

Kennametal Layer of Protection Tool

Expectation: This assessment tool is a supplement to recognized risk assessment tools and clarifies minimum expectations that can be used to help identify and evaluate layers of protection for potential fatality hazards. Each location shall record at least marginal and unacceptable risks in the Intelx FSI Data Base.

Location:	Department:
Assessed By:	Date:
Task:	
Hazard Category:	Specific hazard(s):
Frequency: <input type="checkbox"/> Routine (Daily, Weekly) <input type="checkbox"/> Non-Routine (Periodic, Occasional, Infrequent)	

Risk Assessment Rating:	PRE Assessment Risk Rating	POST Assessment Risk Rating
Recognized Risk Assessment Tool Used: _____	_____	_____
Rating: _____	_____	_____

Layers of Protection: Place a check in front of each layer of protection selected for the hazard being assessed. Describe 'Other' layers of protection that are not listed in the space provided.

Hierarchy of Controls

Engineering Design (10 pts)	Fixed Engineering Controls (7 pts each)	Safety Devices (4 pts each)	Warning Devices (3 pts each)	Human Performance Tools* (1 pt each)	Administrative Controls (1 pt each)
<input type="checkbox"/> Substitution/Elimination	<input type="checkbox"/> Interlocked Barrier <input type="checkbox"/> Check Valves <input type="checkbox"/> Control Reliable <input type="checkbox"/> Fall Prevention <input type="checkbox"/> Physical Barriers <input type="checkbox"/> Anti-failure System <input type="checkbox"/> Automatic Fire Suppression <input type="checkbox"/> Dock Lock System <input type="checkbox"/> Engineered Access <input type="checkbox"/> Equipment Actuating Device <input type="checkbox"/> Explosion Proof Equipment <input type="checkbox"/> Machine Guards <input type="checkbox"/> Relief Valves (temperature/pressure) <input type="checkbox"/> Redundant Safety Circuitry (e.g. PLC Logic, Equipment Controls) <input type="checkbox"/> Detection Systems (e.g. Light curtains, scanners, etc.) <input type="checkbox"/> Fixed ventilation / atmospheric monitor (gas detection, exhaust hood) <input type="checkbox"/> Other <u>hand rail</u> <input type="checkbox"/> Other _____	<input type="checkbox"/> Remote Control Devices <input type="checkbox"/> Aerial Lift <input type="checkbox"/> Emergency Release/E-Stop <input type="checkbox"/> Falling Object/Load Protection <input type="checkbox"/> Tools (Hands Free, Specialty) <input type="checkbox"/> Dock Safety Equipment <input type="checkbox"/> Energy Isolation Device (e.g. blanks, blinds, double block/bleed, pins, blocking devices, etc.) <input type="checkbox"/> Grounding Equipment <input type="checkbox"/> Temporary Physical Barriers <input type="checkbox"/> Storage Rack Securement <input type="checkbox"/> Secured/Restricted Access (e.g. chain link fence, locked gates, permits, etc.) <input type="checkbox"/> Other _____ <input type="checkbox"/> Other _____	<input type="checkbox"/> Alarms (Audio/Visual) <input type="checkbox"/> Sensing Devices <input type="checkbox"/> Signs/Flagging/Labels/Tags <input type="checkbox"/> Barrier Tape (e.g. Danger / Caution) <input type="checkbox"/> Equipment Cameras <input type="checkbox"/> Floor Designations <input type="checkbox"/> Clearance Indicators <input type="checkbox"/> Other _____ <input type="checkbox"/> Other _____	<input type="checkbox"/> Pre-Task Brief <input type="checkbox"/> Am I Ready Checklist <input type="checkbox"/> Floor Observation <input type="checkbox"/> STOP & Seek Out <input type="checkbox"/> Step by Step <input type="checkbox"/> STAR / Self Check <input type="checkbox"/> 3-Way Communication <input type="checkbox"/> Record As Left Condition <input type="checkbox"/> Peer Check <input type="checkbox"/> Other _____ <input type="checkbox"/> Other _____	<input type="checkbox"/> Spotter/Escorts <input type="checkbox"/> Permits <input type="checkbox"/> Training <input type="checkbox"/> Task Specific PPE <input type="checkbox"/> Isolation/Distance <input type="checkbox"/> Inspection Process <input type="checkbox"/> Independent Review <input type="checkbox"/> Written Procedures/Rule Exists <input type="checkbox"/> Routine Compliance Audit <input type="checkbox"/> Preventative Maintenance <input type="checkbox"/> Job Rotation <input type="checkbox"/> Job Safety Analysis <input type="checkbox"/> Communication Plan (e.g. toolbox, single point lesson, task specific) <input type="checkbox"/> Emergency Response Equip (e.g. extinguisher, eyewash, shower, charged fire line) <input type="checkbox"/> Other _____ <input type="checkbox"/> Other _____
Engineered LOP's Value	Permanent Engineering LOP's Value	Safety Device LOP Value	Warning Device LOP Value	Human Performance Tool Value	Administrative LOP Value
0	0	0	0	0	0
Total Score:					
0					

* **HP Examples:** Example: STAR/Self Check - line added to Safe Work Instruction for employee's initials after each step, required to be used to do this task, paper must be submitted upon completion and retained for auditing. Floor Observation - process to trigger observation each time this task is performed, observation documented and retained for auditing.

Fatality Risk Assessment Criteria: Total score and LOP's must meet fatality risk categorization criteria below.		
Acceptable Risk Level 1 and 2	Marginal Risk Level 3	Unacceptable Risk Level 4 and 5
<input type="checkbox"/> Engineering Design (Elimination / Substitution) <input type="checkbox"/> A total hierarchy of controls value greater than or equal to 10; must be a combination of at least two different hierarchy of control categories and must include at least one warning/safety device or engineering control.	<input type="checkbox"/> A total hierarchy of controls value greater than or equal to 7; must be a combination of at least two different hierarchy of control categories.	<input type="checkbox"/> No LOP <input type="checkbox"/> Any other combination of hierarchy of controls equaling 6 or less, or <u>any single hierarchy of control category other than Engineering Design (Elimination/Substitution).</u>
All LOPs must be verified		
Final Rating:		
<input type="checkbox"/> Acceptable	<input type="checkbox"/> Marginal	<input type="checkbox"/> Unacceptable