Equipment: Minster (Manufacturer) AB-123-CD (Model / Generation / Tooling Design)

Location: Module # 1 (Line #) #33 (Machine #) #12345 Starting Date: 5/1/2009

Type of Equipment: Press ABC-123 Plant: Plant B

Assessment Team Members: (Contact Person)

Instruction: Please follow Safe Guarding Seminar Risk Assessment Flow Chart and Risk Estimation Matrix!

Use the ANSI B11.TR3-2000 Hazard Table to Assist in Identification of Hazards and Promote Consistency!

1–8 Represents Low Level, 9–14 Represents Medium Level, 15–20 Represents High Level

Hazard #	Hazard Identification: Identified Hazard	Annex A #	Hazard Type (From Hazard Table Annex A)	Risk Level Estimate: Frequency of Exposure 1,2,4	Probability of Injury 1,2,4,6	Severity of Injury 1,3,6,10	Number of People Exposed	Est. Risk Level	Accident Review Yes/No	Tolerable Yes/ No	Method of Reduction: By Design	By Safe-guarding	By Admin. Controls	Method of Addressing Risk Reduction or Current Method in Place Making it Tolerable!	Follow-Up: Frequency of Exposure 1,2,4	Probability of Injury 1,2,4,6	Severity of Injury 1,3,6,10	Number of People Exposed	Final Risk Level	Tolerable?
	Guarding Concerns																			
1	E-stops not redundant or properly monitored	14.0	Failure of Control Circuit	2	2	6	1	10	y	No	X	X		Add redundancy and safety monitoring relay	2	2	6	1	10	No
2	Guard switches not in conformance	14.0	Failure of Control Circuit	2	4	6	1	12		No	X	X		Change guard switches & add safety monitoring relay	1	1	1	1	3	Yes
3	D.C. capacitive buss of AC drive not isolated from motor	14.0	Failure of Control Circuit	2	2	6	1	10		No	X			Make M1 contactor a safety type and move between drive & motor	1	1	1	1	3	Yes
4	Inch function on guards open not appropriate	14.0	Failure of Control Circuit	2	2	6	1	10		No	X	X	X	Change guard switches and add safety monitoring relay. Add two-hand control monitoring relay.	1	2	1	1	4	Yes
5	CR2, CR3, MCR not in conformance	14.0	Failure of Control Circuit	2	2	6	1	10		No	X			Change to safety relays with appropriate monitoring	1	2	2	1	5	Yes
6	No flywheel motion detection	1.d	Mechanical Hazard-mass and velocity (kinetic energy of elements in controlled of uncontrolled motion)	2	2	6	2	16		No	X		X	Add stopped motion detector and indicator	1	2	1	2	5	Yes
7	Software not adequate for above items 1-6			3	3	3	1	9		No	X			Modify software to accommodate above modifications. Items 1-6					0	Yes
8	Main motor drive belts	1.3 1.4	Cutting Severing hazard, Entanglement hazard	1	2	3	1	6		Yes			X	The backside of this guard is open. This unit sits approx. 15 ft. above the ground. No access on top of press while running					0	Yes
9	Flywheel	1.d	Mechanical Hazard-mass and velocity (kinetic energy of elements in controlled of uncontrolled motion)	1	2	6	1	9		No	X			Flywheel is "counter sunk" in press housing & covered with fiberglass guard.					0	Yes
12	Main jackshaft	1.3 1.4	Cutting Severing hazard, Entanglement hazard	1	1	3	1	5		Yes		X		Drive belt is totally surrounded by a guard					0	Yes
34								0											0	Yes
35								0											0	Yes
	Operational Concerns							0											0	Yes
																			0	Yes
																			0	Yes
								0											0	Yes
	Maintenance Concerns							0											0	Yes
								0											0	Yes
								0											0	Yes