Jefferson Lab
Thomas Jefferson National Accelerator Facility

Task Hazard Analysis (THA) Worksheet

(See ES&H Manual Chapter 3210 Appendix T1
Work Planning, Control, and Authorization Procedure)

Click For Word

Author:	Chris Keith	**Date:**	Feb. 18, 2016	**Task #:** If applicable	

Complete all information. Use as many sheets as necessary

Task Title:	Operation of PRad Gas Target			**Task Location:**	Hall B
Division:	Physics	**Department:**	Target Group	**Frequency of use:**	Daily
Lead Worker:	Chris Keith				
Mitigation already in place: Standard Protecting Measures Work Control Documents					

Sequence of Task Steps	Task Steps/Potential Hazards	Consequence Level	Probability Level	Risk Code (before mitigation)	Proposed Mitigation (Required for Risk Code >2)	Safety Procedures/ Practices/Controls/Training	Risk Code (after mitigation
1	Evacuate target chamber with small pump. Turn on large pumps. No hazards.	M	EL	1		Follow chamber evacuation procedure, (see attachment, *Operation of the PRad Target*).	1
2	Pump and purge gas lines and gas panel. Flammable gas (hydrogen).	H	L	3	Utilize Hall B flammable gas lines. All new pressure systems are ASME31.3(2012) compliant. All pumps exhaust through Hall B vent header, purged with inert gas. Minimization of ignition sources. Flow limiter on H2 cylinder. Proper posting of "Flammable Gas Area".	Follow pump & purge procedure (see attachment, *Operation of the PRad Target*).	1
3	Turn on Pulse Tube Refrigerator, cool to ~25K.	M	EL	1		Follow cooling procedure, (see attachment, *Operation of the PRad Target*).	1

Jefferson Lab
Thomas Jefferson National Accelerator Facility

Task Hazard Analysis (THA) Worksheet

(See ES&H Manual Chapter 3210 Appendix T1
Work Planning, Control, and Authorization Procedure)

Sequence of Task Steps	Task Steps/Potential Hazards	Consequence Level	Probability Level	Risk Code (before mitigation)	Proposed Mitigation (Required for Risk Code >2)	Safety Procedures/ Practices/Controls/Training	Risk Code (after mitigation
4	Change hydrogen cylinder, as necessary.	H	L	3	Nonsparking tools.	Follow procedure for changing H2 cylinder (see attachment, *Operation of the PRad Target*).	1
5	Turn target off.	M	L	2		Follow shut down procedure, (see attachment, *Operation of the PRad Target*).	2

Highest Risk Code before Mitigation:	3	**Highest Risk Code after Mitigation:**	1

When completed, if the analysis indicates that the Risk Code before mitigation for any steps is "medium" or higher (RC≥3), then a formal Work Control Document (WCD) is developed for the task. Attach this completed Task Hazard Analysis Worksheet. Have the package reviewed and approved prior to beginning work. (See ES&H Manual Chapter 3310 Operational Safety Procedure Program.)

Form Revision Summary

Periodic Review – 08/13/15 – No changes per TPOC
Revision 0.1 – 06/19/12 - Triennial Review. Update to format.
Revision 0.0 – 10/05/09 – Written to document current laboratory operational procedure.

ISSUING AUTHORITY	TECHNICAL POINT-OF-CONTACT	APPROVAL DATE	REVIEW DATE	REV.
ESH&Q Division	Harry Fanning	08/13/15	08/13/18	0.1

This document is controlled as an on line file. It may be printed but the print copy is not a controlled document. It is the user's responsibility to ensure that the document is the same revision as the current on line file. This copy was printed on 3/3/2016.