OPERATION PROBLEMS AND TROUBLESHOOTING

Problem	Possible Caused	Counter Measures
TSS, COD, BOD5 do not comply with standard	Incomplete coagulation and flocculation process.	To pro-long the retention time of the effluent in the chemical mixing tank.
	Insufficient dosing of coagulant/ flocculant.	Increase dosage rate of dosing pump or increase concentration of coagulant /flocculant.
	Shock loading as result of sudden discharge of concentrated waste.	Stop treatment system and clean up any sudden discharge of waste.
	Discharging of waste that is different from the characteristic of waste for treatment plant design.	To seek consultant to propose the possible upgrading.
		To stop discharging different waste type into IETS.
Electrical Equipment can't restart	No power supply.	Check if main switch/ isolator is on.
		Check if MCCB in factory is on.
		Check if there is any power failure.
	The system could have tripped due to over loading.	When the red light is on (the control panel), it indicates that the system has tripped. This can be rectified by resetting the thermal overload relay in the control panel box. **Safety**: If you are not familiar with electricity work, do not attempt to open the control panel box. Please refer to your electrical technician.
Treated Water is Turbid	None or insufficient or chemical of incorrect dosage.	Check if dosing pump is working.
		Check if there are sufficient chemical in chemical tank.
		Check if pH controller is working.
		Check for optimum dosage of chemical.
		Check if the stirrer is working or the rpm is too high.
	pH in chemical mixing tank is not in the range of 6.0 – 8.0 (condition for coagulation process).	Re-calibrate the pH controller.
		Check if the pH probe is in good condition.
		Check if the dosing pump is working.
		Check if the pH controller is working.
		Inspect the chemical and chemical preparation (Caustic Soda).
		Check if the mixing tank stirrer is working.
	Discharging of waste that is different from the characteristic of waste for treatment plant design.	To seek consultant to propose the possible upgrading.
		To stop discharging different waste type into IETS.

Problem	Possible Caused	Counter Measures
Waste Water overflow from Collection Pit	Tthe Raw Effluent Transfer Pump is not running.	Check if transfer pump is clogged.
		Check if level switch is in good condition.
		Check for power failure.
	Overloading of waste into the collection pit.	Check the flowrate of waste discharge from all source into the collection pit.
No Chemical Delivery to Chemical Mixing Tank	No chemical solution in chemical tank.	Prepare chemical solution immediately.
	Pump is not running.	Check the pump switch.
		Check for power failure to the pump.
	Pump is running but the chemical is not delivering.	Clogged pump- remove any debris in the foot valve of the chemical solution end.
pH value is not within the standard	Dosing Pump is not running.	Check for power failure.
		Check for clogs in the pump.
		Check the connection between pump and controller.
	No chemical solution (Caustic Soda) in the tank or chemical below minimal level.	Prepare the chemical solution immediately.
	Malfunction pH controller.	Check the pH sensor.
		Re-calibrate the pH controller.
		Replace it if necessary.
Sludge carryover from bottom clarifier	Sludge is already full in the bottom clarifier	Clear the sludge from the bottom of the clarfier to the Sludge Holding Tank.
	High flow rate of waste inlet to the plant	Control water discharge from production or upgrading the plant capacity.
	Clarifier too dirty.	Clean the clarifier.
Activated Carbon Filter	No Flow.	Check valve.
		Check if the pump is running.
		Check water level in Buffer Tank.
	Outlet Water in low quality.	Backwash.
		Inlet too dirty- problem at other section.
		Check Activated Carbon- Replace if needed.
	Media Lost.	Reduce backwash flowrate if it is too high.
		Check the bottom distributor system- replace it if necessary.
	Excessive Pressure Drop across the filtration bed.	Filtration bed plugged with particulates- use higher backwash rate to wash out particulates.
		Bottom distributor system plugged with media- clean nozzle or replace them if necessary.
		Filtration bed packed- use higher backwash rate to loosen the filtration bed.
Whitish discharge from production	Discharge acidic/alkaline white influent	Test if the discharge is acidic or alkaline with a pH meter at collection pit. If it is acidic, neutralize the waste water with caustic soda, if alkaline, neutralize with acid at collection pit. Increase dosage rate of dosing pump or increase concentration of coagulant /flocculant at chemical mixing tank.
	Discharge neutral white influent	Increase dosage rate of dosing pump or increase concentration of coagulant /flocculant at chemical mixing tank.