Management System: Nuclear and Facility Safety		
Subject Area: Accelerator Safety View All (Procedures and Exhibits)		
Major Revision Date: **Mar 19, 2012** **Last Revision Date: 03/19/2012**	Subject Matter Expert: Stuart Martin	Management System Owner: Michael Stafford

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1.0 Introduction

This subject area provides requirements for organizations that operate **accelerators** at the Oak Ridge National Laboratory (ORNL). Operation of ORNL **accelerator facilities** under DOE O 420.2C will ensure adequate protection to workers, the public, and the environment. All ORNL line organizations with **accelerator operations** within the scope of this subject area are responsible and accountable for providing a safe operational environment by adhering to these requirements. Accelerator facilities for which the entire Accelerator Safety subject area applies are the Spallation Neutron Source (SNS) and the Holifield Radioactive Ion Beam Facility (HRIBF). For the Oak Ridge Electron Linear Accelerator (ORELA), the entire Accelerator Safety subject area applies except as noted in the Safety Assessment Document (SAD) Development and Maintenance and Accelerator Safety Envelope (ASE) Development and Maintenance procedures. Other accelerators are evaluated to determine the applicable requirements.

Following this subject area ensures that accelerator facilities comply with the primary accelerator safety program elements established in DOE Order 420.2C which include requirements for a **SAD**, an **ASE**, a documented **Unreviewed Safety Issue** (USI) process, and an appropriate **Accelerator Readiness Review** (ARR) program.

Radiological Safety requirements associated with compliance with 10 CFR 835 and implementing the as low as reasonably achievable (ALARA) principle are addressed by the Radiological Protection management system. Nuclear Criticality Safety requirements associated with accelerator operations exceeding 700 g fissionable equivalent mass (FEM) are addressed by the Nuclear Criticality Safety subject area.

Requirements of this subject area apply to the entire **accelerator facility**. Areas that contain radiological material and are not part of the accelerator facility as defined in the SAD are subject to the processes and controls of the Facility Hazard Categorization subject area.

2.0 Contents

Procedures/Guidelines	Procedure/Guideline Content
1. Accelerator Safety Requirements, Exemptions, and Equivalencies	• Evaluating applicability of exemptions from requirements • Requesting exemptions or equivalencies from DOE
2. Safety Assessment Document Development and Maintenance	• Developing the SAD • Review and Approval • Maintaining the SAD
3. Accelerator Safety Envelope Development and Maintenance	• Developing/Modifying an ASE • Review and Approval • Operating within the ASE
4. Unreviewed Safety Issue Process	• Developing an appropriate USI process
5. Accelerator Readiness Reviews	• Preparing for an ARR • Initiating and conducting an ARR • Initiating commissioning or routine operations
6. Internal Reviews	• Establishing an appropriate internal assessment process • Performing periodic review of accelerator safety program elements

3.0 Exhibits and Guidelines

No Exhibits or Guidelines are associated with this subject area.

4.0 Related Information

DOE Order 420.2C, Safety of Accelerator Facilities
ORNL's Work Smart Standards for Accelerators
ORNL's Work Smart Standards for SNS
DOE G 420.2-1, Accelerator Facility Safety Implementation Guide for DOE O 420.2B, Safety of Accelerator Facilities

5.0 External/Internal Requirements

DOE O 420.2C

List Parsed Units

6.0 Records Managed by UT-Battelle R&D and Support Organizations

None Identified

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