

## 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:</b> <b>Clean Room Operations</b>	<b>Frequency (B)</b>	≤once/year	≤once/month	≤once/week	≤once/shift	>once/shift
<b>Job Number or Job Identifier:</b> NC-JRA-017						
<b>Job Description:</b>	<b>Severity (C)</b>	First Aid Only	Medical Treatment	Lost Time	Partial Disability	Death or Permanent Disability
Training Procedures List (Optional):	<b>Likelihood (D)</b>	Very Unlikely	Unlikely	Possible	Probable	Multiple
Approved by: S. Hoey Date: 1/10/08 Rev. #: 0						
<b>Stressors (if applicable, please list all)</b> (1) Environmental; (2) Temperature; (3) Time restraints		<b>Reason for Revision (if applicable):</b>			<b>Comments:</b>	

Activity	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	Risk* AxBxCxD
1. FLOOR WASHING	SLIPS AND FALLS - WET FLOORS ARE EVEN MORE SLIPPERY WITH BOOTIES ON - MAY "BUMP" INTO EQUIPMENT CAUSING EXPOSURE TO ELECTRICAL CURRENT, TUBING DISLODGE MENT,	TEST DIFFERENT TYPES OF BOOTIES ON WET FLOOR SURFACES, DEDICATE AN APPROPRIATE SUPPLY FOR FLOOR MAINTENANCE - TRAINING OF PERSONNEL, cleaning procedure	N	1	3	3	3	27								

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	EQUIPMENT SHUT-DOWN														
2. ROUTINE HORIZONTAL SURFACE WIPING	MAY CONTACT AND SPILL HAZARDOUS MATERIAL	KEEP TO A MINIMUM THE AMOUNT OF BEAKERS, BOTTLES, SAMPLES ETC. LEFT OUT ON BENCHES AND IN HOODS – TRAINING OF PERSONNEL	N	1	3	3	3	27							
3. GENERAL CLEAN ROOM WORK	A CLEAN ROOM IS, BY DESIGN, AN ISOLATED ENVIRONMENT. AN INDIVIDUAL THAT HAS SUSTAINED AN INJURY MAY BE UNNOTICED BY THE LAB-AT-LARGE – BECAUSE OF THE HEPA FILTERS, THE CEILING IS VERY FLAMMABLE	INDIVIDUALS ARE NOT PERMITTED TO WORK ALONE, EXCEPT DURING NORMAL BUSINESS HOURS – DO NOT ALLOW OPEN FLAMES – TRAIN PERSONNEL ON CORRECT AND IMMEDIATE RESPONSE TO A FIRE IN THE CLEAN ROOM, fire extinguisher/sprinklers.	N	1	2	5	2	20							
4. WORKING WITH HF	SPILLS / FUMES	Specific SOP, Training, PPE, Spill kit	N	1	2	5	2	20							
5. <del>UV EXPOSURE FROM NANO IMPRINTER</del>	<del>EYE AND SKIN EXPOSURE TO OPERATOR AND OTHERS IN ROOM</del>	<del>Signage, PPE</del>	<del>N</del>	<del>1</del>	<del>2</del>	<del>2</del>	<del>3</del>	<del>12</del>							
6. IGNITION OF PYROPHORIC GASES TO PECVD	Flammable gas leak ignites	Refer to JTA NC-015 Pyrophoric/Toxic Gas Exchange. Auto shutdown on flow.	N	1	2	5	1	10							
7. ASPHYXIATION FROM GASES/FUMES	asphyxiation	ODH CALCULATIONS, MONITORS	N	1	2	4	2	16							
8. SPINNING OF RESISTS	EXPOSURE TO TOXIC/CARCINOGENIC/REPRODUCTIVE TOXIN FUMES FROM RESISTS	RESIST WORK IN HOODS, Refer to Chemical JRA-003	N	1	2	3	3	18							

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9. FILLING OF CRYOGENIC TRAPS	CRYOGENIC BURNS FROM N2	TRAINING ON FILL PROCEDURES, PROPER PPE, Refer to JTA -005 Cryogenic work.	N	1	3	2	3	18							
10. WORKING WITH OR NEAR VACUUM SYSTEMS	VACUUM CHAMBER IMPLOSION	PROPER SELECTION OF MATERIALS, SHIELDING, commercial equipment, Refer to JRA- 018 vacuum systems, Inspection of equipment	N	1	3	2	2	12							
11. WEARING OF GLOVES	CONTACT DERMATITIS OR ANAPHYLITIC SHOCK FROM EXPOSURE TO LATEX IN GLOVES	TRAIN PERSONNEL TO IDENTIFY REACTIONS – PROVIDE SUBSTITUTE GLOVES	N	1	2	1	2	4							
12. WEARING FLAMMABLE MATERIALS (IE TYVEK, NEAR ELECTRICAL CONDUCTORS)	Ignition of tyvek due to arc flash.	Proper selection of PPE, work permit.	N	1	2	4	2	16							

<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>