**Department of Energy**
Fermi Site Office
Post Office Box 2000
Batavia, Illinois 60510

NOV 24 2010

Mr. Benjamin G. Stauss
Fermi Research Alliance, LLC
1111 19th Street, NW, Suite 400
Washington, DC 20036

Dear Mr. Stauss:

SUBJECT: MODIFICATION NO. 073 TO U.S. DEPARTMENT OF ENERGY CONTRACT NO. DE-AC02-07CH11359

Enclosed for your records is a signed copy of the subject contract modification which unilaterally increases the amount of funds obligated hereunder by $191,752.62 from $1,781,104,724.69 to a total of $1,781,296,477.31.

Also enclosed is Fiscal Year 2011 Approved Funding Program No.2 which depicts the funding adjustment in the following category:

- Operating Expense Funds are increased by $190,106.00; and
- Reimbursable Work Funds are increased by $1,646.62.

This obligation does not affect expenditure limitations which are applicable and which the Laboratory may have been advised of separately from contract modifications.

Sincerely,

Rory S. Simpson
Contracting Officer

Enclosures:
As Stated

cc: P. Oddone, Fermilab, w/encls.
Y. - K. Kim, Fermilab, w/encls.
B. Chrisman, Fermilab, w/encls.
D. Carlson, Fermilab, w/encls.
C. Conger, Fermilab, w/encls.
C. Trimby, Fermilab, w/encls.
M. Rhoades, Fermilab, w/encls.
E. Becker, Fermilab, w/encls.

**AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT**

1. CONTRACT ID CODE

PAGE 1 OF PAGES 1

2. AMENDMENT/MODIFICATION NO. 073

3. EFFECTIVE DATE 11/01/2010

4. REQUISITION/PURCHASE REQ. NO. 11SC000970

5. PROJECT NO. *(If applicable)*

6. ISSUED BY CODE 06006

Fermi Site Office
U.S. Department of Energy
Fermi Site Office
P.O. Box 2000
Batavia IL 60510

7. ADMINISTERED BY *(If other than Item 6)* CODE 06006

Fermi Site Office
U.S. Department of Energy
Fermi Site Office
P.O. Box 2000
Batavia IL 60510

8. NAME AND ADDRESS OF CONTRACTOR *(No., street, county, State and ZIP Code)*

FERMI RESEARCH ALLIANCE LLC
Attn: GARY LEONARD
FERMI RESEARCH ALLIANCE, LLC
PINE ST. AND KIRK RD, MS-213
BATAVIA IL 605105011

CODE 626399831 FACILITY CODE

(x) 9A. AMENDMENT OF SOLICITATION NO.

9B. DATED *(SEE ITEM 11)*

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 telegram 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 telegram or letter, provided each telegram or letter 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)* Net Increase: $191,752.62
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 date, 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: Part I, Section I, Clause I 119; DEAR 970.5232-4 |
| | D. OTHER *(Specify type of modification and authority)* |

**E. IMPORTANT:** Contractor ☒ is not, ☐ is required to sign this document and return 0 copies to the issuing office.

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

This contract modification unilaterally increases the amount of funds obligated hereunder by $191,752.62, from $1,781,104,724.69 to a total of $1,781,296,477.31.
FOB: Unknown
Period of Performance: 01/01/2007 to 12/31/2011

Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.

| 15A. NAME AND TITLE OF SIGNER *(Type or print)* | | 16A. NAME AND TITLE OF CONTRACTING OFFICER *(Type or print)* | |
|---|---|---|---|
| | | Rory S. Simpson | |
| 15B. CONTRACTOR/OFFEROR | 15C. DATE SIGNED | 16B. UNITED STATES OF AMERICA | 16C. DATE SIGNED |
| *(Signature of person authorized to sign)* | | Signature on File *(Signature of Contracting Officer)* | 11/24/2010 |

CHICAGO OPERATIONS OFFICE
FY 2011 APPROVED FUNDING PROGRAM NO. 2
CH Fermi Accelerator Laboratory - CONTRACT NO: CH11359
SUMMARY

| | BUDGET AUTHORITY (BA) | | | | |
|---|---|---|---|---|---|
| | BEGINNING UNCOSTED OBLIGATIONS | NEW BA PREVIOUS | NEW BA CHANGE | NEW BA REVISED | TOTAL AVAILABLE |
| OPERATING EXPENSES | 0.00 | 58,201,675.00 | 190,106.00 | 58,391,781.00 | 58,391,781.00 |
| CAPITAL EQUIPMENT | 0.00 | 7,803,342.00 | 0.00 | 7,803,342.00 | 7,803,342.00 |
| CONSTRUCTION | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| REIMBURSABLE WORK | 0.00 | 25,449.15 | 1,646.62 | 27,095.77 | 27,095.77 |
| GRAND TOTAL | 0.00 | 66,030,466.15 | 191,752.62 | 66,222,218.77 | 66,222,218.77 |

Certification of Funds Availability:

Catherine Richardson 11-9-10

Certifying Official Date

CHICAGO OPERATIONS OFFICE
FY 2011 APPROVED FUNDING PROGRAM NO. 2
CH Fermi Accelerator Laboratory - CONTRACT NO: CH11359
HQ B&R CONTROL SUMMARY

| APPROPRIATION YEAR FT | HQ B&R CONTROL | BUDGET REFERENCE NUMBER | BUDGET AUTHORITY (BA) BEGINNING UNCOSTED OBLIGATIONS | NEW BA PREVIOUS | NEW BA CHANGE | NEW BA REVISED | TOTAL AVAILABLE |
|---|---|---|---|---|---|---|---|
| 89X0222 2010 General Science and Research Activities, Oper | | | | | | | |
| WA | KA-11-00-00-0 | KA1100000 - Proton Accelerator-Based Physics | 0.00 | (2,000,000.00) | 0.00 | (2,000,000.00) | (2,000,000.00) |
| 89X0222 2011 General Science and Research Activities, Reim | | | | | | | |
| 2W | 60-00-00-00-0 | 600000000 - Cost Of Reimbursable And Cooperative Work - Non- | 0.00 | 25,449.15 | 1,646.62 | 27,095.77 | 27,095.77 |
| WA | FS-10-00-00-0 | FS1000000 - Safeguards and Security - Science | 0.00 | 622,251.00 | 0.00 | 622,251.00 | 622,251.00 |
| | KA-11-00-00-0 | KA1100000 - Proton Accelerator-Based Physics | 0.00 | 50,210,871.00 | 8,927.00 | 50,219,798.00 | 50,219,798.00 |
| | KA-12-00-00-0 | KA1200000 - Electron Accelerator-Based Physics | 0.00 | 138,516.00 | 0.00 | 138,516.00 | 138,516.00 |
| | KA-13-00-00-0 | KA1300000 - Non-Accelerator-Based Physics | 0.00 | 2,598,960.00 | 89,250.00 | 2,688,210.00 | 2,688,210.00 |
| | KA-14-00-00-0 | KA1400000 - Theoretical Physics | 0.00 | 2,262,683.00 | 91,929.00 | 2,354,612.00 | 2,354,612.00 |
| | KA-15-00-00-0 | KA1500000 - Advanced Technology R&D | 0.00 | 12,034,827.00 | 0.00 | 12,034,827.00 | 12,034,827.00 |
| | KJ-00-00-00-0 | KJ0000000 - Advanced Scientific Computing Research | 0.00 | 136,909.00 | 0.00 | 136,909.00 | 136,909.00 |

CHICAGO OPERATIONS OFFICE
FY 2011 APPROVED FUNDING PROGRAM NO. 2
CH Fermi Accelerator Laboratory - CONTRACT NO: CH11359
DETAIL

| FT | B&R REPORTING/BUD REF NUM | | APPR YEAR | OBJ CLASS | | BEGINNING UNCOSTED OBLIGATIONS | BUDGET AUTHORITY (BA) NEW BA PREVIOUS | CHANGE | REVISED | TOTAL AVAILABLE |
|---|---|---|---|---|---|---|---|---|---|---|
| OPERATING EXPENSES | | | | | | | | | | |
| WA | FS-10-01-00-0 | | 2011 | 25400 | FS1001000, Protective Forces | 0.00 | 302,379.00 | 0.00 | 302,379.00 | 302,379.00 |
| | FS-10-02-00-0 | | 2011 | 25400 | FS1002000, Security Systems | 0.00 | 102,816.00 | 0.00 | 102,816.00 | 102,816.00 |
| | FS-10-05-00-0 | | 2011 | 25400 | FS1005000, Cyber Security | 0.00 | 179,392.00 | 0.00 | 179,392.00 | 179,392.00 |
| | FS-10-07-00-0 | | 2011 | 25400 | FS1007000, Material Control and Accountability | 0.00 | 8,033.00 | 0.00 | 8,033.00 | 8,033.00 |
| | FS-10-09-00-0 | | 2011 | 25400 | FS1009000, Program Management | 0.00 | 29,631.00 | 0.00 | 29,631.00 | 29,631.00 |
| | KA-11-01-02-1 | | 2011 | 25400 | KA1101021, Proton Research, National Laboratory, Energy Fron | 0.00 | 5,625,427.00 | 0.00 | 5,625,427.00 | 5,625,427.00 |
| | KA-11-01-02-2 | | 2011 | 25400 | KA1101022, Proton Research, National Laboratory, Intensity F | 0.00 | 1,576,155.00 | 0.00 | 1,576,155.00 | 1,576,155.00 |
| | KA-11-01-03-0 | | 2011 | 25400 | KA1101030, University Service Accounts | 0.00 | 0.00 | 8,927.00 | 8,927.00 | 8,927.00 |
| | KA-11-02-01-1 | | 2011 | 25400 | KA1102011, Accelerator Operations | 0.00 | 19,756,950.00 | 0.00 | 19,756,950.00 | 19,756,950.00 |
| | KA-11-02-01-2 | | 2011 | 25400 | KA1102012, Detector Operations | 0.00 | 5,899,425.00 | 0.00 | 5,899,425.00 | 5,899,425.00 |
| | KA-11-02-02-1 | EQU | 2011 | 31003 | KA1102021, Accelerator Support | 0.00 | 517,650.00 | 0.00 | 517,650.00 | 517,650.00 |
| | KA-11-02-02-2 | EQU | 2011 | 31003 | KA1102022, Detector Support | 0.00 | 406,087.00 | 0.00 | 406,087.00 | 406,087.00 |
| | KA-11-02-02-3 | | 2011 | 25400 | KA1102023, Other Tevatron Support Costs | 0.00 | 1,043,333.00 | 0.00 | 1,043,333.00 | 1,043,333.00 |
| | | EQU | 2011 | 31003 | KA1102023, Other Tevatron Support Costs | 0.00 | 132,090.00 | 0.00 | 132,090.00 | 132,090.00 |
| | KA-11-02-03-3 | EQUMIE71RF | 2011 | 31001 | KA1102033, Proton Facilities - Projects, Current Facility Pr | 0.00 | 5,000,000.00 | 0.00 | 5,000,000.00 | 5,000,000.00 |
| | | OPEMIE01VK | 2011 | 25400 | KA1102033, Proton Facilities - Projects, Current Facility Pr | 0.00 | 1,000,000.00 | 0.00 | 1,000,000.00 | 1,000,000.00 |
| | | OPEMu2E | 2011 | 25400 | KA1102033, Proton Facilities - Projects, Current Facility Pr | 0.00 | 1,500,000.00 | 0.00 | 1,500,000.00 | 1,500,000.00 |
| | KA-11-02-03-4 | | 2011 | 25400 | KA1102034, Proton Facilities - Projects, Future Facility R&D | 0.00 | 1,731,450.00 | 0.00 | 1,731,450.00 | 1,731,450.00 |
| | KA-11-02-05-3 | | 2011 | 25400 | KA1102053, LHC Accelerator RandD | 0.00 | 511,830.00 | 0.00 | 511,830.00 | 511,830.00 |
| | KA-11-02-05-5 | | 2011 | 25400 | KA1102055, Proton Facilities - LHC Support, CMS Detector & C | 0.00 | 4,742,924.00 | 0.00 | 4,742,924.00 | 4,742,924.00 |
| | | EQU | 2011 | 31003 | KA1102055, Proton Facilities - LHC Support, CMS Detector & C | 0.00 | 767,550.00 | 0.00 | 767,550.00 | 767,550.00 |
| | KA-11-02-05-6 | OPEMIE91TD | 2010 | 25400 | KA1102056, Proton Facilities - LHC Upgrade Projects | 0.00 | (2,000,000.00) | 0.00 | (2,000,000.00) | (2,000,000.00) |
| | KA-12-01-02-0 | | 2011 | 25400 | KA1201020, National Laboratory Research | 0.00 | 138,516.00 | 0.00 | 138,516.00 | 138,516.00 |
| | KA-13-01-02-1 | | 2011 | 25400 | KA1301021, Non-Accelerator Physics Research, National Labora | 0.00 | 1,920,660.00 | (26,775.00) | 1,893,885.00 | 1,893,885.00 |
| | KA-13-01-02-5 | | 2011 | 25400 | KA1301025, Non-Accelerator Research, National Laboratory, Ex | 0.00 | 0.00 | 116,025.00 | 116,025.00 | 116,025.00 |
| | KA-13-01-03-1 | EQUMIE81SA | 2011 | 31001 | KA1301031, Non-Accelerator Physics, Research, Projects, Curr | 0.00 | 678,300.00 | 0.00 | 678,300.00 | 678,300.00 |
| | KA-14-01-02-0 | | 2011 | 25400 | KA1401020, National Laboratory Research | 0.00 | 1,695,749.00 | 91,929.00 | 1,787,678.00 | 1,787,678.00 |
| | KA-14-01-04-0 | | 2011 | 25400 | KA1401040, Other | 0.00 | 120,684.00 | 0.00 | 120,684.00 | 120,684.00 |
| | KA-14-01-05-0 | | 2011 | 25400 | KA1401050, Theoretical Physics Research, Computational HEP | 0.00 | 144,585.00 | 0.00 | 144,585.00 | 144,585.00 |
| | | EQU | 2011 | 31003 | KA1401050, Theoretical Physics Research, Computational HEP | 0.00 | 301,665.00 | 0.00 | 301,665.00 | 301,665.00 |
| | KA-15-01-02-0 | | 2011 | 25400 | KA1501020, National Laboratory Research | 0.00 | 484,467.00 | 0.00 | 484,467.00 | 484,467.00 |
| | KA-15-02-01-1 | | 2011 | 25400 | KA1502011, Advanced Technology Research, Accelerator Develop | 0.00 | 2,790,848.00 | 0.00 | 2,790,848.00 | 2,790,848.00 |
| | KA-15-02-01-2 | | 2011 | 25400 | KA1502012, Advanced Technology Research, Accelerator Develop | 0.00 | 3,653,181.00 | 0.00 | 3,653,181.00 | 3,653,181.00 |
| | KA-15-02-02-1 | | 2011 | 25400 | KA1502021, Advanced Technology Research, Accelerator Develop | 0.00 | 1,602,930.00 | 0.00 | 1,602,930.00 | 1,602,930.00 |
| | KA-15-02-02-3 | | 2011 | 25400 | KA1502023, Advanced Technology Research, Accelerator Develop | 0.00 | 320,407.00 | 0.00 | 320,407.00 | 320,407.00 |
| | KA-15-02-03-0 | | 2011 | 25400 | KA1502030, Muon Accelerators | 0.00 | 1,454,043.00 | 0.00 | 1,454,043.00 | 1,454,043.00 |
| | KA-15-03-02-0 | | 2011 | 25400 | KA1503020, Detector Development | 0.00 | 1,728,951.00 | 0.00 | 1,728,951.00 | 1,728,951.00 |
| | KJ-04-04-00-0 | | 2011 | 25400 | KJ0404000, Next Generation Networking for Science | 0.00 | 111,919.00 | 0.00 | 111,919.00 | 111,919.00 |
| | KJ-05-04-00-0 | | 2011 | 25400 | KJ0504000, High Performance Network Facilities and Testbeds | 0.00 | 24,990.00 | 0.00 | 24,990.00 | 24,990.00 |

CHICAGO OPERATIONS OFFICE
FY 2011 APPROVED FUNDING PROGRAM NO. 2
CH Fermi Accelerator Laboratory - CONTRACT NO: CH11359
DETAIL

| FT | B&R REPORTING ORDER NUMBER | APPR YEAR | OBJ CLASS | | BUDGET AUTHORITY (BA) BEGINNING UNCOSTED OBLIGATIONS | NEW BA PREVIOUS | NEW BA CHANGE | NEW BA REVISED | TOTAL AVAILABLE |
|---|---|---|---|---|---|---|---|---|---|
| REIMBURSABLE WORK | | | | | | | | | |
| 2W | 60-03-03-00-0 | 2011 | 25400 | 600303000, State and Local Governments and Non-Profit Organi | | | | | |
| | AGRWFO02001 | | | CH AGRWFO02001 | 0.00 | 0.00 | 1,646.62 | 1,646.62 | 1,646.62 |
| | AGRWFO04001 | | | CHAGRWFO04001 | 0.00 | 10,827.87 | 0.00 | 10,827.87 | 10,827.87 |
| | | | | TOTAL B&R REPORTING 60-03-03-00-0 | 0.00 | 10,827.87 | 1,646.62 | 12,474.49 | 12,474.49 |
| | 60-03-05-00-0 | 2011 | 25400 | 600305000, Universities and Institutes | | | | | |
| | AGRWFO20100001 | | | CHAGRWFO20100001 | 0.00 | 14,621.28 | 0.00 | 14,621.28 | 14,621.28 |
| | | | | TOTAL B&R REPORTING 60-03-05-00-0 | 0.00 | 14,621.28 | 0.00 | 14,621.28 | 14,621.28 |

CHICAGO OPERATIONS OFFICE
FY 2011 APPROVED FUNDING PROGRAM NO. 2
CH Fermi Accelerator Laboratory - CONTRACT NO: CH11359
COMMENTS

| FT | B&R REPORTING | BUDGET REFERENCE NUMBER | ORDER NUMBER | OPI | CC | PROGRAM TASK |
|---|---|---|---|---|---|---|