

Certification and Accreditation Documentation
for the
SC Lattice QCD Computing Project Extension
(LQCD-ext)

Operated at
Brookhaven National Laboratory
Fermi National Accelerator Laboratory
Thomas Jefferson National Accelerator Facility

for the
U.S. Department of Energy
Office of Science
Offices of High Energy and Nuclear Physics

Version 2.0

April 21, 2011

PREPARED BY:
Bakul Banerjee, FNAL

CONCURRENCE:



William N. Boroski
LQCD Contractor Project Manager

April 25, 2011
Date

**LQCD-ext Certification and Accreditation Documentation
Change Log**

Revision No.	Description / Pages Affected	Effective Date
Revision 0.0	Entire document.	April 13, 2009
Revision 1.0	Added BNL ATO Extension	March 10, 2010
Revision 2.0	Added renewed BNL, FNAL, and Jlab ATOs	April 24, 2010

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1. SCOPE AND PURPOSE

This document contains Certification and Accreditation (C&A) documentation for the SC Lattice Quantum Chromodynamics Computing Project Extension (LQCD-ext). Specifically, this document contains copies of the cover pages, with signatures, for Computer Security Authority to Operate (ATO) documents issued by the U.S. Department of Energy (DOE) to the three sites that will host LQCD-ext computing facilities. These include Brookhaven National Laboratory, Fermi National Accelerator Laboratory, and Thomas Jefferson National Accelerator Facility.

Complete sets of ATO documentation are maintained at the three operating sites and are available upon request.

2. PLAN OF ACTION AND MILESTONES

In addition to maintaining current ATO documentation, each operating site maintains Plan of Action and Milestones (POAM) spreadsheets provided by the Office of Science. These POAMs are used to collect and track individual findings from various audits, with milestones. On a quarterly basis, the POAM sheets are updated and provided along with the FISMA reports to the Office of Science. POAM management is handled by the cyber security staff at each of the three sites.

3. DOE AUTHORITY TO OPERATE DOCUMENTS

The following sections contain copies of current C&A documentation for the three host laboratories.

3.1. Brookhaven National Laboratory



Department of Energy

Brookhaven Site Office
P.O. Box 5000
Upton, New York 11973

Dr. Samuel H. Aronson, Director
Brookhaven Science Associates, LLC
Brookhaven National Laboratory
Upton, New York 11973

JUN 30 2010

Dear Dr. Aronson:

SUBJECT: EXTENSION OF BROOKHAVEN NATIONAL LABORATORY'S (BNL'S)
AUTHORITY TO OPERATE (ATO)

BNL is currently operating its cyber systems under an ATO that will expire on June 30, 2010. Certification and Accreditation is a complex process and requires all cyber systems to be operating and maintained in accordance with Department of Energy and Brookhaven Science Associates (BSA) requirements.

The Office of Science's Program Cyber Security Plan (SC-PCSP) is a key document that establishes cyber security requirements for SC Federal and Contractor staff. An updated SC-PCSP was approved on June 25, 2010 by William F. Brinkman, Director, Office of Science. The plan directs the use of National Institute of Standards and Technology cyber security standards. BSA has estimated that the reaccreditation process will be completed within a year of issuance of the new SC-PCSP. I am therefore extending the current ATO an additional year to expire on June 30, 2011.

The Contractor Requirements Document (CRD) of DOE Order 205.1A that requires compliance with the SC-PCSP has already been incorporated into BSA's prime contract. The new June 2010 SC-PCSP has been attached for your review and implementation.

In addition, the Brookhaven Site Office (BHSO) requests that an implementation plan for the new ATO be submitted by Monday August 16, 2010. The plan should provide details of key milestones leading to the reaccreditation of BNL cyber systems. Performance against this plan will be an important consideration in BHSO's annual assessment of BSA's performance.

If you have any questions, please contact Jonathan Loh at extension 5408.

Sincerely,

A handwritten signature in cursive script that reads "M. Holland".

Michael D. Holland
Site Manager

Enclosure:
As Stated

cc: B. Gordon, SC-BHSO, w/o encl. T. Schlagel, BSA, w/o encl.
J. Loh, SC-BHSO, w/o encl. H. Todosow, BSA, w/o encl.
M. Parsons SC-BSHO, w/o encl.
K. Lally, BSA, w/o encl.

3.2. Fermi National Accelerator Laboratory



Department of Energy

Fermi Site Office
Post Office Box 2000
Batavia, Illinois 60510

MAY 24 2010

Ms. Vicky White
Chief Information Officer
Fermilab
P.O. Box 500
Batavia, IL 60510

Dr. Ms. White:

SUBJECT: ACCREDITATION OF FNAL COMPUTER SECURITY ENCLAVES AND MAJOR APPLICATIONS, REQUEST FOR EXTENSION OF AUTHORITY TO OPERATE (ATO)

In response to your letter dated April 9, 2010, regarding the Subject: Same As Above, the Fermi Site Office grants an extension to the existing ATO for your enclaves and Major Applications until February 2012. The purpose of the extension is to allow for the final completion and approval of the new Office of Science Program Cyber Security Plan (PCSP), which is currently undergoing a major rewrite. This extension is approved after consultation with and endorsement by Mr. Frank Healey of the DOE Chicago Office, Office of Safeguards and Security. It is intended that the extension will allow sufficient time for Fermilab to plan, implement, review, and document all necessary changes to the Fermilab program in order to ensure compliance with the new PCSP.

If you have any questions concerning this correspondence, please call me at extension 3281.

Sincerely,

A handwritten signature in black ink, appearing to read "MEB", written over a light blue circular stamp.

Mark E. Bollinger
Acting Site Manager

cc: B. Chrisman
F. Healy
M. Leininger
J. Scott
W. Begner

3.3. Thomas Jefferson National Accelerator Facility



Department of Energy

Thomas Jefferson Site Office
12000 Jefferson Avenue, Suite 14
Newport News, Virginia 23606

January 7, 2011

Mr. Michael D. Dallas
Chief Operating Officer
Thomas Jefferson National Accelerator Facility
12000 Jefferson Avenue
Newport News, VA 23606

Dear Mr. Dallas:

ACCREDITATION DECISION LETTER (GRANTING AN AUTHORITY TO OPERATE)

Jefferson Lab has completed the certification of the cyber security programs for its ten computing enclaves in accordance with DOE and Office of Science direction and guidance. The cyber security threats and risks have been analyzed, plans developed, and controls implemented to mitigate risks to an acceptable level.

After reviewing the results of the independent Security Test and Evaluation (ST&E), the Plans of Action and Milestones, and the certification documents, I have determined that the residual risk to the agency's information and information systems is acceptable and have accredited the cyber security program for the ten enclaves. Accordingly, the information systems are authorized to operate in the existing operating environment.

The Department of Energy (DOE) hereby grants Thomas Jefferson National Accelerator Facility the authority to operate its ten computing enclaves. This full approval to operate is valid for a three (3) year period; I am extending your authority without any significant restrictions or limitations to operate to January 8, 2014.

The accreditation will remain in effect subject to the following conditions:

1. Within the first year of this accreditation period, JLab will define their Continuous Monitoring methodology, and be poised to incorporate Continuous Monitoring parameters specified in subsequent Office of Science PCSP revisions. As the movement toward Contractor Assurance becomes clearly defined, this initiative could adjust the accreditation period accordingly.
2. JLab will continue to mitigate vulnerabilities and risks identified in its Plans of Action and Milestones in accordance with the schedule presented.
3. JLab will continuously monitor its cyber security posture. Threats and vulnerabilities identified and reported during the continuous monitoring process must be mitigated promptly or be addressed by new items posted in the Plans of Actions and Milestones.

4. JLab will assess its security posture to ensure that there are no significant changes in the environment, technology or operations that would constitute increased risk. The C&A is a living process that must be maintained, with risks acknowledged and mitigated to acceptable levels.
5. JLab will inform the AO of any significant changes in the Lab's risk posture or in the structure of the program to allow a determination of the continuing authority to operate. If a significant change to an enclave(s) occurs, a new risk assessment for applicable enclave (s) would be submitted to the AO for determination of continued operation.

If you have any questions, please contact either André Bethea at extension 5095 or me.

Sincerely,



Scott Mallette, Acting Manager
Thomas Jefferson Site Office

Enclosures:

1. Copies of the following (10) signed documents:
2. Acceptance of Residual Risk - Accelerator Controls Enclave
3. Acceptance of Residual Risk - Business Administration Enclave
4. Acceptance of Residual Risk - Collaborative Computing Enclave
5. Acceptance of Residual Risk - Core Services Enclave
6. Acceptance of Residual Risk - Desktop Support Enclave
7. Acceptance of Residual Risk - Experimental Physics Enclave
8. Acceptance of Residual Risk - Free Electron Laser Enclave
9. Acceptance of Residual Risk - Guest Services Enclave
10. Acceptance of Residual Risk - Public Services Enclave
11. Acceptance of Residual Risk - Scientific Computing Enclave

cc w/enclosures:

Roy Whitney
Robert Lukens

cc w/o enclosures:

Walt Dykas, SC-31.3

APPENDIX A: Acronyms

ATO	Authority to Operate
C&A	Certification and Accreditation
LQCD	Lattice Quantum Chromodynamics
POAM	Plan of Action and Milestones