



HABIB SUGAR MILLS LIMITED NAWABSHAH
Risks & Opportunities Assessment
Sugar Processing (HSE, HLR & Food Safety)

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Sr.No.	Activities / Processes	Hazard Type. Physical (P), Chemical (C), Biological (B), Food Safety (F) Environment (E), Human & Labor Rights (HLR)	Hazard	Hazard Effect/ Risks	Existing Controls	Risk Evaluation			Additional Controls	Residual Risk		
						P	S	R		P	S	R
1	Sugar cane unloading (Feeding)	P	Physical contact between humans and cane tractor trolley, trucks.	Minor injuries.	1. Traffic control SOP 2. Follow the plant speed limits. (10 km p/h) 2. Safety signages	1	2	2				
		P	Sugar cane spreading	1. Cane loss/ crush under the vehicle tyre 2. Slip/ Trip & Minor injury	1. Cane picker arrangement. 2. Maintain good housekeeping. (area cleaning check list) 3. Proper supervision	2	2	4				
		P & F	Iron bar/ angle dropped from trolley.	1. May damage to cutter knife. 2. Damage to mill house equipment. 3. Harm to workers	1. Magnet before shredder 2. Magnet checklist 3. Use PPEs (Safety helmet, shoes and gloves)	2	2	4				
		B & F	Bacterial growth	Product may contaminated	Biocide dozing	1	2	2				
		HLR	Harassment	Employee turnover	1. Hiring of trained employees 2. Grievance mechanism procedure	1	2	2				
		HLR	Discrimination towards employees	Negative attitudes	1. Hiring of trained & merit based employees 2. Grievance mechanism procedure	1	2	2				
2	Cane preparation	HLR	Child Labor	Accidents / suffer education / illiteracy	1. Child labor (below 18 years age) are strictly prohibited. 2. Verification of age by CNIC. 3. Human/ Labor Right Policy (SOP-0423)	1	1	1				
		B & P	Soil, roots and trash	Sugarcane may contaminate	1. Hot water showering 2. Biocide dozing 3. COA of biocide. 4. MSDS	2	2	4				
		P	Cutter knife broken parts	Process interrupt / stoppages	Magnet calibration/ inspection checklist	2	2	4				
		E	High noise produce from shredder	Noise pollution, Chronic effects ears, hearing loss.	1. Proper maintenance of equipments & lubrication to reduce noise. 2. Personal protective equipment (Use of ear plugs to prevent from hearing loss). 3. Ear protection safety signages. 4. Area noise record.	2	2	4				
3	Milling (Juice Extraction)	P	Unguarded rotary parts (Drives gears, motor belts & sprockets)	Worker may entangled into rotatory parts. 1. Permanent disability. 2. Minor & major injury.	1. Loose cloths & kerchief are not allowed 2. Safe guard of rotatory parts.	1	3	3				
		E	High noise produce from turbines	Noise pollution, Chronic effects ears, hearing loss.	1. Proper maintenance of equipments & lubrication to reduce noise. 2. Personal protective equipment (Use of ear plugs to prevent from hearing loss). 3. Ear protection safety signages. 4. Area noise record.	2	2	4				
		E & F	Diesel mounted Vehical operation for materail shifting (Fork lifter, trailer)	Juice may contaminate due to ash particals.	Use L.P.G mounted vehicals.	1	2	2				
		B, P & F	Open juice tanks	Product may contaminate due to open tanks	1. Cover the tanks 2. Biocide dozing	1	2	2				
		P	Slippery surface/ stairs.	Minor & major injuries.	1. Area cleaning checklist 2. Platform / stairs are made by checker plats	2	2	4				

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						P	S	R		P	S	R
4	Milling (Juice Extraction)	P	1. Sharp edges of material. 2. Poor & damage condition of hand tools & equipment.	1. Hand injury.	1. Check listed hand tool/ equipment. 2. Maintenance record of hand tools & equipment. 3. Training records. 4. Use PPE's (Hand Gloves).	1	2	2				
		P	Hot Jobs/ fabrications 1. Spark, spatter, particles, naked flame. 2. Hot surface. 3. Welding Light & Radiations. 4. Smoke produced by Welding. 5. Electrocutation. 6. Grinder disc & Drill bit broken	1. Minor & major injury (burns). 2. Fire / explosion. 3. Eye damaged/ Irritation. 4. Fatality	1. Housekeeping (Area cleaning check list) 2. Welding area covered. 3. Use proper PPE's face shield, welding hood, goggles, heavy duty gloves & safety shoes. 4. Safety signage. 5. Air ventilation. 6. Keep fire extinguisher/ sand bucket. 7. Training of workers. 8. Check list of grinder tool. 9. Working floor is dry to avoid electrocution.	2	2	4				
		P	Electric shock/ Short circuit	1. Electrocutation 2. Minor & Major injuries. 3. Fire	1. Insulated electrical supply/ connection 2. Covered D.B/ Panel 3. Inspection records 4. Fire extinguisher/ Sand buckets. 5. PPEs (Shock resistant gloves and safety shoes) 6. Safety signage	2	2	4				
		P	Fall of load & Overhead crane failure, pinch point.	1. Minor & Major injuries. 2. Property loss. Fatality. 3. Permanent disability.	1. Check validity of 3rd party certification of crane. 2. Check validity of 3rd party certification of lifting accessories. 3. 3rd party certify operator and rigger. 4. Performance test of crane before picking up the load. 5. Carry out pre-use inspection of all lifting appliance and accessories. 6. Tag line to control the load movement. 7. Safety signage. 8. PPEs	2	2	4				
		P	Unguarded rotary parts (Drives gears, motor belts & sprockets)	Worker may entangled into rotatory parts. 1. Permanent disability. 2. Minor & major injury.	1. Loose cloths & kerchief are not allowed 2. Safe guard of rotatory parts.	1	3	3				
		E	Raw water usage	1. Increased energy consumption. 2. Increased waste water	1. Water conservation 2. Waste water treatment plant	1	2	2				
		E	Lubrication oil	Soil & water may contaminate due to lubrication oil.	1. Oil and water skimmer. 2. Proper sanitation	2	2	4				
		E & C	Hazardous waste (Oil-soaked rags, plastic, rubber belts, glass)	Soil & water may contaminate due to hazardous waste.	1. Training on chemical handling of staff. 2. Allocate hazardous waste collection spot. 3. Personal protective equipment for cleaning and handling. 4. Cleaning checklist 5. Disposal through EPA approved contractor.	2	2	4				
		HLR	Harassment	Employee turnover	1. Hiring of trained employees 2. Grievance mechanism procedure	1	2	2				
		HLR	Discrimination towards employees	Negative attitudes	1. Hiring of trained & merit based employees 2. Grievance mechanism procedure	1	2	2				

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5	Boiler Operation	P	Boiler tube & piping leakage	Process interrupt, steam generation reduction.	1. Proper inspection & maintenance of boiler tubes & piping. 2. Boiler drum level control by automation	2	2	4				
		E & C	Burning of Bagasse	May effect on GHG	1. Flue gas control system. 2. Emission test report. 3. Wet scrubber	2	2	4				
				Respiratory problems due to bagasse dust / fly ash	Use of Dust mask	2	2	4				
		E	High noise.	Noise pollution, Chronic effects ears, hearing loss.	1. Proper maintenance of equipment & lubrication to reduce noise. 2. Personal protective equipment (Use of ear plugs to prevent from hearing loss). 3. Ear protection safety signage. 4. Area noise record.	2	2	4				
		P	Confined space works 1. Excessive heat 2. Unauthorized person. 3. Electrocution. 4. Hot surface 5. Improper lighting	1. Fatality. 2. Permanent disability. 3. Minor & major injuries. 4. Slip / trip & fall . 5. Skin burns	1. Unauthorized Person Entry is prohibited. 2. Entry prohibited until surface temperature cool down. 3. Take breaks within each 1 hour. 4. Conduct confined space training with work force and share the hazards. 5. Ensure safe access and egress. 6. LOTO must be ensured if required. 7. Use proper specific PPEs.	2	2	4				
		P	Unguarded rotary parts (Drives gears, motor belts & sprockets)	Worker may entangled into rotatory parts. 1. Permanent disability. 2. Minor & major injury.	1. Loose cloths & kerchief are not allowed 2. Safe guard of rotatory parts.	1	3	3				
		C	incompetent workers in Chemical dosing (Caustic soda)	1. Skin burn 2. Major & minor injury	1. MSDS 2. Training of staff 3. Personal protective equipment (Chemical coverall, splash goggles, helmet, face mask, rubber gloves & gum boots). 4. Safety signage	2	2	4				
		E & C	Hazardous waste (Chemical bags)	Empty chemicals bags, Hazardous waste effects on health (infections & diseases)	1. Training on chemical handling of staff. 2. Allocate hazardous waste collection spot. 3. Personal protective equipment for cleaning and handling.	2	2	4				
		P	Steam, hot water leakage & hot surface.	1. Skin burn 2. Major & minor injury 3. Fatality	1. Proper inspection & maintenance record of boiler tubes & piping. 2. Safety signage 3. PPEs	2	2	4				
		HLR	Harassment	Employee turnover	1. Hiring of trained employees 2. Grievance mechanism procedure	1	2	2				
HLR	Discrimination towards employees	Negative attitudes	1. Hiring of trained & merit based employees 2. Grievance mechanism procedure	1	2	2						

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6	Bagasse storage	E	Air pollution	Respiratory problems due to bagasse dust	Use face mask	2	2	4				
		p	Bagasse spreading & exposed to workers.	Eye irritation	Use eye protection	2	2	4				
		P	Hot Jobs/ fabrications 1. Spark, spatter, particles, naked flame. 2. Hot surface. 3. Welding Light & Radiations. 4. Smoke produced by Welding. 5. Electrocutation. 6. Grinder disc & Drill bit broken	1. Minor & major injury (burns). 2. Fire / explosion. 3. Eye damaged/ Irritation. 4. Fatality	1. Housekeeping (Area cleaning check list) 2. Welding area covered. 3. Use proper PPE's face shield, welding hood, goggles, heavy duty gloves & safety shoes. 4. Safety signage. 5. Air ventilation. 6. Keep fire extinguisher/ sand bucket. 7. Training of workers. 8. Check list of grinder tool. 9. Working floor dry to avoid electrocutation.	2	2	4				
		P	Smoking near bagasse	Risk of major fire	1. Area cleaning checklist. 2. Energized fire hydrant system. 3. Fire extinguisher placed/ sand bucket. 4. Fire watch. 5. Close monitoring at bagasse storage. 6. Safety signage 7. No smoking area	2	2	4				
		HLR	Harassment	Employee turnover	1. Hiring of trained employees 2. Grievance mechanism procedure	1	2	2				
		HLR	Discrimination towards employees	Negative attitudes	1. Hiring of trained & merit based employees 2. Grievance mechanism procedure	1	2	2				
7	Power Generation	P	Electric shock/ Short circuit	1. Electrocutation 2. Minor & Major injuries. 3. Fire	1. Insulated electrical supply/ connection 2. Covered D.B/ Panel 3. Inspection records 4. Fire extinguisher/ Sand buckets. 5. PPEs (Shock resistant gloves and safety shoes) 6. Safety signage	2	2	4				
		p	Fall of load & Overhead crane failure, pinch point.	1. Minor & Major injuries. 2. Property loss. 3. Fatality. 3. Permanent disability.	1. 3rd party certification of crane. 2. 3rd party certification of lifting accessories. 3. 3rd party certify operator and rigger. 4. Tag line to control the load movement. 5. Safety signage. 6. PPEs	2	2	2				
		p	Turbine tripping	Steam turbines operation tripping / power cut off , plant shut down	1. Maintain set point of Lubrication oil. 2. Prevent overload by maintaining electrical equipment.	2	2	4				
		E	High noise.	Noise pollution, Chronic effects ears, hearing loss.	1. Proper maintenance of equipment & lubrication to reduce noise. 2. Personal protective equipment (Use of ear plugs to prevent from hearing loss). 3. Ear protection safety signage. 4. Area noise record.	2	2	4				
		HLR	Harassment	Employee turnover	1. Hiring of trained employees 2. Grievance mechanism procedure	1	2	2				
		HLR	Discrimination towards employees	Negative attitudes	1. Hiring of trained & merit based employees 2. Grievance mechanism procedure	1	2	2				

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						P	S	R		P	S	R
8	Mix Juice Measurement	P & F	Flow & level meter malfunction	Process may disturb to very extent & tank overflow	Calibration of mix juice flow & level meter	1	4	4				
9	Clarification	P & F	Flow meter malfunction	Process may disturb to very extent & clarity of juice decreases	Calibration of flow meter	1	3	3				
		F & C	Defecated product	Impurities may increase & may effect on product quality	Use of chemical (Acofloc) for juice clarity and settling mud	1	3	3				
		C	Incompetent workers in Intrasol (Visk aid) dosing	Product may contaminate due to improper Visk aid dosing	1. Trained and skilled workers 2. COA of intrasol , MSDS / Food grade	1	2	2				
		E	High noise.	Noise pollution, Chronic effects ears, hearing loss.	1. Proper maintenance of equipment & lubrication to reduce noise. 2. Personal protective equipment (Use of ear plugs to prevent from hearing loss). 3. Ear protection safety signage. 4. Area noise record.	1	2	2				
		HLR	Harassment	Employee turnover	1. Hiring of trained employees 2. Grievance mechanism procedure	1	2	2				
		HLR	Discrimination towards employees	Negative attitudes	1. Hiring of trained & merit based employees 2. Grievance mechanism procedure	1	2	2				
10	Primary juice heater	P	1. Tube & valves leakage 2. Hot surface	1. Juice concentration may disturb and process condensate water may contaminate with juice. 2. Skin burn	1. Hydraulic test of equipment 2. Insulation of equipment	1	3	3				
		C	Tube scaling	juice temperature may not maintain as required.	Scheduled cleaning of equipment	1	2	2				
		P	incompetent workers in cleaning and brushing	1. Minor & Major injuries may occur from brushing shaft. 2. Entanglement of loose clothes in rotary parts	1. Skilled worker to perform the job. 2. Use of personal protective equipment (Gum boots, rubber gloves, splash goggles & face mask.	2	2	4				
		HLR	Harassment	Employee turnover	1. Hiring of trained employees 2. Grievance mechanism procedure	1	2	2				
		HLR	Discrimination towards employees	Negative attitudes	1. Hiring of trained & merit based employees 2. Grievance mechanism procedure	1	2	2				
11	Defecation	F & C	pH meter malfunction	Process may suffer due disturb pH	Calibration of pH meter	1	2	2				
		C	Mol dosing	Product may contaminate due to mol dosing	COA of milk of lime dosing	1	2	2				
		P	Personal Entanglement into rotatory parts of screens.	Minor & major injury.	Loose cloths & kerchief are not allowed, Safe guard of rotatory parts.	2	2	4				
		P	Electric shock/ Short circuit	1. Electrocutation 2. Minor & Major injuries. 3. Fire	1. Insulated electrical supply/ connection 2. Covered electrical D.B/ Panel 3. Inspection record 4. Fire extinguisher/ Sand buckets. 5. PPEs (Safety helmet, Shock resistant gloves and shoes)	2	2	4				
		HLR	Harassment	Employee turnover	1. Hiring of trained employees 2. Grievance mechanism procedure	1	2	2				
		HLR	Discrimination towards employees	Negative attitudes	1. Hiring of trained & merit based employees 2. Grievance mechanism procedure	1	2	2				
12	Secondary juice heater	P	1. Tube & valves leakage 2. Hot surface	1. Juice concentration may disturb and process condensate water may contaminate with juice. 2. Skin burn	1. Hydraulic test of equipment 2. Insulation of equipment	1	2	2				
		P	Tube scaling	juice temperature may not maintain as required.	Scheduled cleaning of equipment	1	2	2				
12	Secondary juice heater	P	incompetent workers in cleaning and brushing	1. Minor & Major injuries may occur from brushing shaft. 2. Entanglement of loose clothes in rotary parts	1. Skilled worker to perform the job. 2. Use of personal protective equipment (Gum boots, rubber gloves, splash goggles & face mask.	2	2	4				
		HLR	Harassment	Employee turnover	1. Hiring of trained employees 2. Grievance mechanism procedure	1	2	2				

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						P	S	R		P	S	R
		HLR	Discrimination towards employees	Negative attitudes	1. Hiring of trained & merit based employees 2. Grievance mechanism procedure	1	2	2				
13	Vacuum filter	P	High pol in mud	May effect on profitability and increase sugar losses	Proper cleaning and maintenance of vacuum filter	1	3	3				
14	Milk of Lime preparation	F & C	Defecated juice	Impurities may increased & may effect on product quality	Use of milk of lime to maintain pH through defecation for juice clarity and settling mud	1	3	3				
		F & C	Mol Concentration	Clarification reaction / sedimentation may effect	Use Boumometer for required concentration	1	2	2				
		HLR	Harassment	Employee turnover	1. Hiring of trained employees 2. Grievance mechanism procedure	1	2	2				
		HLR	Discrimination towards employees	Negative attitudes	1. Hiring of trained & merit based employees 2. Grievance mechanism procedure	1	2	2				
15	Pre-Heater juice heating	P	1. Tube & valves leakage 2. Hot surface	1. Juice concentration may disturb and process condensate water may contaminate with juice. 2. Skin burn	1. Hydraulic test of equipment 2. Insulation of equipment	1	2	2				
		P	Tube scaling	juice temperature may not maintain as required.	Scheduled cleaning of equipment	1	2	2				
		P	incompetent workers in cleaning and brushing	1. Minor & Major injuries may occur from brushing shaft. 2. Entanglement of loose clothes in rotary parts	1. Skilled worker to perform the job. 2. Use of personal protective equipment (Gum boots, rubber gloves, splash goggles & face mask.	2	2	4				
		HLR	Harassment	Employee turnover	1. Hiring of trained employees 2. Grievance mechanism procedure	1	2	2				
		HLR	Discrimination towards employees	Negative attitudes	1. Hiring of trained & merit based employees 2. Grievance mechanism procedure	1	2	2				
16	Evaporation	P	Tube scaling	juice temperature may not maintain as required. Lack of evaporation may effect on quality	Scheduled cleaning of equipment	1	2	2				
		C	incompetent workers in Chemical dosing (Caustic soda)	1. Skin burn. 2. Permanent disability. 3. Minor & major injuries.	1. MSDS 2. Use PPEs 3. Trained worker/ record 4. Proper supervision	2	2	4				
		P	Confined space works 1. Excessive heat 2. Unauthorized person. 3. Electrocuton. 4. Hot surface 5. Improper lighting	1. Fatality. 2. Permanent disability. 3. Minor & major injuries. 4. Slip / trip & fall . 5. Skin burns	1. Unauthorized Person Entry is prohibited. 2. Entry prohibited until surface temperature cool down. 3. Take breaks within each 1 hour. 4. Conduct confined space training with work force and share the hazards. 5. Ensure safe access and egress. 6. LOTO must be ensured if required. 7. Use proper specific PPEs. 8. Use inspected power tools.	2	2	4				
		E & C	Effluents/ Waste water, chemical bags.	1. Environment damage 2. Empty chemicals bags, Hazardous waste effects on health (infections & diseases)	1. Training on chemical handling of staff. 2. Allocate hazardous waste collection spot. 3. Waste water treatment plant. 4. Personal protective equipment for cleaning and handling.	2	2	4				
16	Evaporation	P	1. Tube & valves leakage 2. Hot surface	1. Juice concentration may disturb and process condensate water may contaminate with juice. 2. Skin burn	1. Hydraulic test of equipment 2. Insulation of equipment 3. Maintenance of equipment and valves	1	3	3				
		HLR	Harassment	Employee turnover	1. Hiring of trained employees 2. Grievance mechanism procedure	1	2	2				
		HLR	Discrimination towards employees	Negative attitudes	1. Hiring of trained & merit based employees 2. Grievance mechanism procedure	1	2	2				
		C	Incompetent workers in Visc Aid dosing	Product may contaminate due to improper Visc aid dozing	1. Trained and skilled workers 2. COA / MSDS / Food grade	2	2	4				

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						P	S	R		P	S	R
17	Sugar Crystallization	C	incompetent workers in Chemical dosing (Caustic soda)	1. Skin burn. 2. Permanent disability. 3. Minor & major injuries.	1. MSDS 2. Use PPEs 3. Trained worker/ record 4. Proper supervision	2	3	6				
		E	Hazardous waste	Empty containers of chemicals, Hazardous waste effects on health (infections & diseases)	1. Training on chemical handling of staff. 2. Allocate hazardous waste collection spot. 3. Personal protective equipment for cleaning and handling.	2	2	4				
18	Mother liquor crystal separation (Centrifugal)	E	High noise.	Noise pollution, Chronic effects ears, hearing loss.	1. Proper maintenance of equipment & lubrication to reduce noise. 2. Personal protective equipment (Use of ear plugs to prevent from hearing loss). 3. Ear protection safety signage. 4. Area noise record.	2	2	4				
		E & C	Hazardous waste (Oil-soaked rags, rubber belts)	Soil & water may contaminate due to hazardous waste.	1. Training on chemical handling of staff. 2. Allocate hazardous waste collection spot. 3. Personal protective equipment for cleaning and handling. 4. Cleaning checklist 5. Disposal through EPA approved contractor.	2	2	4				
		HLR	Harassment	High employment turnover	1. Hiring of decent employees 2. Grievance mechanism procedure	1	2	2				
		HLR	Discrimination towards employees	Negative attitudes	1. Hiring of decent employees 2. Grievance mechanism procedure	1	2	2				
19	Sugar Remelting	F	Raw water usage	Product may contaminated	Use condensate water	1	2	2				

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						P	S	R		P	S	R
20	Phosphatation Process	C	Incompetent workers in decolorizer dosing	Product may contaminate due to improper decolorizer dosing	1. Trained and skilled workers 2. COA / MSDS / Food grade	2	2	4				
		C	Incompetent workers in Phosphoric Acid dosing	Product may contaminate due to improper phosphoric acid dosing	1. Trained and skilled workers 2. Certificate of Phosphoric acid	2	2	4				
		C	Incompetent worker in Flotation Aid dosing	Product may contaminate due to improper flotation aid	1. Trained and skilled workers 2. COA & Certificate of Flotation aid	2	1	2				
		E	Hazardous waste	Empty containers of chemicals, Hazardous waste effects on health (infections & diseases)	1. Training on chemical handling of staff. 2. Allocate hazardous waste collection spot. 3. Personal protective equipment for cleaning and handling.	2	2	4				
		HLR	Harassment	High employment turnover	1. Hiring of decent employees 2. Grievance mechanism procedure	1	2	2				
		HLR	Discrimination towards employees	Negative attitudes	1. Hiring of decent employees 2. Grievance mechanism procedure	1	2	2				
21	Treated Liquor Filtration	P	Iron particles, foreign matters	Sugar contamination,	1. Liquor filtration 300 mesh 2. Inline magnet	2	2	4				
22	Fine Liquor Storage	P	Iron particles, foreign matters	Sugar contamination,	Inline magnet	2	2	4				
23	Refine Sugar crystallization	F	Hot water	Product may contaminated	Safe operation as required RPM	1	2	2				
		P	Electric shock/ Short circuit	1. Electrocutation 2. Minor & Major injuries. 3. Fire	1. Insulated electrical supply/ connection 2. Covered electrical D.B/ Panel 3. Inspection record 4. Fire extinguisher/ Sand buckets. 5. PPEs (Safety helmet, Shock resistant gloves and shoes)	2	2	4				
24	Sugar Drying	E & P	High noise	Noise pollution, Chronic effects ears, hearing loss.	1. Proper maintenance of equipment & lubrication to reduce noise. 2. Personal protective equipment (Use of ear plugs to prevent from hearing loss). 3. Ear protection safety signage. 4. Area noise record.	2	2	4				
		C	Sugar contamination, iron particles, foreign matters	Product recall, complaint from customer	Grill type magnets, s.s netting	1	2	2				
25	Sugar Grading	E & P	High noise	Noise pollution, Chronic effects ears, hearing loss.	1. Proper maintenance of equipment & lubrication to reduce noise. 2. Personal protective equipment (Use of ear plugs to prevent from hearing loss). 3. Ear protection safety signage. 4. Area noise record.	2	2	4				
		P	1. Screen may damage 2. High moisture	Product may contaminated	1. Grill type magnate 2. Hourly cleaning of blower	2	2	4				
		C	Iron particles	Sugar contamination, product quality loss.	magnets, hourly magnets cleaning and record maintenance	2	2	4				

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						P	S	R		P	S	R
26	Sugar Packing Area	P, E & F	Unhygienic activity, high humidity, labor jewelry, hairs packed in sugar bags	Product may contaminated due to human contact	1. Microbiological test of worker hands, 2. Sugar packing dressing SOP- 0423 3. Inceicator installed 4. Contact environment (Temp & Humidity indicator installed) 5. Packing area dress code. 6. Washing hand area 7. Air carton installed at work inlet 8. Air carton installed at sugar bag outlet 9. Enclosed area 10. Restricted area 11. Heat screen installed 12. R. 1 Blue color 13. R. 2 White out border 14. R. 3 Green color printing 15. Packing area cleaning checklist 16. Packing area PPEs (Hair net, beard net, foot net, hand gloves, dress & apron).	2	2	4				
		B, P & F	Bags broken needle	Customer complaint, sugar loss	Sugar segregation specific area for damage bags, record maintenance , sugar bag quality check Proper handling guideline & training to labor	1	2	2				
		P	Electric shock/ Short circuit.	1. Electrocutation 2. Minor & Major injuries. 3. Fire	1. Insulated electrical supply/ connection 2. Covered D.B/ Panel 3. Inspection 4. Fire extinguisher 5. Safety signage	2	2	4				
27	Sugar Dispatch from SPA to Warehouse	P	Manual handling.	1. Back injuries. 2. Soft-tissue injuries to wrists, arms, shoulders, neck or legs. hernias. chronic pain. 3. Permanent disability. 4. Minor & major injuries.	1. Manual handling training awareness, rest breaks, job rotation, training record. 2. PPEs	2	2	4				
		HLR	Child Labor	Accidents / suffer education / illiteracy	1. Child labor (blow 18 years age) are strictly prohibited. 2. Verification of age by CNIC. 3. Human/ Labor Right Policy (SOP-0423)	1	1	1				
28	Sugar Bags Storage in warehouses	E & B	Cobweb, birds faeces and rodent.	Product may contaminate, Customer complaint, product recall	Godown to be covered and sealed. Proper covering over each sugar bags lot, proper cleaning and record maintenance, pest control management (traps and spray),	1	2	2				
		E	High humidity and temperature,	Product may contaminate, Customer complaint, product recall	Ventilation exhaust fan wear house humidity and temperature record Humidity and temperature indicator	1	2	2				
		E	Dust	Product may contaminate, Customer complaint, product recall	proper cleaning and record maintenance,	1	2	2				
		P	Personal Entanglement into rotatory parts of staker conveyer.	Permanent disability. Minor & major injuries.	1. Loose cloths & kerchief are not allowed, Safe guard of rotatory parts.	2	2	4				
		HLR	Harassment	Employee turnover	1. Hiring of trained employees 2. Grievance mechanism procedure	1	2	2				
		HLR	Discrimination towards employees	Negative attitudes	1. Hiring of trained & merit based employees 2. Grievance mechanism procedure	1	2	2				
		HLR	Child Labor	Accidents / suffer education / illiteracy	1. Child labor (blow 18 years age) are strictly prohibited. 2. Verification of age by CNIC. 3. Human/ Labor Right Policy (SOP-0423)	1	1	1				

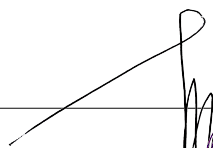

Sr.No.	Activities / Processes	Hazard Type. Physical (P), Chemical (C), Biological (B), Food Safety (F) Environment (E), Human & Labor Rights (HLR)	Hazard	Hazard Effect/ Risks	Existing Controls	Risk Evaluation			Additional Controls	Residual Risk		
						P	S	R		P	S	R
29	Sugar Bag Dispatched	P	Physical contact between humans and tractor trolley, trucks.	Minor or Major injuries.	1. Traffic control SOP 2. Follow the plant speed limits. (10 km p/h) 2. Safety signage	2	2	4				
		HLR	Harassment	Employee turnover	1. Hiring of trained employees 2. Grievance mechanism procedure	1	2	2				
		HLR	Discrimination towards employees	Negative attitudes	1. Hiring of trained & merit based employees 2. Grievance mechanism procedure	1	2	2				
		HLR	Child Labor	Accidents / suffer education / illiteracy	1. Child labor (blow 18 years age) are strictly prohibited. 2. Verification of age by CNIC. 3. Human/ Labor Right Policy (SOP-0423)	1	1	1				
30	Main Store	P	1. Incompetent worker 2. Material overlapping on racks	1. Fall of material 2. Minor or Major injuries. 3. Property loss.	1. Tarained and skilled worker. 2. Each item place in its designated place and as per rack limit. 3. Use personel protective equipment	2	2	4				
		P	Sharp edges of material	Minor injuries	Use of persopan protective equipment	1	2	2				
		P	Improper handling and storage of gas cylinders.	1. Fire and explosion 2. Minor and major injury 3. Fatality	1. Designated gas cylinder storage area. 2. Labeling and identification 3. Work instruction for storage & handling. 4. Safe distance between flammable and oxygen cylinder. 5. Personal protective equipments.	2	2	4				
		P	Improper handling and storage Oils.	1. Fire and explosion 2. Minor and major injury 3. Fatality	1. Designated Oils storage area. 2. Labeling and identification 3. Work instruction for storage & handling. 4. Drip tray 5. Personal protective equipments. 6. Fire extinguisher	2	2	4				
		C & F	Improper handling and storage chemicals.	1. Fire and explosion 2. Minor and major injury 3. Fatality 4. Foreign particles in exposed chemical	1. Designated chemicals storage area. 2. Labeling and identification. 3. Chemical bags / containers sealed off. 4. Ventilation 5. Placement of chemicals at clean and safe surface. 6. MSDS 7. Work instruction for storage & handling. 8. Personal protective equipments. 9. Fire extinguisher 10. Chemical (FIFO) First In, First Out. 11. Approved personnel list for material receiving.	2	2	4				
		E		Oil & Chamilal spillage may contaminate soil and air.	1. Personal protective equipments 2. Follow MSDS, 3. Cover the spilled area with sand. 4. Remove spilled material suitable resources cotton rags, sand & equipments.	1	2	2				
		HLR	Harassment	Employee turnover	1. Hiring of trained employees 2. Grievance mechanism procedure	1	2	2				
		HLR	Discrimination towards employees	Negative attitudes	1. Hiring of trained & merit based employees 2. Grievance mechanism procedure	1	2	2				
HLR	Child Labor	Accidents / suffer education / illiteracy	1. Child labor (blow 18 years age) are strictly prohibited. 2. Verification of age by CNIC. 3. Human/ Labor Right Policy (SOP-0423)	1	1	1						

Sr.No.	Activities / Processes	Hazard Type. Physical (P), Chemical (C), Biological (B), Food Safety (F) Environment (E), Human & Labor Rights (HLR)	Hazard	Hazard Effect/ Risks	Existing Controls	Risk Evaluation			Additional Controls	Residual Risk		
						P	S	R		P	S	R
	Reviewed On		01-10-2022		ISO 9001: 2015, ISO 22000:2018, PS 3733:2019 and Certification process of Bonsucro production standard (V-5.1) & Chain of custody standard (V-5.1)							

**Probability X Severity = Risk Rating
(6 to 9 = High) (3 to 4 = Medium) (1 to 2 = Low)**

**P: Probability
S: Severity
R: Risk**


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