



Guidelines on pollution control and safety before restarting industries during COVID-19 Pandemic

These guidelines should be followed in addition to the guidelines issued by Ministry of Health and Indigenous Medicine and other relevant authorities for factory operations during COVID 19 pandemic.

According to the regulations of National Environmental Act industries should be operated with standards and conditions stated in Environmental Protection Licenses (EPL) and Scheduled Waste Management Licenses (SWML). The spread of COVID-19 pushes most of these industrial activities to partially or fully suspend their production. These industries must have had few systems for Environmental Pollution Control and Waste Management. Industries starting up means that those service units and systems should also come on-line. Thus a proper start-up must also give consideration to those service units that enable industries to function with no burden on the environment. Guidelines given below are for re-establishing industries with maintaining environmental standards and controls.

1. Priority measures on safety:

- As the industries are operating with altered conditions from the normal need to re-define responsibilities for workers. Accordingly appoint a specific individual to be responsible for the implementation of safety and emergency response program.
- **Develop/improve the existing emergency response plan with considering all types of in-plant risk including** exposure to chemicals/gases, fire risk, handling chemicals, storage of raw materials/waste materials, condition of machineries used for pollution control measures; overflows and spills of fuel/oil storage tanks etc.
- As the power supply of any industry is one of the main concerns, check Panel Board and wiring for any signs of physical damages such as from rodents etc.
- Ensure efficient performance of all fire fighting and safety related systems including the fire extinguishers, fire water systems and other safety related equipments such as alarms, ventilation systems, water supply systems, inert gas systems, safety valves etc.

2. Production floor and storage areas

- During the shutdown/transition period of altered operation conditions during this pandemic, minimum working quantities of raw materials / chemicals to be maintained at the production floor. All the excess material to be removed back to the safe storage areas.
- All materials should be containerized/bagged, clearly labeled and stored to prevent contamination/ spills/accidental fires. Material that cannot be moved should be securely covered.
- Check the secondary containments provided for bulk liquid chemicals/ fuel storage tanks for signs of spillages / physical damages.
- Check whether the chemicals are stored in order. If incompatible chemicals are stored together within the storage, place them in the right place.

- Check whether any spills or leakages in the storage and if so, clean them immediately and remove the leaked and leaking containers.

3. Check List for Industrial Wastewater Treatment Plants before Start Up

- Check relevant treatment units such as aeration tanks/equalization tanks having adequate venting (Due to long shut down even closed aerobic tanks may have gone anaerobic due to high temperature and long shut down, hence may produce methane and hydrogen Sulphide can lead to fatal accidents). Workers attending this task should ensure having adequate precautionary measures such as ventilation and other Personal Protective Equipments.
- Care should be taken checking gas level in methane holding tanks in case of anaerobic treatment and ability to re-use gas for energy production or otherwise flaring.
- **In case of aerobic treatment system it is required to ensure that the proper microbial culture is maintained throughout the period and if not the units need to be introduced with seed bacterial cultures to rectify the situation as per the Operations and maintenance Instructions Manual of the treatment plant.**
- **Before starting manufacturing operations ensure wastewater treatment plant is reactivated to functional position (This includes reactivating motors/chemical dosing pumps/aerators etc). For this the personnel engaged should be provided with required safety measures and reactivation to be commissioned under the close supervision of a responsible officer from the Management.**
- Those with in-house chemical wastewater treatment plants ensure required chemicals are available for operating the treatment plant.
- Industries should dispose accumulated sludge of effluent treatment plants as per the conditions of **EPL / SWML**. Until disposal, collected sludge should be stored safely and care should be taken to avoid mixing with heavy rain expected in the coming rainy season.
- In some industrial premises there may be collection of treated waste water to be disposed. In such cases it is make sure that the treated wastewater should be within the allowable discharge standards. Especially Type "A" industries should consider incorporating a Granular Activated Carbon (GAC) Filters to polish treated effluent if the industry is located in sensitive areas (upstream of abstraction of raw water to produce drinking water).
- **Industries are strongly advised not to discharge partially treated wastewater into the environment violating conditions stipulated in EPL even for single event. Industries are advised to seek CEA guidance for alternative disposal arrangements with minimal environmental impacts until the systems get rectified and strongly**

advice not to obtain external waste collectors/disposers service without prior approval of CEA.

- **Pollution control systems need rectification / are temporarily out of order, in such cases industries are needed to get technical advises from a CEA registered consultant to re-establish such pollution control measures**

4. Waste Management

- Major shutdowns can lead to considerable waste generation as some of the raw material/semi-finished products get expired and equipments have to be emptied and cleaned etc. Make sure these materials are removed immediately and are not allowed to build up even when the production process is not running.
- Where ever it is not possible to obtain the service of third-party contractors for the waste management (including the Hazardous Waste) and disposal as usual, the waste should be securely contained with proper identification labels to avoid accidental reactions/spills/soil contaminations/fires etc. until disposal. **(Some industries have come into agreements with the CEA licensed waste management companies for the disposal of their waste. During this pandemic period the collection and disposal services provided by such companies may be irregular and therefore the Industries are strongly advised not to divert from such licensed waste management companies without prior approval of the CEA.)**
- Need to aware the workers that collected waste piles/effluents can generate offensive gases such as methane; ammonia etc. and therefore necessary precautions should be taken to vent and disperse such gases safely.
- Workers should not be deployed to clean the waste collection areas without ensuring adequate precautionary measures such as ventilation and other Personal Protective Equipments.
- All Personal Protective Equipments used by workers should be sanitized as per the guidance given by Ministry of Health and Indigenous Medicine before disposal.
- If any industry needs a facility to dispose non hazardous industrial waste accumulated during this shut down period, directly due to absence or difficulties in finding a registered waste disposers, inform CEA the quantity and the types of waste in order to consider possible options to dispose the same.

5. Handling of new Chemicals

- The production plants need to handle new hazardous chemicals such as chlorine, ozone, bleaching powder, hydrogen peroxide, alcohols etc. required for sanitation purposes during this period. The management of such chemicals should only be done by competent worker/s.

- New chemicals should be stored appropriately within the properly designed Chemical storage facility preventing possible accidents such as fire, explosions etc.
- Adequate chemical safety instructions should be provided before handling such chemicals as poor practices will lead to disastrous situations.
- Instructions in relevant Safety Data Sheets (SDS) should be followed during the usage, storage and the event of any accident.

In case more information in establishing environmental standards and controls is required please contact: CEA hotline: 0112888999 ; compliance.monitoring@cea.lk



P B Hemantha Jayasinghe
Director General
Central Environmental Authority