

Experiment Safety Review Form

Review Number: AD-004-2013-JUL-22

PRINCIPAL INVESTIGATOR: Andrey Ovodenko

GROUP: Radiabeam & ATF

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LIFE NUMBER: Z8676

Project Title: Deep Ultraviolet Beam Imaging (AE56c).
Location(s): 0820
Area(s): ATF BEAMLINe #2

SIGNATURES:

Principal Investigator: Andrey Ovodenko	Date:
Experiment Review Coordinator: Peter Cirnigliaro	Date: 8/26/2013
Co-PI or Alternate Contact (s): Kusche, Karl	Date:
Reviewer: Asher Etkin	Date: 7/31/2013
Reviewer: Karl Kusche	Date: 7/31/2013
Reviewer: Mikhail Fedurin	Date:
Reviewer: Frank Craner	Date: 8/6/2013
Review/Approval (ERC) Comments: 08/26/2013 2:05 PM 08/26/2013 2:05 PM	
Walkthrough Signature:	Date:
Next Annual Review Date:	
FUA Change Required? No	
Fire Rescue Run Card Changes Required? No	
Has a NEPA Review been Performed for this Project? Don't Know	
Required Approvals (i.e., IACUC, IBC, etc.):	
Project Termination Acceptance Signature:	
Comments:	Date:

I. Define the Scope of the Work**A. Description**

The DUV Imaging system aims to improve the resolution of beam diagnostics while mitigating COTR effects by working in the Deep UV band.

** (Please see attachment for full description).

Equipment manuals or procedures that are controlled documents:

None.

B. Human Performance Factors

None.

C. Waste Minimization/Pollution Prevention

None.

D. Materials Used /Waste Generated

Materials Used	Disposal Method	Amount per Use	Amount per Year	Comments
Nitrogen gas	Fugitive	10.00 ft3	150.00 ft3	Purge for optics
Silicon wafer	Other	1.00 ea	1.00 ea	Silicon wafer target not consumed. Will be returned to owner.

II. Identify and Analyze Hazards Associated with the Work

The following hazards were identified:

Physical Hazards:

- Compressed gases (lecture bottles, cylinders, gas lines) (Area: ATF BEAMLINe #2)

Chemical Hazards:

- None

Ionizing and Non-ionizing Radiation Hazards:

- ATF electron beam (Other)

Biological Hazards:

- None

Offsite Work:

- None

Other Issues (Security, Notifications, Community, etc.):

- None

Significant Environmental Aspects

- None

III. Develop and Implement Hazard Controls and Assess Risk

A. Physical Hazards, Tasks and Controls

Hazard, Default Controls, Task Specific Info	Risk Level
<p>Hazard: Compressed gases (lecture bottles, cylinders, gas lines)</p> <hr/> <p>Default Controls:</p> <ul style="list-style-type: none"> • Any systems >15psi must be SME Approved • Transport cylinders using a cylinder cart • Secure cylinders to a fixed object/wall • Use regulator, hoses, and components compatible with gas • Use hoses and clamps rated for maximum regulator output or use pressure relief device • Wear safety glasses with side shields when installing/removing/or adjusting regulator • Label piping/tubing <hr/> <p>Task Specific Info:</p> <p>Nitrogen purge (<15 psig) will be supplied by ATF and handled by trained ATF staff.</p>	Negligible (0-20)

B. Chemical Hazards, Tasks and Controls

None

C. Environmental Hazards, Tasks and Controls (include on/off site transportation and products/services)

None

D. Radiation Hazards, Tasks and Controls

Hazard, Default Controls, Task Specific Info	Risk Level
<p>Hazard: ATF electron beam (Other)</p> <hr/> <p>Default Controls:</p> <hr/> <p>Task Specific Info:</p> <p>Existing shielding, radiation interlock system and approved safety documentation are in place to address hazards related to electron beam delivery in experimental hall.</p>	Negligible (0-20)

E. Biological Hazards, Tasks and Controls

None

F. Offsite Work Hazards, Tasks and Controls

None

G. Other Issues (Security, Notifications to Other Organizations, Community Involvement, etc.)

None

H. Recommended Exposure Monitoring

- None

Description or comments:

I. EPHA Determination

Chemical Name	Quantity (lbs, gal)	Location (Bldg/Room#)

IV. Perform Work Within Controls

A. Recommended Training and Medical Surveillance Summary

- JTA for ATF User (GE-53A)
- Compressed Gas Safety (TQ-COMPGAS1)

B. Personnel Training, Qualification, and Authorization List

Employee/Guest Name	Life/Guest#	Dept	Required Training Course(s)	Signed
Andrey Ovodenko	Z8676	DB	JTA for ATF User (GE-53A) [COURSE NOT FOUND]	
Tara Hodgetts	V8225	DB	JTA for ATF User (GE-53A) [COURSE NOT FOUND]	
Karl Kusche	19960	AD	Compressed Gas Safety (TQ-COMPGAS1) [EXPIRES: 1/8/2016] JTA for ATF User (GE-53A) [COURSE NOT FOUND]	

C. Emergency Procedures

ATF linac operator will follow existing procedures for linac operations and local emergency plan. ATF linac operator acts as LEC.

D. Transportation

None

E. Logistical Interactions

None

F. Termination/Decommissioning

Items directly exposed to electron beam require activation check prior to release from experimental hall.

V. Provide Feedback

None

VI. Attachments

Attachment provided by PI.

Attached Files:

[RBT-DUV-SAF-1.pdf](#)