

Chemistry for Better Living

To

The Director General,

State Disaster Response and Fire Services Department, 2nd Floor, State Fire Control Room, Governor Pet, Opp. Police Control Room, Vijayawada-520002, Krishna District, Andhra Pradesh.

Sub: Clarifications against Directions issued on 06.02.2025

Ref: D.O.Lr.No:09/DGFS/AP/2025 Dated: 06.02.2025

Dear Sir,

We Laurus Labs Limited, is manufacturing of Intermediates and Active Pharmaceutical Ingredients (APIs) at Plot No. 21, J. N. Pharmacity City, Parawada Mandal, Anakapalli-531012.

(a) The reactor and solvent facilities (with a flashpoint of -18°C) in Zone-I (as per the Hazardous Area Classification Study) are in the same building along with Quality Control labs and office areas. According to safety standards, Zone-I should be physical separated from low-hazardous areas. Had this been the case, we could have minimized the casualties. Ideally, Zone-I hazardous facilities to be not only located in physically separated buildings but also be operated through Distributed Control System with least manual intervention

Clarification:

In Laurus, infrastructure facilities designed in a way, all the offices, laboratories & workshops isolated from the manufacturing blocks and bulk solvent storage facilities. DCS/SDS/HMI systems are in place for pumping of solvents.

(b) Electrical panels that produce sparks should never be located beneath the reactor or Solvent handling facilities. However. This is exactly the design at Escientia, which led to ignition and the subsequent explosion. This critical design mistake, if any, must be corrected immediately in all your facilities

Clarification:

In Laurus, Electrical Panels are separated from Operational areas i.e., no water/solvent/ chemical transferring lines are not allowed in panel rooms and no reactors are positioned over the panel rooms. All electrical panels near manufacturing facilities are provided with positive pressure. In addition, we have provided smoke/ heat detectors integrated factory emergency siren. Auto operated clean agent fire suppression systems are in place.

(c) The Air Handling Unit (AHU), designed to disperse solvent vapours, should be placed Outside to ensure proper functionality. In Escientia, the AHU was located inside, leading to the accumulation of solvent vapours and the eventual explosion. Had AHU been placed outside to remove any leaked solvent vapours, the explosion wouldn't have occurred. Such serious mistakes, if any, be corrected forthwith in your factory.

Registered Office Laurus Labs Limited

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Clarification:

In our Units, AHUs are 'once-through type' (not recirculation type). Once through ventilation will not allow the accumulation of vapors even in any adverse situation. The AHUs are installed in areas which is isolated from operational areas. Provided heat/ smoke detectors in AHUs area and integrated to factory emergency siren. All AHU systems having auto close fire dampers which will activate automatically and cut-off the air flow in the event of fire.

(d) Further, it has come to our attention that several facilities continue to use water sprinklers in areas where water-reactive chemicals are stored. This practice not only fails to enhance safety but is, in fact, hazardous. Many of these recommendations were based on misguided advice from fire department, citing the National Building Code (NBC). However, such applications contradict the NBC's overall objectives of ensuring reasonable fire safety. We are sorry. It is wrong advice and you are hereby requested to discard such harmful practices immediately. For instance: see enclosed letter of M/s. Chemeca Drugs Private Limited, Dt: 05.02.2025

Clarification:

All water reactive chemicals are stored separately and isolated from the regular storage facilities. All water reactive chemical storages and operational blocks are provided with alternate fire suppression such as modular fire extinguishers, 150 kg Trolley mounted ABC/TEC powder, Clean agent etc. and avoided water sprinklers. Heat detectors installed and integrated with factory emergency siren. We have taken exemption of water sprinklers at water reactive chemicals storage & handling areas in earlier FIRE NOCs.

Therefore, any previous NOCs issued prescribing Water sprinklers in the following critical manufacturing or storage areas be forthwith discarded. I have instructed fire department officials not to give such inappropriate advice that compounds the problem and instead let the managements be guided by experts given the complexity of chemical factories.

- (1) Areas where water-reactive chemicals are stored
 - Provided Special DCPs
- (2) Warehouse tankfarm area
 - Eliminated sprinklers at water reactive ware house chemicals storage.
- (3) Warehouse corrosive chemical store
 - Eliminated sprinklers at water reactive ware house chemicals storage.
- (4) Production intermediate area
 - Provided roof-mounted powder flooding systems.
- (5) Manufacturing units for electronic goods
 - Not Applicable.
- (6) Cold storage units
 - Provided roof-mounted powder flooding systems

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- (7) Electrical panel rooms, UPS rooms, and server rooms
 - Provided auto operated clean agent fire suppression systems.
- (e) We also observed that the fire hydrant pipes are corroding as the water is with salts and the coastal environments increases corrosion of pipes. This corrosion hampers the system's effectiveness during emergencies. We recommend transitioning to fire retardant CPVC pipelines, which are corrosion-free and can use water supplied by gravity from the existing overhead tanks.

Additionally, based on the expected "fire load" at various facilities, it is advisable to install HP plunger pumps (ranging from 5 HP to 50 HP) powered by petrol, diesel, or emergency power generators. This system will be corrosion free, low maintenance, reliable, and adaptable to varying water needs based on "fire load".

Clarification:

We have noted your valuable suggestion and we will implement in our future activities, currently we are using low TDS potable water for fire hydrant systems and all our fire hydrant networks are provided with anti-corrosive painting and maintained regularly.

As directed we have arranged plunger pumps in our manufacturing facilities.

(f) We also welcome the use of modem firefighting tools such as foam generators, modular DCP/ Aerosol fire extinguishers/ clean agent/ liquid CO₂/ ABC flooding systems etc. These systems should be tailored to the specific requirements of your facility as recommended by industry experts.

Clarification:

We are adopting the new technologies and systems as directed the internal Safety subject matter experts and external fire technical experts.

Thanking you sir, Yours Sincerely For Laurus Labs Limited, Unit 1

Authorized Signatory