UNIVERSITY OF KWAZULU-NATAL
INYUVESI YAKWAZULU-NATALI

OPERATIONL RISK ASSESSMENTS

Version 1 (20/08/2012)

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SUBJECT

DEPARTMENT

INTRODUCTION

The Occupational Health and Safety Act (85 of 1993) stipulates that organizations must conduct a Risk Assessment to;

- ✓ Determine the risk that the processes or substances present to the employees and the community.
- ✓ Inform employees of the risks and control measures.
- ✓ Implement measure to reduce or control the risks, and
- ✓ Where appropriate, to monitor the risks.

This Risk Assessment is therefore a critical element in Management's efforts to comply with the O.H.S. Act and the Hazardous Chemical Substances Regulations. In so doing, this Assessment will enable Management to;

- ✓ Identify all risk problems,
- ✓ Prioritize the problems,
- ✓ Enable resources to be best used, and in some instances save costs on unnecessary monitoring,
- ✓ Design a monitoring program which is suitable for the conditions, and
- ✓ Recommend control measure or existing short comings.

The purpose of this Risk Assessment is in accordance with Management's legal and moral obligation to ensure a safer, healthier workplace and environmental status. In this regard, the objectives were;

- ✓ To develop a comprehensive qualitative assessment of the workplace, the processes, materials used and the employee's exposure and the risk presented by these to the employees.
- ✓ To enable the risk to be determined and for appropriate measures to be implemented to quantify the risk (via monitoring) and to reduce or control the risk.
- ✓ To enable Management to comply with the existing legislation and implement successful environmental, health and safety programmes.

In compiling this Risk Assessment, the following information was taken into consideration;

- ✓ The legal legislation in terms of the O.H.S. Act,
- ✓ The Company's S.H.E. Standards and Procedures,
- ✓ 'The Company's present processes and operational standards,

- ✓ The past history of incidents/accidents within these operations and the severity of such incidents/accidents.

The compilation of this Risk Assessment and the discussions which transpired around each individual operation within NBI, involved the following steps;

1. Identifying all substances hazardous to health.
2. Establishing how the substances could enter the body.
3. Identifying the potential effects.
4. Examining the work environment.
5. Identifying who could be exposed and the degree of exposure.
6. Identifying individual operations.
7. Establishing the risk involved in each operation.
8. Identifying appropriate P.P.E. for each operation.
9. Identifying and cross relating the operations with UKZNs current Standards and operations.
10. Identifying the Risk, Standard, Compliance and Effectiveness of the Safety, Health and
11. Environmental aspects of each operation.

As with any Assessment, a true reflection of the operations cannot be accurately established without the input of key personal being involved. In this regard, the following job categories and titles had direct involvement in completing this Assessment;

- ✓ The Acting Director: Safety, Health and Environmental
- ✓ The Workshop Manager.
- ✓ The Area Managers.
- ✓ The Occupational Health Practitioner
- ✓ The Safety, Health and Environment Representatives.
- ✓ Individual employees in each Department/Discipline
- ✓ The Occupational SHE Practitioner/professional

It is thus the objective of this Risk Assessment to inform, instruct and train all employees and Safety, health and Environment Representatives on the risks and the precautions to be taken whilst conducting their normal operations. In this regard, it is vital that a clear message is sent and understood on;

- ✓ The contents of the regulations pertaining to Risk Assessments,
- ✓ The potential sources of the risk problems,
- ✓ The nature and extent of the risk to health,
- ✓ The reason for the control measures and their proper use,
- ✓ The correct use, maintenance, limitation of safety equipment and facilities,
- ✓ The need for air sampling, biological monitoring and medical surveillance,
- ✓ The importance of good housekeeping and personal hygiene,
- ✓ The reason for personal protective equipment (P.P.E.) and when it should be worn.
- ✓ The results of any monitoring, sampling or assessments conducted in this regard.

FORMAL RISK ASSESSMENT RATING

CONSEQUENCES					PROBABILITY				
SEVERITY RATING	**PEOPLE**	**ENVIRONMENT**	**REPUTATION**	**ASSETS AND REVENUE**	**< 1%** Never heard of. Practically Impossible	**10%** Once every 10 years. Not likely to happen	**10%** Once every 5 years. Could happen	**95%** Annually Has happened	**100%** Several times a year. Common occurrence
					A	**B**	**C**	**D**	**E**
1	**MINOR INJURY**	**SLIGHT EFFECT** Permits slightly effected	**SLIGHT IMPACT** Possibly local	**SLIGHT DAMAGE** > R5 000	**1**	**2**	**4**	**7**	**11**
2	**LOST TIME INJURY**	**MINOR EFFECT** Temporary effect outside	**LIMITED IMPACT** Local & Regional	**LOCALIZED DAMAGE** R5 000 to R10 000	**3**	**5**	**8**	**12**	**16**
3	**SERIOUS INJURY**	**LOCALISED EFFECT** Limited damage	**CONSIDERABLE IMPACT** National coverage	**LOCALIZED DAMAGE** R10 000 to R15 000	**6**	**9**	**13**	**17**	**20**
4	**SINGLE FATALITY**	**MAJOR EFFECT** Severe environmental damage	**NATIONAL IMPACT** National headlines	**MAJOR DAMAGE** R15 000 to R20 000	**10**	**14**	**18**	**21**	**23**
5	**MULTIPLE FATALITY**	**MASSIVE EFFECT** Persistent severely	**INTERNATIONAL IMPACT** International coverage & headlines	**EXTENSIVE DAMAGE** R20 000 to R50 000	**15**	**19**	**22**	**24**	**25**

When to perform a Risk Assessment

- ✓ **Prior to drafting a WSWP**
- ✓ **After an incident or near miss**
- ✓ **Prior to introducing new work systems**
- ✓ **Prior to using new equipment, chemicals or material.**

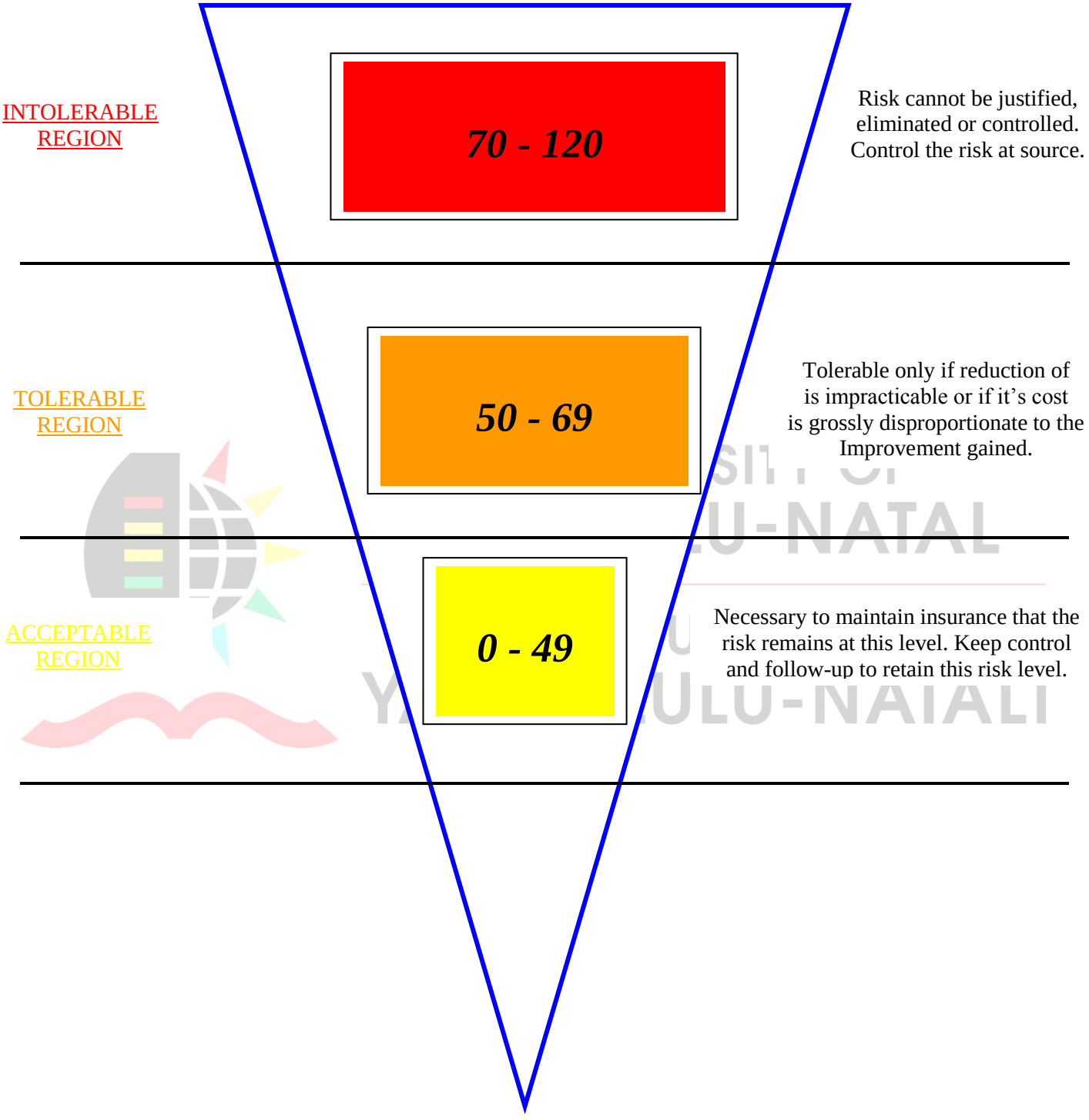
Risk Control Strategies

1. **Elimination**
2. **Control at source**
3. **Minimize**
4. **Issue personal Protective Equipment**
5. **Monitor Risk and control accordingly**

POINT ALLOCATION SUMMARY

1. **Establish level of CONSEQUENCES**
2. **Establish level of PROBABILITY**
3. **Ascertain initial RISK RATING (score)**
4. **Review Accidents / Incidents of last 12 months**
5. **Allocate 5 points for every Accident / Incident (Safety, Health or Environmental)**
6. **Add RISK RATING to Accident / Incident Score**
7. **Final Score = Total Risk Rating for Operation**

ACTION CRITERIA FRAMEWORK



SUMMARY - OVERALL HIGHEST TO LOWEST RISK

POSTION	*OPERATION*	*SCORE*
1		**70 - 120**
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18		**50 - 69**
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27		**0 - 49**
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OPERATION 1

(Department)

(Operation being assessed)

Risk Assessment Worksheet

(Department) – (Operation being assessed)

(EXAMPLE ONLY)

POTENTIAL HAZARDS	PROB	CONS	RISK RATE	CURRENT CONTROLS	RECOMMENDATIONS
Manoeuvring trolleys and filters on uneven flooring with holes, causing the handled equipment to snag of dislodge in uneven surfaces	D	1	7	Flooring inspected by SHE Reps on monthly basis with defective flooring reported to Maintenance for repairs.	Ensure that heavy movable items are fitted with wheels that are in good condition.
Slipping on wet floors	D	1	7	Covered slip-proof shoes issued, Wate spillage kept to a minimum with regular clean-ups.	Only use limited amount of water for application and ensure drainage operational as per designs.
Manual handling heavy equipment causing back and other ergonomical problems	C	2	8	Staff trained on correct lifting and pushing techniques.	Seek assistance when handling heavy objects either lifted, pushed or pulled.
Failure to wear PPE – Overalls. Gloves, head-gear etc. resulting in human and product contamination	C	1	4	Standard operational procedures require full PPE to warn at all times.	Ensure PPE is in good working condition and warn correctly
No load testing or inspections on goods hoist	B	2	5	Annual load testing with certification issued – Documents retained in Maintenance & SHE Department	Ensure that copy of last hoist load testing certificate displayed at point of operation in the workplace.
No emergency alarm on outside of Cold Room R28 – Trapped Personal unable to raise alarm of situation	B	2	5	All Cold Rooms to be fitted with emergency exit locks from inside and emergency alarms on outside of freezers	Ensure Cold Rooms safe to enter by firstly checking alarm systems. Regular checks to be conducted and recorded on a Register
Faulty autoclave rupturing under pressure or opened whilst in operation.	A	2	3	36 monthly pressure testing of autoclaves with written safe work procedures signed by all staff using the equipment	Ensure a copy of the 36 monthly certificate displayed at point of operation.
Faulty eye wash unit resulting in delayed first aid treatment for splashes in the eye.	B	1	2	Eye wash units checked on a regular basis and recorded on a Register.	Ensure water emitted from Unit is strong enough to dose eye but not too strong to injure inside of eye.
Accidents/incidents over last 12 month (Safety, Health or Environment)	***SAFETY*** 5	***HEALTH*** 0	***ENVIRONMENT*** 0	All Accidents / Incidents investigated by Approved, Certificated Investigators with proactive recommendations to prevent a recurrence.	Investigations to be led by SHE Manager and HOD, including SHE Representatives. Findings to be discussed at SHE Committee Meetings.
TOTAL			***46***		

CERTIFICATION

ACCEPTANCE BY INCUMBENT(S)				INCUMBENT(S) TRAINED/INDUCTED BY SUPERVISOR		PLANNED JOB OBSERVATION AND TASK REVIEW BY SUPERVISOR			INCUMBENT(S) CERTIFIED COMPETENT BY SUPERVISOR/PLANT TRAINER		
No	Name(s) of Incumbent(s)	Signature(s) of Incumbent(s)	Date	Signature(s) of Incumbent(s)	Date	Name of Supervisor	Signature of Supervisor	Date	Name of Supervisor	Signature of Supervisor	Date
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OPERATION 2

(Department)

(Operation being assessed)

Risk Assessment Worksheet

(Department) – (Operation being assessed)

POTENTIAL HAZARDS	PROB	CONS	RISK R	CURRENT CONTROLS	RECOMMENDATIONS
Accidents/incidents over last 12 month (Safety, Health or Environment)	***SAFETY*** 5	***HEALTH*** 0	***ENVIRONMENT*** 0		
TOTAL			***Total score to be listed in priority on Page 5***		

CERTIFICATION

ACCEPTANCE BY INCUMBENT(S)				INCUMBENT(S) TRAINED/INDUCTED BY SUPERVISOR		PLANNED JOB OBSERVATION AND TASK REVIEW BY SUPERVISOR			INCUMBENT(S) CERTIFIED COMPETENT BY SUPERVISOR/PLANT TRAINER		
No	Name(s) of Incumbent(s)	Signature(s) of Incumbent(s)	Date	Signature(s) of Incumbent(s)	Date	Name of Supervisor	Signature of Supervisor	Date	Name of Supervisor	Signature of Supervisor	Date
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OPERATION 3

(Department)

(Operation being assessed)

Risk Assessment Worksheet

(Department) – (Operation being assessed)

POTENTIAL HAZARDS	PROB	CONS	RISK R	CURRENT CONTROLS	RECOMMENDATIONS
Accidents/incidents over last 12 month (Safety, Health or Environment)	***SAFETY*** 5	***HEALTH*** 0	***ENVIRONMENT*** 0		
TOTAL			***Total score to be listed in priority on Page 5***		

CERTIFICATION

ACCEPTANCE BY INCUMBENT(S)				INCUMBENT(S) TRAINED/INDUCTED BY SUPERVISOR		PLANNED JOB OBSERVATION AND TASK REVIEW BY SUPERVISOR			INCUMBENT(S) CERTIFIED COMPETENT BY SUPERVISOR/PLANT TRAINER		
No	Name(s) of Incumbent(s)	Signature(s) of Incumbent(s)	Date	Signature(s) of Incumbent(s)	Date	Name of Supervisor	Signature of Supervisor	Date	Name of Supervisor	Signature of Supervisor	Date
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PERSONAL PROTECTIVE EQUIPMENT

MATRIX

PERSONAL PROTECTIVE EQUIPMENT MATRIX

OPERATION	*STERILIZED OVERALL*	*OVERALL SUIT*	*DUST COAT*	*SAFETY SHOE*	*CLOSED SHOE*	*GUM BOOT*	*LATEX GLOVE*	*KEFLER GLOVE*	*COTTON GLOVES*	*EYE PROT*	*HEAD COVERING*	*EAR PLUG*	*NOSE MASK*	*FACE SHIELD*	*FREEZER JACKET*
DEPARTMENT															
Operation assessed	X					X	X				X		X		
Operation assessed	X			X			X				X	X	X	X	
Operation assessed	X			X			X	X			X		X	X	
Operation assessed	X			X			X		X		X		X	X	
Operation assessed															
Operation assessed	X			X					X		X		X		X
DEPARTMENT															
Operation assessed	X			X					X	X	X			X	
Operation assessed		X		X			X		X	X	X		X		
Operation assessed	X			X							X		X		
Operation assessed	X			X			X				X		X		
Operation assessed	X			X			X				X		X		
Operation assessed	X			X							X		X		
DEPARTMENT															
Operation assessed			X		X		X		X	X					
Operation assessed			X		X		X		X	X					
Operation assessed			X		X		X		X	X					
Operation assessed			X		X		X		X	X					
DEPARTMENT															
Operation assessed			X	X											
DEPARTMENT															
Operation assessed			X	X											
DEPARTMENT															
Operation assessed			X	X											