To: Dale Knutson, LCLS Director  
Cc: LCLS Managers  
From: Jochen Schneider, Experimental Facilities Division (XFD)  
John Seeman, Accelerator Systems Division (ASD)  

Subject: Jurisdictional Boundary Treaty

Background  
Safe and efficient operation of the LCLS will depend on clear definitions of responsibilities for maintenance and operation of the various parts of this facility.

By previous agreement, the linear accelerator and all systems and processes associated with the electron beam are the responsibility of the Accelerator Systems Division (ASD), and all systems and processes associated with x-ray beams in the NEH and FEH experimental halls are the responsibility of the Experimental Facilities Division (XFD).

The long-term plan is to place the main boundary between ASD and XFD at the shield wall dividing the Electron Beam Dump from the FEE. However, during initial commissioning and operation, a different boundary will be used. During this initial period, ASD will assume responsibility for safe operation and maintenance of the FEE. This memo addresses the details of the division of responsibility under this interim plan.

Construction of the Front End Enclosure (FEE)  
The FEE will be the responsibility of the LCLS Strategic Projects Division (SPD) until x-ray operations commence. The LCLS Construction Project Director is responsible for preparing a Safety Assessment Document, as specified in Guideline 25 of SLAC Guidelines for Operations.

Transition to Operations  
SPD is responsible for all preparations needed to fulfill any readiness requirements imposed by the laboratory management or by the DOE. ASD will take responsibility for preparing all applicable Operations safety procedures and will assist in the preparation of other documents as needed to complete this process.
When authorization to commence operations has been obtained, responsibility for the FEE will be transferred to the ASD. The affected area extends to the wall separating the FEE from the NEH and includes the personnel exclusion barriers, access control equipment, and all the accessible volume within these barriers. When the ASD assumes responsibility for the FEE, all applicable ASD policies and procedures will be in effect for this area. These include the policies and procedures described in the ASD Operations Directives and all the subsidiary documents specified within this document. With this transition, the FEE will be managed in the same way as the other areas within the ASD jurisdiction.

**Formal Documentation of Responsibilities**
The ASD Operations Directives and the safety-related Operations procedures will be revised by the ASD Operations Department as needed to incorporate the FEE. The Beam Authorization Sheets (BAS) will be extended as needed to allow operation of the FEE systems. The FEE BAS will be prepared, reviewed, approved, and incorporated into ASD operations in the same way as the BAS’s for the upstream electron systems, and by the same organizational units. The Radiation Safety Work Control Form, the ASD Work Authorization Form, and any other work control processes developed within ASD will apply to the FEE.

**Management Responsibility**
A System Physicist and an Area Manager will be appointed to assume responsibility for safe operation of the FEE. These persons will be members of ASD and will report in a direct line path to the Director of the ASD. The designated ASD System Physicist will take responsibility for the integrity of the facility, work authorization policies, and other tasks that are normally done by an ASD System Physicist, and will support the efforts of the XFD technical staff to optimize the performance of the facility.

**Technical Responsibility**
A designated physicist in XFD, herein referred to as the FEE Scientist, will be responsible for the technical performance of the x-ray optics and diagnostics in the FEE. This person will be expected to be the technical leader in developing, commissioning, and documenting the FEE-area controls, diagnostics, and other hardware and software needed to optimize the performance of the LCLS. He or she will be expected to work closely with the System Physicist, Area Manager, and the ASD Operations staff to ensure that the FEE systems are effective, reliable, and as easy to operate as practicable.

The FEE Scientist will have authority to replace, modify, adjust, and operate FEE beamline devices as needed to optimize the quality and reliability of the x-ray beams. However, these activities must be carried out in compliance with ASD policies and procedures, including the ASD approval processes for work in ASD areas. In general, decisions concerning the modification of FEE equipment should involve notification to and input from both the FEE Scientist and the ASD System Physicist; however, the ASD System Physicist and Area Manager will have ultimate authority and responsibility for
overseeing any such work in the FEE to ensure the integrity of the safety devices, vacuum system, and other equipment.

**Personnel Protection System (PPS) and Beam Containment Systems (BCS)**
All PPS controls, including access controls, stopper controls, monitoring signals, alarms, interlock resets, and so on, will be operable only from the MCC control room, and will be subject to all policies and procedures governing other safety systems within the ASD jurisdiction. All BSOIC’s and other safety devices specified by the BAS’s are also within the jurisdiction of the ASD, even when such devices physically reside in areas nominally within the XFD jurisdiction (such as in the Near Experimental Hall). In addition, any FEE equipment which can re-direct the x-ray beam or otherwise affect beam containment will be controlled from MCC under ASD jurisdiction.

**Other FEE controls**
Responsibility for FEE controls not related to PPS, BCS, or accelerator machine protection will lie with the XFD group. This includes controls for x-ray diagnostics in FEE. In order to facilitate commissioning of LCLS FEL systems, XFD will provide MCC with access to all data signals generated in FEE. In addition, XFD will provide MCC with control access to all instrumentation within FEE, except for instrumentation identified by the FEE Scientist as being not yet in an operational state.

The ASD and XFD staff will work with the Controls Department to develop appropriate control system features, while not compromising the ability of the EOIC and ASD line managers to meet the requirements in the ASD Operations Directives.

\[ \text{Signature: } \text{John Schneider} \]
\[ 03/16/2009 \]

\[ \text{Signature: } \text{John T. Seeman} \]
\[ 03/24/2009 \]