

Memorandum

February 7, 2008

To: Bruce Chrisman
From: William Griffing 
Subject: Revised FESHM Chapter 5053 – Nanotechnology

FESHM Chapter 5053, "Nanotechnology" is a new chapter that defines the requirements that must be followed if Fermilab becomes involved in Nanotechnology materials research in the future.

After final approval, please return this approval page to Elizabeth Bancroft at MS119 for posting on the web.

Encl.

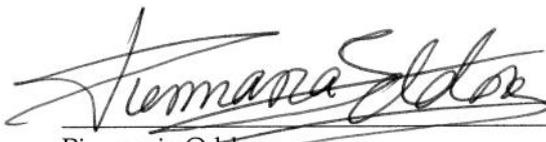
Recommended for Approval:



Bruce Chrisman

2/7/08
Date

Approved:



Piermaria Oddone

2/7/08
Date

NANOTECHNOLOGY

Introduction

The purpose of this chapter is to define the requirements that must be followed **if** Fermilab becomes involved with “Engineered” Nanomaterials in the future. Currently there are **no** plans to conduct Nanotechnology research at Fermilab.

Much of the scientific information on the safety, health and environmental hazards of working with these materials is yet to be determined.¹ Because of this uncertainty, **if** Fermilab begins work with Nanomaterials, Fermilab will adopt all applicable policies and guidelines in its Set of Work Smart Standards to ensure that all work with Nanomaterials is conducted in a safe and responsible manner that protects workers, the public, and the environment.

Definition

Nanotechnology is the understanding and control of matter at dimensions of roughly 1 to 100 nanometers and involves imaging, measuring, modeling, and manipulating matter at this length scale. At the nanoscale, the physical, chemical, and biological properties of materials differ in fundamental and valuable ways from the properties of individual atoms and molecules or bulk matter.²

Applicable Policies and Guidelines

Department of Energy [Policy DOE P 456.1](#)

Department of Energy – Nanoscale Science Research Centers – [Webpage](#) and [Approach to Nanomaterial ES&H Revision 2 - June 2007](#)

Industrial Hygiene/Occupational Safety (IH/OH) Special Interest Group (SIG) [Nanotechnology Webpage](#)

National Nanotechnology Initiative [Webpage](#)

¹ Department of Energy Policy DOE P 456.1

² Industrial Hygiene/Occupational Safety (IH/OH) Special Interest Group (SIG) [Nanotechnology Webpage](#)