

Hazard Analysis Form

This form can be used by Fermilab Employees, Fermilab Supervisors, Fermilab Task Managers, Construction Coordinators, Service Coordinators, and Fermilab Subcontractors. This is a dynamic document which may require modification as the project moves from start to finish and should be readily available at the site where the work is being performed.

Note: Not all sections of the first page are applicable to every job or task, complete what is necessary for your specific job or task.

Job Title _____

Job Location NuMI underground Hall: MINERvA detector

Contract/Work Order # _____

TO BE COMPLETED FOR WORK INVOLVING SUBCONTRACTORS

Subcontractor (if applicable)

Fermilab

Company _____

Project Manager _____

Project Manager _____

Phone _____

Phone _____ Page _____

TM/CC/SC _____

ESH Rep. _____

Phone _____ Page _____

Phone _____ Page _____

ES&H Rep. _____

ESH Rep. _____

Phone _____ Page _____

Phone _____ Page _____

AT LEAST TWO SIGNATURES ARE REQUIRED

Prepared _____ Date _____

Print Name _____

Accepted _____ Date _____

Print Name _____

Accepted as noted _____ Date _____

Print Name _____

Description of Work: Cleaning exposed ends of fiber optic wires (LI fibers) with a Bransononic B-200 ultrasonic cleaner, while inside a lift. The ultrasonic cleaner uses a solution of water and Branson Optical cleaner. The free ends of the fibers should be inserted into the basin of the cleaner while it is on, and held there for roughly 10 seconds. Upon removing the fiber from the solution, turn off the cleaner. Dry the fiber free ends with compressed air.

Personal Protective Equipment: (Check protective equipment required for the job.)	
<input type="checkbox"/> Safety glasses	<input type="checkbox"/> Side shields
<input type="checkbox"/> Hearing Protection	<input checked="" type="checkbox"/> Chemical splash goggles
<input type="checkbox"/> 3.0 Brazing goggles	<input type="checkbox"/> Hard Hats
<input type="checkbox"/> Face shield	<input type="checkbox"/> Impact goggles
<input type="checkbox"/> Leather gloves	<input type="checkbox"/> Rubber apron
<input checked="" type="checkbox"/> Chemical resistant gloves (specify type):	<input type="checkbox"/> Hot/Cold thermal protective gloves
<u>Latex, Nitrile, Neoprene</u>	<input type="checkbox"/> Respirators
<input type="checkbox"/> Other required PPE (specify):	<input checked="" type="checkbox"/> Fall protection equipment (specify):
_____	<u>Fall arrest harness</u>

Environmental Aspects (check one):
<input checked="" type="checkbox"/> Yes, I have thought about the environmental aspects of this job and will document such aspects and mitigation steps within this document.
<input type="checkbox"/> Yes, I have thought about the environmental aspects of this job and no such credible aspects exist and therefore do not need to be written in this document.

Equipment required for the job: (List the tools needed to perform the job.)

Bransononic B-200 Ultrasonic Cleaner, Brason OC Optical Cleaner, Compressed air canister, lift.

Work Plan History Information: (List any lessons learned incidents from this job, tips from previous jobs)

Keep the cover on the ultrasonic cleaner when not in use. This helps to prevent the solution from splashing out of the basin.

Improvement/Feedback: At the conclusion of the job, the Task Manager, Supervisor and/or Project Leader shall work with those involved to consider lessons learned and receive feedback in order to improve future work plans.

Check One:

- Yes** we have considered lessons learned and accepted feedback on this job and will communicate such information so that future work plans may be improved.
- Yes** we have considered lessons learned feedback and determined that future work plans do not need to be improved.

Utilizing the format below, identify hazards and environmental aspects, and their corresponding safety precautions/procedures to mitigate hazards. Use as many sheets as necessary.

HAZARD ANALYSIS

Step	Description	Hazards/ Environmental Aspects	Precautions / Safety Procedures
1	Prepare the cleaning solution by filling the basin with 300ml of bottled water and 1.23ml (.25tsp) of the Branson OC cleaner.	Solution is a possible eye/skin irritant, spillage.	Position portable eye wash station near work area. Wear protective gloves and goggles. Place blue transport container lid under basin while preparing solution on table.
2	Place the green cover on the basin. Place the basin in the blue carrying container for transport to the lift. Place the cleaning unit and container on the shelf that is mounted on the lift railing. Secure container with Velcro straps.	Trip hazard. Solution spillage.	Coil and secure the cord for transport. Test shelf for stability.
3	Plug basin power cord into outlet on lift.	Trip hazard. Accidental disconnection due to stress on power cord.	Secure basin power cord on lift. Ensure enough slack is available to reach fibers when positioning lift and basin. Only Lift and Fall Hazard trained personnel may occupy lift for this procedure. Rescue plan: This procedure will be performed when 3 people are present. The third person remains on the ground to operate lift in case of emergency.
4	Once the lift is in position, remove the cover, and turn the ultrasonic cleaner on. Place the clear end of the fiber in the basin for about ten seconds. Do not let the fiber end touch the bottom.	Accidental spillage, splashing.	Do not move the lift while basin cover is removed.
5	After ten seconds, remove the fibers and turn off the cleaner. Put the cover back on the cleaner, and dry the fibers by blowing them with compressed air.	Splash and blowing debris hazard.	Wear safety goggles. Blow air away from self and colleague.
6	Dispose of used cleaning solution.	Possible environmental	Pour used solution in safety approved waste container. Tighten

		hazard.	lid on container. Contact ES&H when container is full for underground removal and disposal. Jose:x2557, Angela:3701, Rob:2399.
7			
8			
9			
10			

GUIDELINES FOR COMPLETING THE HAZARD ANALYSIS

Phase of Work	Safety Hazard	Precautions/Safety Procedures
<p>Examining a specific job by breaking it down into a series of steps or tasks, will enable you to discover potential hazards employees may encounter.</p> <p>Each job or operation will consist of a set of steps or tasks. For example, the job might be to move a box from a conveyor in the receiving area to a shelf in the storage area. To determine where a step begins or ends, look for a change of activity, change in direction or movement.</p> <p>Picking up the box from the conveyor and placing it on a hand truck is one step. The next step might be to push the loaded hand truck to the storage area (a change in activity. Moving the boxes from the truck and placing them on the shelf is another step. The final step might be returning the hand truck to the receiving area.</p> <p>Be sure to list <i>all</i> steps needed to perform the job. Some steps may not be performed each time; an example could be checking the</p>	<p>A hazard is a potential danger to a person or equipment. The purpose of the Job Safety Analysis is to identify ALL hazards- both those produced by the environment and those connected with the job procedure.</p> <p>To identify hazards, ask yourself these questions about each step:</p> <p>Is there a danger of the employee striking against, being struck by, or otherwise making injurious contact with an object?</p> <p>Can the employee be caught in, by, or between objects?</p> <p>Is there potential for slipping, tripping, or falling?</p> <p>Could the employee suffer strains from pushing, pulling, lifting, bending, or twisting?</p> <p>Is the environment hazardous to safety and/or health (toxic gas, vapor, mist, fumes, dust, heat, or radiation)?</p> <p>Are there electrocution hazards?</p>	<p>Using the first two columns as a guide, decide what actions or procedures are necessary to eliminate or minimize the hazards that could lead to an accident, injury, or occupational illness.</p> <p>Begin by trying to: 1) engineer the hazard out; 2) provide guards, safety devices, etc.; 3) provide personal protective equipment; 4) provide job instruction training; 5) maintain good housekeeping; 6) insure good ergonomics (positioning the person in relation to the machine or other elements in such a way as to improve safety).</p> <p>List the recommended safe operating procedures. Begin with an action word. Say exactly what needs to be done to correct the hazard, such as, "lift using your leg muscles." Avoid general statements such as, "be careful", "use caution", and "be alert".</p> <p>List the required or recommended personal protective equipment necessary to perform each step of the job.</p> <p>Give a recommended action or procedure for each hazard.</p> <p>Serious hazards should be corrected immediately. The JSA should then be changed to reflect the new conditions.</p>

<p>casters on the hand truck. However, if that step is generally part of the job it should be listed.</p>	<p>Close observation and knowledge of the job is important. Examine each step carefully to find and identify hazards- the actions, conditions, and possibilities that could lead to an accident. Compiling an accurate and complete list of potential hazards will allow you to develop the recommended safe job procedures needed to prevent accidents.</p>	<p>Finally, review your input on all three columns for accuracy and completeness. Determine if the recommended actions or procedures have been put in place. Re-evaluate the job safety analysis as necessary.</p>
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