Lawrence Berkeley National Laboratory

Attach this completed form to the relevant WPC activities where this OJT is required. To learn how, see the instructional video "How to use the OJT Tool in Activity Manager (Video)" at the OJT Website (https://training.lbl.gov/OJT/).

This OJT is for qualifying workers to use EMF-generating devices.

***Note:** See back page for the meanings of these column-headings*

Preparation Steps (setup)	Student Explains	Student Demos	Critical Step	Risk Important Action	Common Error	Instructor
1. Trainee understands the hazards for the use of the electromagnetic radiation devices and the controls used in their operations: - Projectiles – the immediate danger associated with magnet environment is the attraction between the magnet and ferromagnetic objects. - People with metallic implants (e.g., cardiac pacemakers, cochlear implants, defibrillators, drug delivery systems, and other medical devices) may experience the device's malfunctioning if subjected to magnetic fields > 5 Gauss. - Cryogenic Gas Issues: Quench - To eliminate the risk of exposure to EMF, engineering and administrative controls must be implemented wherever possible.	x					
2. Trainee is familiar with the manufacturer's manuals and understands specific safety-related information.	x					
3. Trainee can correctly use applicable engineering controls: - *Shielding* - *Quench protection* - *Interlocks* - Areas where whole-body exposures to 60 Hz fields exceed 25 kV/m or 1 mT (10 G) must be restricted by positive means such as locked enclosures, interlocks, or safety chains. - Engineering controls for *superconducting magnets* - Installation of cryogen level sensor system and liquid helium purge vent.		x				
4. Trainee selects and uses applicable PPE: - PPE for cryogens: wear insulated gloves and face shields or other splash eye/face protection, closed-toed shoes, and lab coats. - Insulating garments and equipment where 60-Hz electric fields exceed 5 kV/m.		x				
5. Trainee posts appropriate warning signs.		x				

6. Trainee restrict access to authorized personnel.		x				
7. Trainee can identify the symptoms of EMF exposure: - Unpleasant effects such as vertigo during head or body movements in areas with EMF above 8 T. - Static or pulsed magnetic fields may influence the working order of electronic and metal implanted devices. Persons wearing metallic implants, such as bone or articular prostheses, surgical clips, nails or screws in broken bones, body piercing may feel painful sensations, if exposed to high magnetic fields.	x					
Performing the task or Activity						
1. Trainee can safely use the EMF-generating device		x				
2. Trainee is using techniques for minimizing EMF exposure such as: - Keeps ferromagnetic tools and objects out of places where elevated static magnetic fields are present. - Restrict access by pacemaker users to places where whole-body magnetic fields exceed 5 G. - Exposure can be controlled by varying the distance from the source.		x				
Clean up (what is done after performing the task)						
1. Trainee turns off the device.		x				
2. Trainee stores all PPE appropriately.		x				
Emergency Response						
1. Trainee understands what to do if something unexpected occurs, such as an off-normal event, quench, overexposure, or other emergency: - Turn Off the device - Remove the worker from the exposure area. - Seek immediate medical attention. - Notify your supervisor at first opportunity, no matter how minor the injury may seem.	x					
Instructor Notes						

This form helps you document the contents of your OJT sessions. From within WPC, you can attach the completed form to the relevant Activity, or place it in a network drive and link to it from the Activity. See: https://training.lbl.gov/OJT/

Instructions

Add or delete rows and/or categories as need. Add the steps needed to perform the task/activity.

The template is arranged in blocks. Use the blocks that are helpful to you and delete blocks that don't apply. You can also add rows and blocks as-needed. Likewise, use the columns that apply to your OJT and ignore the ones that don't.

Steps
List the steps the student must be able to perform to execute this task correctly. Use the columns to indicate your expectations for the student, and to remind yourself if a step cannot be easily undone ("critical step"), if this is a step necessary for reducing risk in a later step ("risk-important action") or if students frequently make a common error.

Other things you should consider noting in this column include:

- Why (e.g., "Why is this step necessary?") and What-If (e.g., "What if I forget to do this step or do it wrong? What could happen?") questions related to this step

Student Explains
Check this column if the student must ***explain*** something (e.g., how to respond to a particular emergency or off-normal condition).

Student Demos
Check this column if the student must ***demonstrate*** something (e.g., how to put on proper PPE). In general, it's preferable to have the student demonstrate rather than just explain.

Critical Step
Mark this column if this is a ***critical step***, meaning, it's a step that can't be easily undone. (e.g., once you combine two chemicals in the same beaker, you can't easily "uncombine" them). You and the student should both verify that everything is as it should be before executing a critical step.

Risk Important Action
Mark this column if this is a ***risk important action***. For example, putting on your seatbelt is a risk-important action because it mitigates the harm you could experience if your car is involved in a crash. By itself, it makes no difference, but in an emergency, it can make a very big difference. In laboratory terms, this could be analogous to keeping a spill kit nearby in case there's a chemical spill, or ensuring you have calcium gluconate gel nearby if you are working with hydrofluoric acid.

Common Error
Check this column if there are known, common mistakes that people make. If this row is documenting such a step, identify those common errors for the student, clarify why so many people make them, and ensure that the student knows to avoid them.

Instructor
Some OJT is taught by multiple instructors, each taking responsibility for a different portion of the session. If that is the case for your OJT, use this column to mark (with the instructor's name) which instructor teaches which steps. If your OJT has only one instructor, you can just put the instructor's name in this column in the first row and leave the rest of the column blank.