

### Job Risk Analysis

Name(s) of Risk Team Members: P. Cirnigliaro, L. Masi, J. Moore, T. Tallerico				Point Value → Parameter ↓	1	2	3	4	5							
Job Title: Electronic work-routine <600 V Job Number or Job Identifier: JRA 4c-05				Frequency (B)	≤once/year	≤once/month	≤once/week	≤once/shift	>once/shift							
Job Description: Bypassing and replacing compressor PLC board by manipulation of energized circuits.				Severity (C)	First Aid Only	Medical Treatment	Lost Time	Partial Disability	Death or Permanent Disability							
Training and Procedures List (optional):				Likelihood (D)	Extremely Unlikely	Unlikely	Possible	Probable	Multiple							
Approved by: <i>E. Lessard</i> Date: 7-8-05 Rev. #: 0																
Stressors (if applicable, please list all):				Reason for Revision (if applicable):			Comments: Note: PLC Racks fed from UPS panel PLC5H, 20 amps each. UPS = 6.0kVA/4.2 kW. Use of Energized Electrical Work Permit AD-G-05-03B.									
				Before Additional Controls					After Additional Controls							
Job Step / Task	Hazard	Control(s)	Stressors Y/N	# of People A	Frequency B	Severity C	Likelihood D	Risk* AxBxCxD	Control(s) Added to Reduce Risk	Stressors Y/N	# of People A	Frequency B	Severity C	Likelihood D	Risk* AxBxCxD	% Risk Reduction
Review work, assign work order number, inform Cryogenic's Control Room of work planned.	Minimal Hazard	Procedures, training, permits.	N	2	3	1	1	6								
Identify PLC board with defective controller		Procedures, training, permits,	N	1	3	4	2	24								
Insert replacement PLC board in adjacent slot on rack.	Exposure to electrical shock and flash hazard	Procedures training, permits , visual inspection, use of PPE as per NFPA 70E, use of CAT III test equipment, use of insulated tools.	N	1	3	4	3	36								

Identify 120VAC wires that must be moved to new PLC board	Exposure to electrical shock and flash hazard	Procedures, training, permits, use of PPE as per NFPA 70E, use of insulated tools.	N	1	3	4	3	24								
Lift and move 120 VAC wires to new PLC controller	Exposure to electrical shock and flash hazard	Procedures, training, permits, use of PPE as per NFPA 70E, use of insulated tools.	N	1	3	4	3	36								
Verify operation of PLC	Exposure to electrical shock and flash hazard	Procedures, training, permits, use of PPE as per NFPA 70E, use of insulated tools.	N	1	3	4	3	24								
Verify operation of equipment	Minimal Hazard	Procedures, training	N	1	3	1	1	3								
Report task completion to Cryogenic's Control Room.	Minimal Hazard	Procedures, training	N	1	3	1	1	3								
*Risk:	0 to 20	21 to 40	41-60	61 to 80	81 or greater											
	Negligible	Acceptable	Moderate	Substantial	Intolerable											