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

Unique Project (Investment) Identifier: 019-20-01-21-02-1032-00

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 1.1

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PREPARED BY:
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CONCURRENCE**:**

William N. Boroski
LQCD Contractor Project Manager

May 27, 2016
Date

LQCD-ext II Certification and Accreditation Documentation
Change Log

Revision No.	Description / Pages Affected	Effective Date
0	Adopt this document for LQCD-ext II from LQCD-ext	February 12, 2014
1.0	Add recently renewed FNAL ATO	April 8, 2014
1.1	Update renewed BNL ATO	April 3, 2015
1.1.1	Review (no changes), update signature date	May 27, 2016

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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 II (LQCD-ext II). LQCD-ext II project installs and operates clusters and special purpose machines at Brookhaven National Laboratory (BNL), Fermi National Accelerator Laboratory (FNAL), and Thomas Jefferson National Accelerator Facility (TJNAF). These systems are managed as parts of the enclaves maintained at each of the Laboratories and are governed by the corresponding rules of the Laboratories.

As of this date, C&A status at sites are given below:

- BNL: BNL is operating under a Computer Security Authority to Operate (ATO) document issued by the U.S. Department of Energy. A copy of BNL's DOE ATO cover letter is included in a later section.

- FNAL: FNAL is operating under a Computer Security Authority to Operate (ATO) document issued by the U.S. Department of Energy. A copy of FNAL's DOE ATO cover letter is included in a later section.

- TJNAF: TJNAF is operating under a Computer Security Authority to Operate (ATO) document issued by the U.S. Department of Energy. A copy of TJNAF's DOE ATO cover letter is included in a later section.

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

2. DOE ATO COVER PAGE for Brookhaven National Laboratory

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

JUN 30 2014

Mr. Keith Lally
Brookhaven Science Associates, LLC
Brookhaven National Laboratory
Upton, NY 11973

Dear Mr. Lally:

SUBJECT: APPROVAL FOR ON-GOING AUTHORITY TO OPERATE (ATO) THE BROOKHAVEN NATIONAL LABORATORY (BNL) INFORMATION SYSTEMS.

Reference: Letter from K. Lally, BSA to F. Crescenzo, Subject: Request to Grant On-Going Authority to Operate (ATO) to BNL Information Systems, dated June 9, 2014.

The referenced security authorization package requests a revised process for reviewing the Information Systems listed below:

Moderate I.S.	Low I.S.
• Protected Core • Perimeter • Shared Services • Network Infrastructure • Moderate Workstations • Energy Management Control System	• Advanced Network Research Testbed • ARM Climate Research Facility External Data Center • RHIC-ATLAS Computing Facility • PHENIX • NSLS Controls/Experimental Floor • STAR/STAR Metadata • C-AD Controls • Chemistry • Administrative Workstations • Research Workstations • Visitor Network • Center for Functional Nanomaterials • New York Blue

Based on the information submitted and the DOE review conducted, an ongoing ATO is granted for these information systems which will be placed on a continuous monitoring program. In order to maintain an effective program, meetings will be held on a monthly basis to discuss BNL's Cyber security status. BSA will be expected to identify vulnerabilities and mitigate risks on a real-time basis.

This ongoing ATO supersedes any prior ATO letter issued and will be renewed on an annual basis. The Laboratory should retain a copy of this letter with the security authorization package.

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

Sincerely,

Frank J. Crescenzo
Site Manager

cc: F. Healy, SC-ISC
R. Gordon, SC-BHSO
E. Landini, SC-BHSO
J. Loh, SC-BHSO

3. DOE ATO COVER PAGE for Fermi National Accelerator Laboratory

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

MAR 20 2014

Mr. Rob Roser, Acting
Chief Information Officer
Fermilab
P.O. Box 500
Batavia, IL 60510

Dear Mr. Roser:

SUBJECT: ACCREDITATION OF FERMI NATIONAL ACCELERATOR LABORATORY COMPUTER SECURITY ENCLAVES AND MAJOR APPLICATIONS – AUTHORITY TO OPERATE

In accordance with DOE Order 205.1B and the Program Cyber Security Plan (PCSP) for the Office of Science, DOE has determined that Fermi National Accelerator Laboratory has established vigilant and effective oversight of its computer security and network operations for the General Computing Environment and the Open Science Environment. The Laboratory also underwent an extensive DOE Office of Inspector General audit in 2013, which resulted in only four findings of minor significance. I hereby grant an Authority to Operate (ATO) for these systems as the Authorizing Official, based on the results of satisfactory performance demonstrated through continuous monitoring data under the Contractor Assurance System since May of 2012 and positive results of the recent audit.

DOE will continue to work with your team to coordinate activities that provide robust continuous monitoring of the Cyber Security Program. The Laboratory is expected to continue monitoring of computer security and network operations and report any incidents in accordance with the PCSP. DOE will routinely evaluate system performance, follow-up on any security-significant events and re-evaluate ATO status as appropriate in accordance with the PCSP.

If you have any questions concerning this correspondence, please call Whitney Begner, of my staff, at (630) 840-5740.

Sincerely,

Michael J. Weis
Site Manager

cc: V. White, Fermilab
J. Chang, Fermilab
I. Gaines, Fermilab
F. Healy, DOE-CH

This ATO includes the Lattice Gauge Systems

4. DOE ATO COVER PAGE for Thomas Jefferson National Accelerator Facility

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

January 23, 2014

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 Science Associates has completed the certification of the cyber security programs for its ten computing enclaves in accordance with Department of Energy (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 certification documents, Plans of Action and Milestones, and results of all the internal and external assessments, I have determined that the residual risk to the agency's information and information systems is acceptable, and information systems are authorized to function in the existing operating environment.

DOE hereby grants Thomas Jefferson National Accelerator Facility (TJNAF) the ability to operate its ten computing enclaves. I am extending your capability with a full authority to operate without any significant restrictions or limitations. Continuous monitoring is a living process that must be maintained and its results transparent. Therefore, evaluation will proceed with the formal acceptance of annual site risk submissions, in conjunction with the efforts of the Continuous Monitoring Program.

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

1. TJNAF will continue to mitigate vulnerabilities and risks identified in its Plans of Action and Milestones in accordance with the schedule presented.

2. TJNAF 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.

3. TJNAF will inform the Authorizing Official (AO) of any significant changes in the Laboratory'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) will be submitted to the AO for determination of continued operation.

If there are any questions, please contact André Bethea at extension 5095 or me.

Sincerely,

Joseph Arango, Manager
Thomas Jefferson Site Office

cc:
Roy Whitney
Andy Kowalski
Greg Nowicki

AB:ATO Ltr_2014:703

APPENDIX A: Acronyms

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