

X-RAY SCIENCE DIVISION

400/1-CR-C Facility Hazard Analysis

The purpose of this form is to serve as a summary of facility characteristics, recognized hazards, implemented hazard controls, pertinent sources of information, and incident reporting contacts.

Scope of work conducted in this facility: X-ray diffractometry; thin-film coating; mirror assembly, measurements with laser

Hazardous materials/equipment associated with this facility:

Analytical X-Ray Generator	Sputter deposition system	Cryogenic pumps
Compressed air	Inert Compressed Gases	Organic Solvents
Motor control systems	Various flammable aerosols	Class 4 laser

Hazards associated with this facility:

X-Ray exposure	Electrical hazards	Chemical exposure
Noise exposure	Occasional heavy lifting	Pressurized gases
Laser radiation exposure – 658nm		

Hazard controls implemented within this facility:

Engineered Controls

Interlocked X-Ray Enclosure
Interlocked sputter deposition system
Backscatter monitor
GFCI outlets

Procedural Controls

X-Ray Diffractometry procedure
Laser Operating/Alignment Mini-procedure
Laser Eyewear (658 nm) O.D.1.5

PPE

Chemically-resistant gloves
Safety Glasses
Safety Shoes

Relevant ESH manual chapters that may be associated with this facility:

- 1) Ch. 4.3 – Laboratory and Chemical Safety
- 2) Ch. 5.15 – Analytical X-Ray Facilities
- 3) Ch. 6.2 – Laser Safety
- 4) Ch. 7.12 – Safe Use of Tools
- 5) Ch. 13.2 – Compressed Gas Cylinders

Pertinent safety training courses that may be associated with this facility:

- 1) ESH 115: Laboratory Hazard Communication Training
- 2) ESH 119: Pressure Safety Orientation
- 3) ESH 120: Laser Safety Training
- 4) ESH 574: Chemical Waste Generator
- 5) ESH 705: Analytical X-Ray Device Safety
- 6) ESH 713: Radiological Worker for X-Ray Users

Note: This is not intended to be an all-inclusive list of training that is required to work within this facility. The authoritative record of required training is depicted by the individual's JHQ.

Incident reporting contacts:

	****Dial 911 in an emergency****	
Lab Safety Captain:	Bing Shi	2-6058
Group Leader:	Lahsen Assoufid	2-2774
ES&H Coordinator:	Paul Rossi	2-4192

Facility hazard analysis completed by: _____
Lab Safety Captain or designee Date

Reviewed and approved by: _____
ES&H Coordinator Date

Line Management Date

This hazard analysis must be reviewed and updated whenever conditions change. Once approved, this hazard analysis must then be posted in a conspicuous space within the facility.