"> • Costs associated with receiving or shipping radioactive sources. • Required sources and any deployment equipment. • Coordination with Laboratory RSO on

		<p>shipping/ receiving of any radioactive materials.</p> <ul style="list-style-type: none"> • Training.
Reviews	<ul style="list-style-type: none"> • Time & effort, travel expenses for SDSTA personnel for some reviews. 	<ul style="list-style-type: none"> • Expenses for non-SDSTA personnel and SDSTA personnel dedicated to LBNF/DUNE.
Storage (Surface)	<ul style="list-style-type: none"> • Receiving and shipping arrangements for operations and maintenance materials. • Approval for heated/cold storage of equipment and materials as appropriate and as space available. 	<ul style="list-style-type: none"> • Receiving and shipping arrangements for construction materials. • Provide advance information on all shipments received by SDSTA. • Request approval for storage.
Storage (Underground)	<ul style="list-style-type: none"> • Coordination for storage of equipment and materials as appropriate and as space available in accordance with LBNF/DUNE temporary construction easement. • Maintenance of storage space. 	<ul style="list-style-type: none"> • Receiving, shipping arrangements for construction. • Costs, packing, specialized storage (except as noted), including maintenance. • Provide advance information on all shipments. • Request approval for storage.
General Transportation (horizontal)	<ul style="list-style-type: none"> • Personnel transportation arrangements to using existing transport vehicles (underground only within available resources). 	<ul style="list-style-type: none"> • Construction transportation materials. • Packing (with regulatory exceptions). • Specialized transport vehicles (except as noted). • Provide advance information on all incoming and outgoing shipments using the Yates Shaft. • Costs associated with shipping goods.
Ross Shaft & Hoist Usage and Operations	<ul style="list-style-type: none"> • Maintenance and inspections and associated costs. 	<ul style="list-style-type: none"> • Operations personnel. • Rehabilitation materials and personnel.

Yates Shaft & Hoist Usage and Operations	<ul style="list-style-type: none"> • Operations personnel, maintenance and inspections and associated costs. • Rehabilitation materials and personnel. • Support for base level of Experiment use (personnel and materials). 	<ul style="list-style-type: none"> • Costs associated with extraordinary use as determined by the JCT.
Procurement	As appropriate and as requested (subject to applicable overhead rate).	All other FRA procurements
Security	System maintenance and access management in common areas.	Access management in leased space.
Emergency Response Team	Personnel staffing for 24-hour coverage.	None
PPE	<p>For Experiment visitors (15 or fewer people at a time) using the Yates Shaft, equipment, maintenance and training as appropriate for:</p> <ul style="list-style-type: none"> • General underground PPE: cap lamp, hard hat (with cap lamp mounting hardware as required), safety glasses with side shields (non-prescription), coveralls, utility belt or small backpack. • Self-rescuer. • Fall arrest and fall restraint equipment (subject to advance notice and training). 	<p>For Experiment personnel and Experiment visitors using the Ross Shaft, equipment, maintenance and training as appropriate for:</p> <ul style="list-style-type: none"> • General underground PPE: cap lamp, gloves, hard hat (with cap lamp mounting hardware as required), safety glasses with side shields (including prescription), coveralls, utility belt or small backpack. • Self-contained self-rescuer. • Fall arrest and fall restraint equipment.
Parking	Attach Diagram	None
2. Leased Space: Ross Dry	Laboratory	Experiment
Facility	<ul style="list-style-type: none"> • Maintain safe access, inspections and maintenance of travel ways, incl surface snow plowing. 	Any leasehold improvements or specialized equipment.

Safety Systems and Equipment	<ul style="list-style-type: none"> • Fire extinguishers monthly and annually: equipment, maintenance, inspections. • First-aid kits: equipment, maintenance. • AED: equipment, maintenance. 	<ul style="list-style-type: none"> • Any special process safety equipment. • Purchase and maintenance of additional specialized first-aid kits.
Cleaning Services	<ul style="list-style-type: none"> • General cleaning and any required supplies. • Mat/rug cleaning service, including arrangements for swapping. • Trash removal, incl non-construction dumpster use. 	<ul style="list-style-type: none"> • Maintain tidiness, cleanliness above what cleaning service provides. • Construction trash removal.
Monitoring	<p>Maintenance, management, monitoring and costs associated with facility items:</p> <ul style="list-style-type: none"> • Any additional sensors required and installed by the Laboratory. 	<ul style="list-style-type: none"> • Any other monitoring. • Gas tester: equipment and maintenance
Utilities/Services	<ul style="list-style-type: none"> • Maintenance, management and costs associated with facility and supporting systems (eg., water, HVAC, light bulbs). 	<p>Construction costs for new additional services or facility modifications/upgrades.</p>
3. Leased Space: Underground	Laboratory	Experiment
Facility	<ul style="list-style-type: none"> • Maintain safe access, inspections and maintenance of travel ways. 	<p>Any leasehold improvements or specialized equipment.</p>
Safety Systems and Equipment	<ul style="list-style-type: none"> • None. 	<p>NA for FY 2020</p>
Cleaning Services	<ul style="list-style-type: none"> • None. 	<p>NA for FY 2020</p>
Monitoring	<ul style="list-style-type: none"> • None. 	<p>NA for FY 2020</p>
Utilities/Services	<ul style="list-style-type: none"> • Maintenance, management and costs associated with facility and supporting systems not directly used for construction purposes (eg., light bulb). 	<p>Construction costs for new additional services or facility modifications/upgrades.</p>

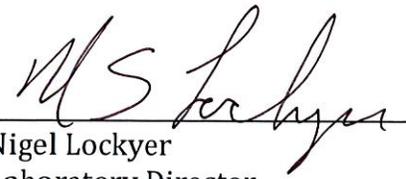
4. Easement Space: Common (Underground and Surface)	Laboratory	Experiment
Facility	<ul style="list-style-type: none"> • Maintain safe access, inspections and maintenance of travel ways. • Improvements as deemed necessary by Laboratory. 	Any Experiment-directed improvements or specialized equipment.
Safety Systems and Equipment	<ul style="list-style-type: none"> • Fire suppression: manage maintenance and inspections. • Fire extinguishers monthly and annually: equipment, maintenance, inspections. • First-aid kits: equipment, maintenance. • AED: equipment, maintenance. • Refuge Chamber Equipment 	<ul style="list-style-type: none"> • Any special process safety equipment.
Cleaning Services	<ul style="list-style-type: none"> • General cleaning and associated supplies. • Mat/rug cleaning service, including arrangements for swapping. • Trash removal, including non-construction dumpster use. 	<ul style="list-style-type: none"> • Maintain tidiness, cleanliness above what cleaning service provides. • Construction trash removal.
Monitoring	Maintenance, management, monitoring and costs associated with facility items: <ul style="list-style-type: none"> • Fire alarm. • Any additional sensors required and installed by the Laboratory. 	<ul style="list-style-type: none"> • Gas tester: equipment, maintenance and training. • Any other monitoring.
Utilities/Services	Maintenance, management and costs associated with facility and supporting systems (eg., water, fire suppression, HVAC, light bulbs).	NA for FY 2020
5. Easement Space: Active Construction (Underground)	Laboratory	Experiment

<p>and Surface; e.g., Ross Headframe, Tramway, 4850L Ore Pass, etc)</p>		
<p>Facility</p>	<p>None.</p>	<ul style="list-style-type: none"> • Maintain safe access, inspections of general Experiment area. • Costs for interfacing Experiment equipment to the facility, including labor if not provided by Laboratory. • Any capital improvements or specialized equipment.
<p>Safety Systems and Equipment</p>	<p>None.</p>	<p>Any safety system and equipment required for construction not previously provided by Laboratory.</p>
<p>Cleaning Services</p>	<p>None.</p>	<ul style="list-style-type: none"> • General cleaning, assistance receiving items into clean laboratory area. • Trash removal.
<p>Monitoring</p>	<p>Maintenance, management, monitoring and costs associated with existing facility items:</p> <ul style="list-style-type: none"> • Fixed gas testers. • Fire alarm. • Any additional sensors required and installed by the Laboratory. 	<p>Maintenance, management, monitoring and costs associated with construction-related items:</p> <ul style="list-style-type: none"> • Portable gas testers. • Any additional sensors required and installed by the Laboratory.
<p>Utilities/Services</p>	<ul style="list-style-type: none"> • Maintenance, management and costs associated with existing facility and supporting systems (eg., light bulbs). • Incidental power: 480/110 VAC, unconditioned. 	<p>Non-incidental power use. Change orders and material costs for new additional services, labor costs if not provided by Laboratory staff.</p>



Mike Headley
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9-25-19
Date



Nigel Lockyer
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9/28/2019
Date