

Task Hazard Analysis (THA) Worksheet

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

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Author:	Holly Szumila-Vance	Date:	8 March 2021	Task #: If applicable	1805
Complete all information. Use as many sheets as necessary					
Task Title:	GEM detectors for Hall A SBS experimets	Task Location:	TEDF BigBite Assembly		
Division:	Physics	Department:	Hall A	Frequency of use:	Daily
Lead Worker:	Holly Szumila-Vance				
Mitigation already in place: Standard Protecting Measures Work Control Documents	Use of shielded HV cables and connectors, relief valve between regulator and detectors				

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	Electrical shock from 4kV high voltage supplying GEM detector	M	L	2	Use of current limited high voltage supply at 4kV Use of shielded HV cables and connectors. Exposed high voltage wrapped with high voltage electrical tape.	High voltage cables are only connected or disconnected to/from the detectors, power supplies, and patch panels when power supply is not energized. ESH Manual Chapter 6200 Electrical Safety Program https://www.jlab.org/ehs/ehsmanual/manual/6200.html / Training: SAF 603A Electrical Safety Awareness Class, Modes, etc. https://www.jlab.org/ehs/ehsmanual/manual/6200.html Electrical safety training for QEW is currently being modified, training is subject to change	1

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Sequence of Task Steps	Task Steps/Potential Hazards	<u>Consequence Level</u>	<u>Probability Level</u>	<u>Risk Code</u> (before mitigation)	Proposed Mitigation (Required for <u>Risk Code</u> >2)	Safety Procedures/ Practices/Controls/Training	<u>Risk Code</u> (after mitigation)
2	Use of compressed Ar/CO ₂ gas, TEDF high bay rated ODH-0	M	L	2	Gas supplied through a pressure regulator attached to the gas bottle with flow limited by a flow meter.	Setup, connection, or disconnection of the gas shall only be done by individuals authorized by this OSP. ESH Manual Chapter 6150 Gas Cylinder Safety - Storage, Movement, and Labeling https://www.jlab.org/ehs/ehsmanual/manual/6150.html , Training for individuals: SAF130A, SAF130C Relief valve between the regulator and detector is implemented as a backup in the event of regulator failure. TEDF high bay is rated ODH-0, SAF103 training is required.	N
3	Covid-19 contamination (if at an elevated MEDCON level)	M	M	3	Face covering required. Maintain Social Distancing of 6' or use appropriate PPE if 6' distancing cannot be maintained.	Discuss OSP ESH-20-106466-OSP. Follow required guidelines	1
4	Use of portable ladder for access to GEM detectors	H	M	3	Use of ladder training and having an observer/assistant.	SAF307 Ladder Safety	1
Highest <u>Risk Code</u> before Mitigation:				3	Highest <u>Risk Code</u> 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](#).)

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Form Revision Summary

Periodic Review – 08/29/18 – No changes per TPOC

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	08/29/18	08/29/21	0.1

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For questions or comments regarding this form contact the Technical Point-of-Contact [Harry Fanning](#)

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