



Hazard Identification, Risk Assessment And Risk Control Register (HIRA)

DEPARTMENT : Effluent Treatment Plant

Activity	Substances	R/ NR	Hazard	Hazard No.	Risk	Applicable Legislation	Expt requirement & Controls required	Present control	Is Control Adequate	Risk Assessment					Additional Operational Controls					
										Probability	Consequences	Risk Rating	Risk Level	Acceptable / Unacceptable	Priority No.	E	S	EC	AC	PPE
1) Receipt of Material	Receiving of chemicals from chemical store in liquid or powdered form	R	Chemical Hazards	1	Injury	Factory Act 1948 & Maharashtra Factory Rules 2012	Not to lift weight more than Adult male - 55 kg	1. Engg Control : Trolleys provided 2. Adm. Control : Safety Shoes 3. PPE : Safety Shoes	Yes	2	1	2	L	Acceptable						
		R	Chemical Hazards	2	Ill Health	Factory Act 1948 & Maharashtra Factory Rules 2012	Brief description of the measures to be taken to minimize the risk & information in local language	1. Engg Control : Nil 2. Adm. Control : OCP, Health check up 3. PPE : Hand gloves, mask, apron	Yes	2	1	2	L	Acceptable						
		R	Chemical Hazards	3	Injury	Factory Act 1948 & Maharashtra Factory Rules 2012	Brief description of the measures to be taken to minimize the risk & information in local language	1. Engg Control : FRP coated tanks provided 2. Adm. Control : OCP, Internal audit 3. PPE : Safety shoes	Yes	1	2	2	L	Acceptable						
2) Oil & Grease Chamber	Removal of Oil and Grease by using Skimmer	R	Mechanical Hazard	3	Injury	Factory Act 1948 & Maharashtra Factory Rules 2012	Brief description of the measures to be taken to minimize the risk & information in local language	1. Engg Control : Nil 2. Adm. Control : OCP, Health check up 3. PPE : mask	Yes	2	1	2	L	Acceptable						
		R	Mechanical Hazard	4	Injury	Factory Act 1948 & Maharashtra Factory Rules 2012	Brief description of the measures to be taken to minimize the risk & information in local language	1. Engg Control : FRP coated tanks provided 2. Adm. Control : OCP 3. PPE : Mask, hand gloves, apron	Yes	1	3	3	M	Acceptable						
		R	Chemical Hazard	5	Ill Health	Factory Act 1948 & Maharashtra Factory Rules 2012	Brief description of the measures to be taken to minimize the risk & information in local language	1. Engg Control : FRP coated tanks provided 2. Adm. Control : OCP 3. PPE : Mask, hand gloves, apron	Yes	1	3	3	M	Acceptable						
3) Cracking of coolant	Cracking of coolant by adding Sulphuric Acid and Caustic Soda in reactor	R	Chemical Hazard	6	Injury	Factory Act 1948 & Maharashtra Factory Rules 2012	Preventing of machine, kept free from obstructions & substances & to ensure safety, steps, stairs, passages and gangways be provided with substantial handrails	1. Engg Control : Railing provided, pumps are with guards 2. Adm. Control : Internal audit 3. PPE : Safety shoes	Yes	1	3	3	M	Acceptable						
		NR	Fumes	3	Ill Health	Factory Act 1948 & Maharashtra Factory Rules 2012	Brief description of the measures to be taken to minimize the risk & information in local language	1. Engg Control : FRP coated tanks provided 2. Adm. Control : OCP 3. PPE : Safety shoes	Yes	1	2	2	L	Acceptable						
		R	Chemical Hazards	4	Ill Health	Factory Act 1948 & Maharashtra Factory Rules 2012	Brief description of the measures to be taken to minimize the risk & information in local language	1. Engg Control : FRP coated tanks provided 2. Adm. Control : OCP 3. PPE : Mask, hand gloves, apron, safety shoes	Yes	2	2	4	M	Acceptable						
3) Neutralisation	Neutralisation by adding acid or caustic soda	NR	Fumes	3	Ill Health	Factory Act 1948 & Maharashtra Factory Rules 2012	Brief description of the measures to be taken to minimize the risk & information in local language	1. Engg Control : FRP coated tanks provided 2. Adm. Control : OCP 3. PPE : Mask, hand gloves, apron	Yes	1	2	2	L	Acceptable						
		R	Chemical Hazards	5	Injury	Factory Act 1948 & Maharashtra Factory Rules 2012	Preventing of machine, kept free from obstructions & substances & to ensure safety, steps, stairs, passages and gangways be provided with substantial handrails	1. Engg Control : Railing provided, pumps are with guards 2. Adm. Control : Internal audit 3. PPE : Safety shoes	Yes	1	3	3	M	Acceptable						
		NR	Chemical Hazards	6	Injury	Factory Act 1948 & Maharashtra Factory Rules 2012	Brief description of the measures to be taken to minimize the risk & information in local language	1. Engg Control : Nil 2. Adm. Control : OCP, Health check up 3. PPE : Mask	Yes	1	3	3	M	Acceptable						
3) Precipitation & Sludge handling	Addition of flocculants and sludge removal	NR	Chemical Hazards	5	Injury	Factory Act 1948 & Maharashtra Factory Rules 2012	Preventing of machine, kept free from obstructions & substances & to ensure safety, steps, stairs, passages and gangways be provided with substantial handrails	1. Engg Control : Railing provided, pumps are with guards 2. Adm. Control : OCP 3. PPE : Safety shoes	Yes	1	2	2	L	Acceptable						
		R	Fall Hazard	6	Injury	Factory Act 1948 & Maharashtra Factory Rules 2012	Brief description of the measures to be taken to minimize the risk & information in local language	1. Engg Control : FRP coated tanks provided 2. Adm. Control : OCP 3. PPE : Mask, hand gloves, apron	Yes	1	3	3	M	Acceptable						
		NR	Chemical Hazards	7	Ill Health	Factory Act 1948 & Maharashtra Factory Rules 2012	Brief description of the measures to be taken to minimize the risk & information in local language	1. Engg Control : Nil 2. Adm. Control : Health check up 3. PPE : Mask	Yes	1	3	3	M	Acceptable						
4) Sludge separation	Separation of effluent from sludge	R	Chemical Hazard	7	Ill Health	Factory Act 1948 & Maharashtra Factory Rules 2012	Brief description of the measures to be taken to minimize the risk & information in local language	1. Engg Control : Nil 2. Adm. Control : Health check up 3. PPE : Mask	Yes	1	3	3	M	Acceptable						
		R	Mechanical Hazard	8	Injury	Factory Act 1948 & Maharashtra Factory Rules 2012	Brief description of the measures to be taken to minimize the risk & information in local language	1. Engg Control : Nil 2. Adm. Control : On job handling 3. PPE : Hand gloves	Yes	2	1	2	L	Acceptable						