

Risk Status

Risk Identification						Pre-Evaluation RL				Plan and Implement			Track		Post-Evaluation RL		
Risk ID	Initiated Date	Origin	Status	Risk Title	Cause / Event / Consequence on Project Objectives	Category	P	C	R L	Goal	Owner	Mitigation / Actions Plan	Complete 99%	Updated Date	P	C	R L
1	11/01/2024	Production, HSE	Open	Leak in coupling to truck	Emission to ground	Environment	3	-4	-12		Project	1) Connect to truck on a concrete slab w/fall and collection basin if any leak 2) Establish routines for loading and unloading	90%	2024-08-14	2	-2	-4
9	11/01/2024	Production, HSE	Open	Leak in a coupling inside the building	Emission to ground	Environment	3	-3	-9		Project	1) Connection point inside collection pool	100%	2024-08-14	1	-3	-3
10	11/01/2024	Production, HSE	Open	Leak in pipe with chemical outside	Emission to ground	Environment	2	-4	-8		Project	1) Assess solution: Closed though or double mantelded pipes			1	-4	-4
12	11/01/2024	Production, HSE	Open	Leak in pumps with chemicals	can lead to fluid is leaking into the collection pool	Environment	5	-1	-5			1) Assess solution: Closed though or double mantelded pipes			5	-1	-5
66	2021-05-25		Closed	Emission of sulfuric acid at the filling station	Emission of sulfuric acid to the ground caused by a rupture in the loading hose from the truck, or leakage from valve, pump og pipe.	Environment	2	-5	-10	No acute emissions to the environment	Production manager	1) Bund at the filling station 2) Radio contact with operator in the control room before/under/after filling 3) Procedure for filling sulfuric acid 4) Training 5) Filling points are marked 6) Mandatory pressure test of filling hose from supplier 7) Control and preventative maintenance of valves, pumps and pipes used when filling acid 8) arrangement to ensure spills outside the bund is contained 9) Spill kit 10) Ventilations from both storage tanks are above roof level.	100%	2021-09-30	2	-2	-4
67	2021-05-25	HSE	Closed	Emission of chemicals to sea or ground from chemical storage tanks	Leakage from storage tanks and connected equipment, resulting in emission to sea or ground	Environment	2	-4	-8	No acute emissions to the environment	Production manager	1) Training of personnel 2) Operation procedures 3) Storage tanks and equipment are new, or checked/maintained before start-up 4) All storage tanks are placed in bunds that will hold 110 % of the largest tank 5) Program for preventive maintenance of tanks, equipment and bund 6) Check rounds to see if any spill is detected in the bunds 7) FMEA performed on all relevant equipment 8) Bund is new or is checked /maintained before start-up 9) spill kit in the area	100%	2021-09-30	1	-1	-1
68	2021-05-25	HSE	Closed	Emission of chemicals to sea or ground from IBCs with chemicals	Leakage from IBC with chemicals, resulting in emissions of chemicals to sea or ground	Environment	2	-4	-8	No acute emissions to the environment	Production manager	1) Training of personnel 2) Operation procedures 3) All storage IBCs are placed in bunds that will hold any spills 4) Program for preventive maintenance of bund 5) Check rounds to see if any spill is detected in the bunds 6) FMEA performed on all relevant equipment 7) Bund is new or is checked /maintained before start-up	100%	2021-12-22	1	-1	-1
69	2021-05-25	HSE	Closed	Emissions to ground from storage for hazardous waste	Leakage from barrels or IBCs with hazardous waste, resulting in emissions to ground.	Environment	2	-4	-8	No acute emissions to the environment	Production manager	1) Training of personnel 2) Procedure for waste handling 3) All IBCs or barrelse with hazardous waste are placed in bund or containment unit that will hold any spills from the IBCs or barrels. 4) Check rounds to see if any spill is detected in the storage area, to be included in verneirunde 5) Spill kit in the area 6) Waste delivered regularly to minimize amount stored	100%	2021-09-30	1	-1	-1
72	2021-05-25	HSE	Closed	Mixing of ordinary waste groups	Waste groups are mixed, that are supposed to be delivered separately to waste handler, leading to lost resources and extra costs.	Environment	3	-3	-9	Reduction of amount of waste	Production manager	1) Training of personnel 2) Procedure for waste handling 3) Sufficient number of waste containers in the building 4) Marking of waste skips to assure sorting is correctly	100%	2021-12-22	1	-1	-1
73	2021-05-25	HSE	Closed	Mixing of ordinary waste with hazardous waste	Mixing of ordinary waste with hazardous waste, resulting in chemical reactions	Environment	3	-4	-12	Zero emissions to environment	Production manager	1) Training of personnel 2) Procedure for waste handling 3) Marking of waste skips/waste areas to assure sorting is correctly	100%	2021-09-30	1	-3	-3
74	2021-05-25	HSE	Closed	Missing emission monitoring result	Monitoring of emissions missing due to failure in monitoring equipment	Environment	3	-3	-9	Zero emissions to environment	Production manager	1) Training of personnel 2) Operation procedures 3) Monitoring programme 4) Program for preventive maintenance 5) Check rounds to see that monitoring equipment is operating correctly 6) FMEA performed on all relevant equipment	100%	2022-04-19	1	-3	-3
75	2021-05-25	HSE	Closed	Error in analysis of samples of emissions	Error in analysis of samples of emissions, might lead to emissions above limit that is not detected	Environment	3	-3	-9	Zero emissions to environment	Chemical process eng	1) Training of personnel 2) Operation procedures 3) Monitoring programme 4) Program for preventive maintenance 5) FMEA performed on all relevant equipment	100%	2022-04-19	1	-3	-3
76	2021-05-25	HSE	Closed	Emissions to air above limit in permit	Emissions above limit in permit, due to malfunction of scrubber	Environment	3	-4	-12	Zero emissions to environment	Production manager	1) Training of personnel 2) Operation procedures 3) Critical parametre are monitored in the control room 4) Program for preventive maintenance 5) FMEA performed on all relevant equipment	100%	2021-11-30	1	-4	-4
77	2021-05-25	HSE	Closed	Emissions to sea above limit in permit	Emissions to sea above limit in permit caused by error in valves in precipitation tank	Environment	3	-4	-12	Zero emissions to environment	Production manager	1) Training of personnel 2) Operation procedures 3) Critical parametre are monitored in the control room 4) Program for preventive maintenance 5) FMEA performed on all relevant equipment	100%	2021-11-30	1	-4	-4
78	2021-05-25	HSE	Closed	Emissions to sea above limit in permit	Utslipp av vann med for lav eller høy pH fra renseanlegg pga. feil på pH-elektrode, og/eller ventiler i fellingstank.	Environment	3	-4	-12	Zero emissions to environment	Production manager	1) Training of personnel 2) Operation procedures 3) Critical parametre are monitored in the control room 4) Program for preventive maintenance 5) FMEA performed on all relevant equipment	100%	2021-11-30	1	-4	-4
79	2021-05-25	HSE	Closed	Emission of chemical to ground or sea	Emission of chemical to ground or sea caused by over filling of chemicals baths in the production line	Environment	3	-3	-9	Zero emissions to environment	Production manager	1) Training of personnel 2) Operation procedures 3) Critical parametre are monitored in the control room 4) continuous monitoring with cameras from control room 5) All bath have electronic monitoring of level, alarm if change in level 6) Any spill will be collected in bund	100%	2021-09-30	1	-1	-1

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80	2021-05-25	HSE	Closed	Emission of chemical to ground or sea	Emission of chemical to ground when transferring baths to storage tanks (Ni-sulfat, SU-bath, Z-bath)	Environment	3	-3	-9	Zero emissions to environment	Production manager	1) Training of personnel 2) Operation procedure 3) Doublet mantle pipe is used for transfer to truck/tanker from the baths when delivering for transport to waste handler 4) The ground in the filling area is protected by spillage barrel 5) All baths are placed in area where any spill will be contained	100%	2021-11-30	1	-3	-3
81	2021-05-25	HSE	Closed	Emission of chemical to ground	Emission of chemical to ground caused by IBC being punctured by fork lift	Environment	3	-3	-9	Zero emissions to environment	Production manager	1) Training of personnel 2) Operation procedures 3) IBCs are stored with containment 4) Spill kit in the area	100%	2021-08-19	1	-3	-3
82	2021-06-25	HSE	Closed	Emission of chemical caused by accident with transporter of waste chemicals	Emissions of chemicals to ground or water caused by accident during transport to waste handler	Environment	3	-4	-12	Zero emissions to environment	Plant Director	1) Training of personnel 2) Procedure for waste handling 3) Safety adviser will prepare the transport 4) MSDS for the waste 5) Only approved companies to be used for the transport	100%	2021-09-30	1	-2	-2
88	2021-08-19	Production	Closed	Leakage from IBC with chemicals, resulting in emissions of chemicals to sea or ground	Emission of chemicals to sea or ground from IBCs when loading/unloading truck	Environment	2	-4	-8	No acute emissions to the environment	Production manager	1) Training of personnel 2) WI 3) Only trained personnel is allowed to use fork lift 4) Drain cover to be used in case of an incident	100%	2024-06-13	2	-2	-4
165	2202-04-25	HSE	Closed	Emission of sanosil to sea	Lekkasje/søl av sanosil i scrubberrom går til vann eller kommunalt nett. Emissions of sanosil from scrubber room to sea og municipal pipsystem	Environment	1	-1	-1	Ingen akutte utslipp	Production manager	Cans with sanosil placed in collection vessel.	100%		1	-1	-1