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

Author:	Dave Meekins	**Date:**	8/4/2015	**Task #:** If applicable	

Complete all information. Use as many sheets as necessary

Task Title:	Argonne Bubble Chamber Test			**Task Location:**	CEBAF Injector 5D beamline
Division:	Accelerator	**Department:**	Injector	**Frequency of use:**	1
Lead Worker:	Brad DiGiovne				
Mitigation already in place: Standard Protecting Measures Work Control Documents	Developed at ANL and used at Duke Tunnel Facility. System was fully reviewed by ANL and Duke and formally permitted to operate.				

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	Filling/relieving of the bubble chamber detector: 1) Release of mercury 2) Release of N2O 3) Exposure of N2O to personnel 4) Overpressure of chamber and vessel 5) Damage to components 6) Flying debris	M	M	3	1) Overpressure protection by ASME relief device. Design and fabrication conforming to Code. 2) Developed procedures 3) Trained and experienced personnel only allowed to operate 4) Limited quantities of HazMat 5) Secondary containment.	See Procedure TGT-PROC-15-001	1

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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
2	Operation of detector: Failure of vessel or pressure component. Flying debris, release of HazMat.	M	M	3	1) Low stored energy for the system when in operations mode. 2) Removal of gas bottles form system when in operation. 3) Developed procedures for operations with trained personnel allowed to operate system 4) Interlocks and normal relief valves to prevent overpressure. 5) Overpressure protection by ASME device. 6) Conservative design	See Procedure TGT-PROC-15-001	1
3	Removal of detector: 1) Dropped heavy load when handling. 2) Release of HazMat	H	M	4	1) Designed with integral lift points 2) Developed procedure for blowdown and recovery of fluids. 3) Filters on pumping system exhaust. 4) Trained personnel	Use of JLAB policies for lifting/material handling. Trained crane operators/riggers. See Procedure TGT-PROC-15-001.	1

Highest Risk Code before Mitigation:	4	Highest Risk Code after Mitigation:	1

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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

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 REQUIRED DATE	REV.
ESH&Q Division	Harry Fanning	06/19/12	06/19/15	0.1

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