

ENVIRONMENT HEALTH SAFETY DEPARTMENT

## HAZARD IDENTIFICATION AND RISK ASSESSMENT

Department: UTILITY (Boiler)							Date:							
HIRA Team:						Location:								
S.No. Activity Sub- Activity		Sub- Activity		N/A/E Ris	Risk	control	Risk Considering existing control measure		itrol	Addition control measures to bring risk to (ALARP level)	Residual risk after applying additional control measures		Remarks (if Any)	
							Frequency	Severity	RPN (F*S)	1. Elimination 2. Substitution 3. Engs. Control 4. Administration Control 5. PPE's	Frequency	Severity	RPN (F*S)	
01	Boiler Operation	Fit-up of boiler	<ul> <li>Sharp edges</li> <li>defective tools &amp; tackles uneven floor</li> </ul>	A	<ul> <li>Musculoskeletal disorder.</li> <li>Stuck by an object.</li> <li>Fall of material &amp; personal Cut injuries.</li> </ul>	345	3	2	6	2345	3	1	3	-

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02	Boiler Operatio n	High limit test	<ul> <li>Explosion, burst</li> <li>Mechanical failure</li> </ul>	A	<ul><li>Burn &amp; scald injuries</li><li>Property damage.</li></ul>	34	4	3	12	345	4	1	4	-
03	Boiler Operatio n	Transferri ng of diesel /FO from storage tank to day storage tank	<ul> <li>Improper joints in pipe line</li> <li>Improper painting of pipe line</li> </ul>	A	<ul><li>Spillage &amp; leakage</li><li>Fire</li><li>Rust</li></ul>	345	3	3	9	2345	3	1	3	-
04	Boiler Operatio n	Water feeding to boiler	<ul> <li>Ball valve.</li> <li>Improper joints.</li> <li>Level indicator.</li> </ul>	A	<ul> <li>May be burst ball valve made of gun metal.</li> <li>Leakage</li> <li>Level indicator not functioning properly.</li> <li>Bursting of Gasket</li> </ul>	34	3	2	6	345	3	1	3	

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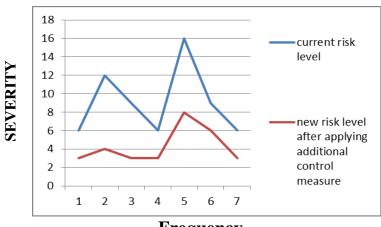
05	Boiler Operatio n	Operation of boiler	<ul> <li>Electrocutio n.</li> <li>Explosion</li> <li>Leakage</li> <li>Moving parts</li> </ul>	Е	<ul> <li>Electric shock.</li> <li>Fire</li> <li>Burn injuries</li> <li>Spillage</li> <li>Entanglement</li> <li>Struck by an object.</li> </ul>	35	4	4	16	345	4	2	8	
06	Boiler Operatio n	Maintena nce	<ul> <li>Electrocution</li> <li>Fire.</li> <li>Defective tools &amp; tackles</li> <li>Height work</li> <li>Confined space</li> </ul>	A	<ul> <li>Musculoskeletal disorder.</li> <li>Struck by an object.</li> <li>Spillage</li> <li>Fall of personal &amp; material.</li> <li>Entanglement.</li> <li>Respiratory Suffocation due to gases and dust</li> </ul>	345	3	3	9	2345	3	2	6	
07	Boiler Operatio n	Thermal pipe lines	<ul> <li>Heated pipelines</li> <li>Improper insulation.</li> <li>Adhesive gum of insulation</li> <li>Defective pipe line</li> <li>Scaling</li> </ul>	A	<ul> <li>Burn injuries.</li> <li>Fire.</li> <li>Leakage.</li> <li>Line bursting.</li> </ul>	35	3	2	6	345	3	1	3	

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Frequency

#### **MATRIX**

,	5	5	10	15	20	25	
ITY	4	4	8	12	16	20	
SEVERITY	3	3	6	9	12	15	
SE	2	2	4	6	8	10	
	1	1	2	3	4	5	
	0	1	2	3	4	5	

Frequency

LOW MODERATE HIGH

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## HAZARD IDENTIFICATION AND RISK ASSESSMENT

REVISION HISTORY - HIRA Register									
Revision No.	Date	Reason for change	Originator (Leader)	Approval					
00		New Document	Plant/Functional Manager	Plant/ Functional Head					
P: 4.91 42 I 1 1 1 1 1 1 1 1 1 1 EUC									

<b>Distribution:</b> Leader	/plant/functional Head(s)	/Functional Head – EHS
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	Prepared By Operating Officer/Executive	Reviewed By Operating Manager	Approved By Department Head	Authorized By Head QA
Sign				
Date				
Name				

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