

## NC Job Risk Assessment

<b>Name(s) of Risk Team Members:</b> L. Davis, D. Elling, S. Hoey, W. Litzke, A. Piper	<b>Point Value</b> → <b>Parameter</b> ↓	1	2	3	4	5
<b>Job Title: Magnetic fields and non-ionizing radiation work</b>						
<b>Job Number or Job Identifier: NC-JRA-012</b>						
<b>Job Description: Work with magnetic fields and non-ionizing radiation.</b>	<b>Frequency (B)</b>	≤once/year	≤once/month	≤once/week	≤once/shift	>once/shift
Training Procedures List (Optional):	<b>Severity (C)</b>	First Aid Only	Medical Treatment	Lost Time	Partial Disability	Death or Permanent Disability
Approved by: S. Hoey Date:12/24/07 Rev. #: 0	<b>Likelihood (D)</b>	Very Unlikely	Unlikely	Possible	Probable	Multiple

Job Step / Task	Hazard	Control(s)	Before Additional Controls					Control(s) Added to Reduce Risk	After Additional Controls					
			Stressor	# of People A	Frequency B	Severity C	Likelihood D		Risk* AxBxCxD	Stressors	# of People A	Frequency B	Severity C	Likelihood D
Operating Power Supplies	Electric Shock	Proper installation, grounding, training procedures, work planning, PPE, Tier 1, SBMS Electrical Safety SUBJECT AREA, protection circuitry.	N	1	5	2	2							
	Arc Flash	Proper installation, grounding, training procedures, work planning, PPE, Tier 1, SBMS Electrical Safety SUBJECT AREA, protection circuitry, EEI Inspections	N	1	5	3	2	30						

## NC Job Risk Assessment

Job Step / Task	Hazard	Control(s)	Before Additional Controls					Control(s) Added to Reduce Risk	After Additional Controls					% Risk Reduction	
			Stressor	# of People A	Frequency B	Severity C	Likelihood D		Risk* AxBxCxD	Stressors	# of People A	Frequency B	Severity C		Likelihood D
Operating Power Supplies (Cont'd)	Reflex injury	Grounding, training, procedures, work planning, PPE, Tier 1, work area conditions	N	1	5	1	2	10							
Working with magnetic fields	Being struck by an object pulled into the field	Work planning, IH review, static magnetic fields SBMS subject area, procedures, training, work area conditions, non-magnetic tools, field maps, field on indicators.	N	1	3	3	2	18							
	Electrical surge due to quench of magnet	Operation within rated limits, power supply design, use of UPS and persistent circuits, ODH assessment and training.	N	1	3	1	2	6							
	Oxygen deficiency due to massive boil-off during a quench	Work planning, ODH assessment and training, SBMS subject area	N	1	3	4	2	30							
	Cryogenic work	See NC-JRA-005	N	1	4	2	1	8							

## NC Job Risk Assessment

Job Step / Task	Hazard	Control(s)	Before Additional Controls					Control(s) Added to Reduce Risk	After Additional Controls					% Risk Reduction	
			Stressor	# of People A	Frequency B	Severity C	Likelihood D		Risk* AxBxCxD	Stressors	# of People A	Frequency B	Severity C		Likelihood D
Working with RF devices	Electrical shock	Proper installation, grounding, training procedures, work planning, PPE, Tier 1	N	1	2	2	1	4							
	Reflex injury	Grounding, training, procedures, work planning, PPE, Tier 1, work area conditions	N	1	2	1	1	2							
	x-ray exposure	Work planning, IH review, static magnetic fields SBMS subject area, procedures, training, work area conditions, non-magnetic tools, field on indicators.	N	1	4	2	1	8							
	Thermal injury from microwave exposure	Work planning, IH review, static magnetic fields SBMS subject area, procedures, training, work area conditions, non-magnetic tools, field maps, field on indicators.	N	1	4	1	1	4							
Working with RF devices	Vacuum system work	See NC-JRA- 019	N	1	4	1	1	4							

## NC Job Risk Assessment

<b>*Risk:</b>	<b>0 to 20</b>	<b>21 to 40</b>	<b>41-60</b>	<b>61 to 80</b>	<b>81 or greater</b>
	<b>Negligible</b>	<b>Acceptable</b>	<b>Moderate</b>	<b>Substantial</b>	<b>Intolerable</b>