

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT		1. CONTRACT ID CODE	PAGE OF PAGES 1 4
2. AMENDMENT/MODIFICATION NO. 0236	3. EFFECTIVE DATE See Block 16C	4. REQUISITION/PURCHASE REQ. NO.	5. PROJECT NO. (If applicable) N/A
6. ISSUED BY SC Chicago Service Center Office of Science - Chicago U.S. Department of Energy 9800 South Cass Avenue Lemont IL 60439	CODE 892430	7. ADMINISTERED BY (If other than Item 6) Fermi Site Office U.S. Department of Energy Fermi Site Office P.O. Box 2000 Batavia IL 60510	CODE 06006
8. NAME AND ADDRESS OF CONTRACTOR (No., street, county, State and ZIP Code) FERMI RESEARCH ALLIANCE, LLC Attn: JOHN MYER FERMI RESEARCH ALLIANCE, LLC PINE ST. AND KIRK RD, MS-213 BATAVIA IL 605105011		(x) 9A. AMENDMENT OF SOLICITATION NO.	
CODE 626399831		FACILITY CODE	
		x 10A. MODIFICATION OF CONTRACT/ORDER NO. DE-AC02-07CH11359	
		10B. DATED (SEE ITEM 13) 11/01/2006	

11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS

The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers is extended. is not extended.
Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods: (a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or electronic communication which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGEMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by letter or electronic communication, provided each letter or electronic communication makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.


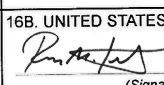
12. ACCOUNTING AND APPROPRIATION DATA (If required)
See Schedule

13. THIS ITEM ONLY APPLIES TO MODIFICATION OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.

CHECK ONE	A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.
	B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation data, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b).
X	C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF: Mutual Agreement of the Parties
	D. OTHER (Specify type of modification and authority)

E. IMPORTANT: Contractor is not is required to sign this document and return 1 copies to the issuing office.

14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.)
See Page 2.

15A. NAME AND TITLE OF SIGNER (Type or print) NIGEL S. LOCKYER	16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) Robert M. Scott
15B. CONTRACTOR/OFFEROR  (Signature of person authorized to sign)	15C. DATE SIGNED AUGUST 20, 2019
	16B. UNITED STATES OF AMERICA  (Signature of Contracting Officer)
	16C. DATE SIGNED 8/21/2019

14. Description of Amendment/Modification:

The purpose of this modification is to update the following:

1. SECTION J ATTACHMENT 9 APPENDIX I – DOE ORDERS AND NOTICES and LIST B – WORK SMART STANDARDS dated 8/5/2019, (attached hereto) is substituted for the APPENDIX I – DOE ORDERS AND NOTICES and LIST B – WORK SMART STANDARDS previously incorporated into this contract by Modification No. 232.

All other terms and conditions remain unchanged.

END OF MODIFICATION

Table of Changes for
Fermi Research Alliance, LLC
Contract No. DE-AC02-07CH11359
Modification No. 236

The purpose of this modification is to update the following:

1.

CONTRACT SECTION J ATTACHMENT 9 APPENDIX I

DOE ORDERS AND NOTICES AND LIST B – FERMILAB
WORK SMART STANDARDS

Order No.	Dates	C	Explanation for Change
DOE Order 205.1C	5/15/2019	Order Revised	The purpose is to enable accomplishment of the Department's mission and fulfill Federal cyber security requirements while allowing Departmental Elements (DEs) programmatic and operational flexibility, enhancing risk management, enabling effective implementation, delegating risk management to the lowest appropriate level, addressing roles and responsibilities, and setting standards for performance across all levels of the Department. Cancels DOE O 205.1B Chg3 (PgChg)
DOE Order 486.1	6/7/2019	Inclusion of Order	New Order required To ensure the continued flow of scientific and technical information consistent with the Department of Energy's (DOE) broad scientific mission, while also ensuring protection of U.S. competitive and national security interests and DOE program objectives; and limiting unauthorized transfers of scientific and technical information.
DOE Order 550.1	5/2/2019	Order Revised	This DOE Order supersedes DOE O 551.1D Change 2.

ATTACHMENT J.9

APPENDIX I

**DOE ORDERS AND NOTICES
AND
LIST B – FERMILAB WORK SMART STANDARDS**

**Applicable to the
Management and Operation of
Fermi National Accelerator Laboratory**

Contract No. DE-AC02-07CH11359

APPENDIX I – DOE ORDERS AND NOTICES

<u>ORDERS/ NOTICES</u>	<u>DATES</u>	<u>TITLE</u>
O 130.1	09/29/1995	Budget Formulation
O 142.3A Change 1	01/18/2017	Unclassified Foreign Visits and Assignments Program
O 200.1A Change 1	01/13/2017	Information Technology Management
O 205.1C	05/15/2019	Department of Energy Cyber Security Program
O 206.1 Change 1	11/01/2018	Department of Energy Privacy Program
O 206.2	02/19/2013	Identity, Credential, and Access Management
O 221.1B	09/27/2016	Reporting Fraud, Waste, and Abuse to the Office the Inspector General
O 221.2A	02/25/2008	Cooperation with the Office of Inspector General
O 227.1A	12/21/2015	Independent Oversight Program
O 231.1B Change 1	11/28/2012	Environmental Safety and Health Reporting
O 232.2A	01/17/2017	Occurrence Reporting and Processing of Operations Information (Reporting for Informational Level Events is not required in the ORPS system. Notification to FSO is required)
O 241.1B	04/26/2016	Scientific and Technical Information Management
O 243.1B Change 1	07/08/2013	Records Management Program
O 251.1D	01/17/2017	Departmental Directives Program
O 252.1A Change 1	03/12/2013	Technical Standards Program
O 313.1	11/19/2009	Management and Funding of the Departments Overseas Presence
O 341.1A	10/10/2007	Federal Employee Health Services
O 350.1 Change 6	02/01/2018	Contractor Human Resource Management Programs
O 410.2 Change 1	04/10/2014	Management of Nuclear Materials
O 411.2	01/04/2017	Scientific Integrity
O 412.1A Change 1	05/21/2014	Work Authorization System
O 413.1B	10/28/2008	Internal Control Program
O 413.2C Change 1	08/02/2018	Laboratory Directed Research and Development
O 413.3B Change 5	04/12/2018	Program and Project Management for the Acquisition of Capital Assets. <i>The Memorandum from S. Binkley (dated 8/2/2018) exempted Capital Asset Projects with a TPC under \$50M from the requirements of this Order, and delegated responsibility for their successful delivery to the cognizant SC Laboratory Director.</i>

<u>ORDERS/</u>	<u>DATES</u>	<u>TITLE</u>
G 413.3-5A	09/23/2011	U.S. Department of Energy Performance Baseline Guide
G 413.3-7A	01/12/2011	Risk Management Guide
O 420.2C	07/21/2011	Safety of Accelerator Facilities
O 436.1	05/2/2011	Departmental Sustainability
O 442.1B	01/31/2019	DOE Employee Concerns Program
O 442.2 (Change 1)	10/5/2016	Differing Professional Opinions for Technical Issues Involving Environment, Safety and Health Technical Concerns
O 443.1B Change 1	04/21/2016	Protection of Human Research Subjects
O 450.2 Change 1	01/17/2017	Integrated Safety Management
O 458.1 Change 3	01/15/2013	Radiation Protection of the Public and the Environment
O 460.1D	12/20/2016	Hazardous Materials Packaging and Transportation Safety
O 462.1 Change 1	7/10/2013	Import and Export of Category 1 and 2 Radioactive Sources and Aggregated Quantities
O 470.3C	11/23/2016	Design Basis Threat Order (OUO)
O 470.4B Change 2	01/17/2017	Safeguards and Security Program
O 470.5	06/02/2014	Insider Threat
O 471.3 Change 1	01/13/2011	Identifying and Protecting Official Use Only Information
O 472.2 Change 1	07/09/2014	Personnel Security
O 473.3A Change 1	01/02/2018	Protection Program Operations – Attachment 3, Section A, Chapters 1-7 and 9-11
O 474.2 Change 4	09/13/2016	Nuclear Material Control and Accountability
O 475.1	12/10/2004	Counterintelligence
O 483.1B Change 1	02/08/2019	DOE Cooperative Research and Development Agreements
O 484.1 Change 2	06/30/2014	Reimbursable Work for the Department of Homeland Security
P 485.1	01/19/2017	Foreign Engagement with DOE National Laboratories
O 486.1	06/07/2019	Department of Energy Foreign Government Talent Recruitment Programs
O 522.1A	08/02/2018	Pricing of Departmental Materials and Services
O 534.1B	01/6/2003	Accounting
O 550.1	05/02/2019	Official Travel
Std. 1090-2011	09/01/2011	Hoisting and Rigging Standard
Std. 1196-2011	4/1/2011	Derived Concentration Technical Standard

LIST B
 Work Smart Set of Standards

10 CFR 1021 (DOE NEPA rules)
10 CFR 1022 (Compliance with Floodplain/Wetlands environmental review requirements)
10 CFR 1046 Subpart B, App. A, Chapter X, par. H through I inclusive. (Physical protection of security interests, protective force personnel)
10 CFR 835 (Occupational radiation protection - applicable and enforceable portions)
10 CFR 850 (Chronic Beryllium Disease Prevention Program)
10 CFR 851 (Worker Safety and Health Program)
10 CFR 860 (Trespass to land owned & leased by the U.S. Government)
17 IAC 525 and permit pursuant (Nuisance animal trapping permits)
17 IAC 3700 and all permits pursuant (Construction in floodways of rivers, lakes and
17 IAC 3702 (Construction and Maintenance of Dams)
17 IAC 3704 and all permits pursuant (Regulation of public waters)
17 IAC 3708 and all permits pursuant (Floodway construction in Northeast Illinois)
18 U.S. Code Sections 841-848 (Use, or threat of use, of explosives; includes civil disorders)
28 CFR 36 (Section 302(b)(2) of the Americans with Disabilities Act and Section 4.1.3(9) of the ADAAG -- accommodations and accessibility)
29 CFR 1903.13 (Imminent danger)
29 CFR 1903.2 (Posting of notice...)
29 CFR 1904 (Recordkeeping and reporting occupational injuries and illnesses)
29 CFR 1910 (OSHA general industry standards - applicable and enforceable portions)
29 CFR 1926 (OSHA construction industry standards - applicable and enforceable portions)
29 CFR 1928 Subpart C (Roll-over protective structures - applicable and enforceable portions)
29 CFR 1928 Subpart D (Safety for agricultural equipment - applicable and enforceable portions)
29 CFR 1977.12 (Exercise of any right afforded by the Act)
29 CFR 1977.4 (Persons prohibited from discriminating)
29 IAC Chapter 1, Subchapter f (Emergency services, disasters, and civil defense /ESDA/ chemical safety)
33 CFR 320-323, 328-330 (Army Corp of Engineers wetlands regs)
35 IAC (State of IL environmental regs - applicable and enforceable portions)
36 CFR 60, 63, 65 (National historic landmark program)
36 CFR 78-79 (NHPA waiver and collection curation regs)
36 CFR 800 (Protection of historic and cultural properties)
40 CFR (Federal environmental regs - applicable and federally-enforceable portions)

41 IAC 100 (Fire prevention and safety)
41 IAC 2120 (Boiler and pressure vessels)
41 IAC 160 (Storage, transportation, sale and use of gasoline and volatile oils: rules relating to general storage)
41 IAC 180 (Storage, transportation, sale and use of volatile oils)
43 CFR 7 (Archaeological collections)
49 CFR (Offsite) Parts 100-177 (Applicable Parts) Parts 178-199 (Applicable Parts) Parts 382-399 (Applicable Parts)
49 CFR (Onsite) Parts 382-399 (Applicable Parts) 177.848 (Segregation Table for Hazardous Materials)
50 CFR 17 (Endangered species rules)
71 IAC 400 (Illinois accessibility code, Subparts C-F)
77 IAC 830 (Structural pest control code)
77 IAC 855 (Rules for Asbestos Abatement for Public & Private Schools and Commercial & Public Buildings in Illinois)
77 IAC 890 (Plumbing code)
77 IAC 900 (Drinking water systems requirements)
77 IAC 905 (Private Sewage Disposal Code)
77 IAC 920 (Water well construction code)
77 IAC 925 (Well pump installation)
225 ILCS 207 (Commercial and Public Building Asbestos Abatement Act)
ACGIH Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices, 2005
ANSI A 17.1 (Elevator Construction)
ANSI A 17.3 (Elevator Maintenance)
ANSI/IWCA I-14.1 2001 (Standard for Window Cleaning)
ANSI B11 series (Metalworking - applicable portions)
ANSI B15.1 (Power transmission apparatus)
ANSI O1.1 (Woodworking machinery)
ANSI Z88.2 (Respiratory Protection) 1992
ANSI Z136.1 (Lasers), 2000

AWS (American Welding Standard) Z 49.1 (Cutting, Welding and Hot Work Activities) 1999 version
ANSI/ASHRAE 15 (Mechanical refrigeration)
ANSI/ASME B30.10 (Hooks) 2005
ANSI/ASME B30.11 (Monorails and Underhung Cranes) 2004
ANSI/ASME B30.16 (Overhead Hoists (Underhung)) 2003
ANSI/ASME B30.17 (Overhead and Gantry Cranes (Top Running Bridge, Single Girder, Underhung Hoist)) 2003
ANSI/ASME B30.2 (Overhead and gantry cranes) 2005
ANSI/ASME B30.20 (Below the hook lifting devices) 2006
ANSI/ASME B30.21 (Manually Lever Operated Hoists) 2005
ANSI/ASME B30.22 (Articulating Boom Cranes) 2002
ANSI/ASME B30.5 (Mobile and locomotive truck cranes) 2004
ANSI/ASME B30.9 (Slings) 2003
ANSI/ASME B31.1 (Power piping) 2001, B31.1a 2002, Addenda to b 31.1 2001
ANSI/ASME B31.3 (Process Piping) 2004
ANSI/ASME B31.5 (Refrigeration piping) 2001
ANSI/ASME B31.8 (Gas transmission and piping systems) 2003
ANSI/ASME B31.9 (Building Services Piping) 1996
Archaeological and Historic Preservation Act of 1974 (P.L. 93-291)
Archaeological Resources Protection Act of 1979 [amended], 16 USC 470aa et seq.
ASME Pressure Vessel Code - Section VIII
ASME B20.1-1996 (Safety Standard for Conveyors & Related Equipment)
Atomic Energy Act of 1954 [amended], 42 USC 2011 et seq.
ANSI N323A-1997 (Radiation Protection Instrumentation Test and Calibration, Portable Survey Instruments)
ANSI N323D-2002 (American National Standard for Installed Radiation Protection Instrumentation)
ANSI/ISA – 84.00.01 – 2004 Application of Safety Instrumented Systems for the Process Industries
Batavia Code of Regulations, City Ordinance, Section 8-3-10-3
International Building Code Fire Prevention Code (latest edition)
International Building Code (latest edition)
Boiler & Pressure Vessels of the Illinois Office of the State Fire Marshall - applies to CUB Boilers Only
CERCLA/SARA, 42 USC 9601 et seq.
City Code of Warrenville, IL Title 7, Chapter 4, sewer/sewerage ordinance
Clean Air Act Amendments 1990, 42 USC 7401 et seq., and Illinois State Implementation Plan, 40 CFR 52 Subpart O
Clean Water Act, 33 USC 1251 et seq.

DOE Order 420.2C Safety of Accelerator Facilities
DuPage County Health Department Private Water Supply Ordinance (Chapter 18, Article 18-4, DuPage County Code)
E.O. 11988 (Floodplain Management)
E.O. 11990 (Protection of Wetlands)
E.O. 12580 (Implementation of superfund); Amended by E.O. 13016
E.O. 13058 (Protecting Federal Employees and the Public from Exposure to Tobacco Smoke in the Federal Work Place)
Endangered Species Act, 16 USC 1531 et seq.
Federal Facility Compliance Act, 42 USC 6961
Fermilab Nuclear Materials Control and Accountability Implementation Plan
FESHM 2010 (Planning and review of accelerator facilities and their operations)
FESHM 3010 (Significant and Reportable Occurrences) (formerly, Occurrence reporting)
FESHM 5031 (Pressure vessels)
FESHM 5031.1 (Piping systems)
FESHM 5032 (Cryogenic system review)
FESHM 5032.1 (Liquid nitrogen dewar installation and operation rules)
FESHM 5032.2 (Liquid Cryogenic Targets)
FESHM 5032.3 (Transporting gases in building elevators)
FESHM 5033 (Vacuum vessel safety)
FESHM 5033.1 (Vacuum window safety)
FESHM 5035 (Mechanical refrigeration systems)
FESHM 9100 (Fermilab electrical safety program)
FESHM 9110 (Electrical utilization equipment safety)
FESHM 9120 (AC electrical power distribution safety)
FESHM 9130 (Management and use of cable tray systems)
FESHM 9140 (Protection against exposed electrical bus)
FESHM 9160 (Low voltage, high current power distribution systems)
FESHM 9180 (Hazard Mitigation for Electrical Workers)
FESHM 4240 (Oxygen deficiency hazards)
FESHM 7060 (Fall Protection Program)
FESHM 4120 (Ergonomics Program)
FESHM 6020.3 (Storage and use of flammable gases)
FESHM 10170 (Aviation safety)

FIFRA, 7 USC 136 et seq.
FRCM Article 362 (X-Ray Generating Devices & Radiography Sources)
FRCM Article 411 (Radioactive Material Identification, Storage and Control - Definitions)
Handbook for Sampling & Sample Preservation of Water and Wastewater, EPA-600/4-82-029
IEC 61511, Functional Safety, Safety Instrumented Systems for the Process Industry Sector
Illinois Chemical Safety Act, 430 ILCS 45/1 et seq.
Illinois Compiled Statutes (ILCS) Chapter 625 (State vehicle code -- Applicable Portions)
Illinois Department of Public Health, DuPage County Dept. Public Health. CDC December 7, 1990
Illinois Endangered Species Protection Act, 520 ILCS 10/1 et seq.
Illinois Ground Water Protection Act, 415 ILCS 55/1 et seq.
Illinois Health and Safety Act, 820 ILCS 225/1 et seq.
Illinois Pesticide Act, 415 ILCS 60/1 et seq.
Illinois Structural Pesticide Act, 225 ILCS 235/1 et seq.
Kane County Health Department Ordinance 04-199/05-141 Water Well Code
National Fire Protection Association Codes and Standards (NFPA Standards - applicable portions)
NFPA (National Electric Code), 2005
NFPA-520 Standard on Subterranean Spaces, version 2005
NFPA 70E (Standard for Electrical Safety in the Workplace), 2004 (except, Tables 130.7(C)(9) (Hazard/Risk Category Classification), 130.7(C)(10) (Protective Clothing and Personal Protective Equipment), and 130.7(C)(11) (Protective Clothing Characteristics))
NFPA 70E (Standard for Electrical Safety in the Workplace), 2009 (Tables 130.7(C)(9) (Hazard/Risk Category Classification), 130.7(C)(10) (Protective Clothing and Personal Protective Equipment), and 130.7(C)(11) (Protective Clothing Characteristics))
National Historic Preservation Act of 1966 [amended], 16 USC 470 et seq.
Native American Graves Protection and Repatriation Act of 1990, 25 USC 3001 et seq.
NEPA, 42 USC 4321 et seq.
OSH Act, 29 USC 654(a)(1) -- General duty clause.
Pressure Equipment Directive (PED) 97/23
Privacy Act of 1974, 5 USC 552a
RCRA Part B Permit (Illinois Log #131), including Emergency Contingency plan
RCRA, 42 USC 6901 et seq.
Recommended standards for Water Works, Great Lakes Upper Mississippi R. Bd. of State Public Health & Environmental Managers (1992)
Safe Drinking Water Act, 42 USC 300f et seq.
Standard Methods for the Examination of Water and Wastewater, 18th Ed., APHA (1992)
Standards and Specifications for Soil Erosion and Sediment Control, 10/87, IEPA 87-102
TSCA, 15 USC 2601 et seq.

UL Listing
Uniform Federal Accessibility Standards, Chapter 4, Accessible Elements and Spaces: Scope and Technical Requirements
Energy Solutions LLC Bulk Waste Disposal and Treatment Facilities Waste Acceptance Criteria
<p>Rather than attempt a precise analysis of all necessary standard citations to exclude non-applicable parts, inclusive citations were made qualified by the phrase "applicable and enforceable parts thereof."</p> <p>To the extent these standards apply to DOE and not the contractor, the contractor will assist DOE in complying with them.</p> <p>This Set does not change any existing Federal, State or local enforcement authority. For standards not applicable as a matter of law (other than FESHM provisions), the applicable version shall be the revision in effect on July 14, 1995, unless otherwise indicated. For FESHM provisions, the applicable version shall be the most recent version established through the procedures set forth in Appendix I.</p>