

**Compliance Report submitted on the recommendations of the joint committee inspection held at M/s. Hatsun Agro Product Limited, Sy.No. 821 & 822, Vavilthota (V), M.Bandapalli Panchayath, Puthalapattu (M), Chittoor District Dt.15.10.2020 vide Original Application No.162 of 2020 (SZ)**

- Ref:**
1. Original Application No.162 of 2020 filed at Hon'ble NGT (SZ), Chennai, Orders of the Hon'ble NGT Dt.04.11.2020.
  2. E-mail Dt.11.03.2021 from Senior Environmental Engineer (Legal), A. P. Pollution Control Board, Board office, Vijayawada.
  3. Original Application No.162 of 2020 filed at Hon'ble NGT (SZ), Chennai, Orders of the Hon'ble NGT Dt.22.02.2021.
  4. This office mail Dt.16.03.2021.

With reference to 1<sup>st</sup> and 2<sup>nd</sup> cited above, It is to submit that, Hon'ble NGT south zone, Chennai has directed A.P.Pollution Control Board and the 9<sup>th</sup> respondent i.e, **M/s. Hatsun Agro Product Limited** to submit a compliance on the joint committee recommendations that "*whether all the recommendations made by the committee could be implemented if so, within what time limit*".

The compliance on the recommendations of the joint committee inspection is as follows:

<b>Sl.No</b>	<b>Joint Committee Direction</b>	<b>Compliance</b>
i.	Minor leaks, mainly in the refrigeration plant room (less often in the condenser location) occasionally occur. These leaks are usually from shaft seals, pipe flanges or valve stems. Seals, flanges and gaskets shall be regularly inspected, without dismantling. Leak test should be conducted in all piping, valves, seals, flanges, and other pertinent equipment at frequent intervals.	Frequent preventive maintenance works are being attended to arrest any sorts of leakages with skilled persons. Gas leak test was conducted on 26.12.2020 by M/s. Varanga Engineering Pvt. Ltd., with validity period up to 25.06.2021. Report enclosed as <b>Annexure - I</b>
ii.	While erecting any new ammonia receiver or repairing, proper Standard Operating Procedure (SOP) has to be followed to avoid accidents. The SOPs shall be prepared for all industrial activities handling hazardous chemicals.	During inspection industry was directed to strictly follow the Standard Operating Procedures (SOPs) during the erecting of new ammonia received etc., The copy of the SOPs prepared is here with enclosed as <b>Annexure - II</b>
iii.	The industry shall carry out comprehensive safety audit and identify the non-compliances and corrective measures shall be taken for compliances. Emergency plans shall be established to deal with leaks. The risk assessment study shall be carried out to identify the control measures required in an emergency.	Safety audit and HAZOP studies were conducted by the industry during October, 2020. (A copy was submitted to this office). During inspection, industry was directed to educate all the employers in connection with the control measures to be followed during the emergency and above emergency plan.

iv.	The ammonia gas sensors and alarm system with automatic ventilators shall be installed at appropriate places where gas leak is suspected, so that any gas leaked is detected are immediate alerted to the employees. The sensors, alarms and ventilators should be frequently checked and maintained.	Industry has provided Ammonia gas sensors (3 Nos), alarms (3 Nos), showers & Automatic water screen / curtain at ammonia receiver area and near at accumulators as safety devices.
v.	Trained and qualified operators shall be permitted to operate ammonia systems and hands on training shall be given to a employees working with ammonia. To conduct mock drills to the employees, so that the employees will be prepared for emergency in terms of minor or major accidents.	Trained and skilled persons are being handling the ammonia systems. Industry is conducting mock drills once in every two months under the supervision of Inspector of factories. Ammonia evacuation mock drill was conducted on 19.02.2021 at 2.30 PM. Details are enclosed as <b>Annexure - III</b>
vi.	To fire fighting equipment / fire hydrant system at appropriate locations and to obtain NOC from the fire department.	Industry has provided fire fighting equipment / fire hydrant system at appropriate location. Industry has obtained provisional NOC from A.P. State Disaster response and Fire services Department (Copy enclosed as <b>Annexure - IV</b> ) and awaiting for the occupancy NOC.
vii.	To develop 33 % of total area as a green belt along the industry premises	Industry is having total land of Acres 6.58 Cents and already developed greenbelt at an area of Acres 2.0 Cents. Presently industry is developing additional greenbelt at an area of Acres 0.58 Cents with 300 saplings to meet the 33% of greenbelt.

As per the directions Dt.22.02.2021 of the Hon'ble NGT the A.P.P.C.B has communicated the Joint Committee inspection report to M/s. Hatsun Agro Product Limited (9<sup>th</sup> respondent) with the details of the Environmental Compensation i.e, Rs.6,72,000/- levied against the industry vide letter Dt.16.03.2021 (Copy enclosed as **Annexure -V**).

This report is submitted in compliance to Hon'ble Tribunal Order Dt.22.02.2021 for kind information.

  
**ENVIRONMENTAL ENGINEER**  
A.P.Pollution Control Board,  
Regional Office, Tirupati,  
Chittoor District, Andhra Pradesh.

Place: Tirupati

Date: 16.03.2021

Varaanga Engineers Pvt. Ltd.



Report No.: VEPL/HAPL/004

26<sup>th</sup> December, 2020

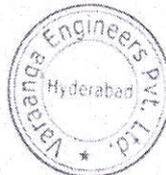
## FORM NO.8

(Prescribed under Rule 56)

## REPORT OF EXAMINATION OF PRESSURE VESSEL OR PLANT

1. Name of the Occupier (or Owner) of premises : M/s. Hatsun Agro Product Limited.
2. Address of the factory : Sy no:821 & 822, M.Bandapalli Village,  
Near Railway Gate, putalapattu Mandal,  
Chittoor District, A.P-517124.
3. Name, description and distinctive number of pressure vessel or plant : Ammonia Receiver (Horizontal)  
Capacity : 2000 Ltrs  
S.No: 4125
4. Name and address of manufacturer and reference to their test certificate or certificate of competent person : M/s. Bombay Ammonia (Madras) Pvt.Ltd.
5. Nature of process in which it is used : Ammonia Storage for Refrigation.
6. Particulars of pressure vessel or plant :
- a) Date of construction : 07/2014
- b) Thickness of wall : Shell : 11.0 mm, Dished End: 11.0 mm
- c) Date on which the pressure vessel or plant was first taken into use : 2014
- d) Maximum permissible working pressure recommended by the manufacturer : 165.0 Psig
- e) Design pressure, if known (The history should be briefly given and the examiner should state whether he has seen the last previous report) : 181.5 Psig  
Vessel is designed as per IS-2825  
First Time external inspection by Mr. V. Ranga rao, competent person on 26-12-2020.
7. Date of last hydrostatic test (if any) and pressure applied : Hydrostatically Tested by Manufacturer at a Pressure of 247.5 Psig.
8. Is the pressure vessel or plant in open or otherwise exposed to weather or to damp? : Located at Compressor room  
& Dry condition
9. What parts (if any) were inaccessible? : All parts are accessible
10. What examination and tests were made (Specify pressure if hydrostatic test was carried out) : Thorough visual inspection carried out and tested pneumatically at a pressure of 165.0 Psig. No leakages found. Ultrasonic thickness measurements carried out on shell and dished ends.
11. Condition of pressure vessel or plant (State any defects materially affecting the maximum permissible working pressure or the safe working of the pressure vessel or plant) : Satisfactory with no defects, dents or pits

Regd Office:  
#403, S.V. Arcade,  
Road No. 1, Doctors Colony, Saroornagar,  
Hyderabad 500 035, TS. India.  
Tel +91 40 2403 4782  
www.varaanga.com



CIN: U74900TG2014PTC092742  
An ISO 9001:2015 Certified Company

12. Are the required fittings and appliances provided in accordance with the rules? : Yes.
13. Are all fittings and appliances properly maintained and in good condition? Have the pressure settings been checked and corrected? : Yes. Well maintained.  
Pressure settings checked and found OK.
14. Repairs, if any, required, and period within they should be executed and any other condition which the person making the examination things if necessary to specify for securing safe working : No Repairs/alterations required
15. Maximum permissible working pressure, calculated from dimensions and from the thickness and other data ascertained by the present examination, give allowance being made for conditions of working if unusual or exceptionally severe (State minimum thickness of walls measured during the examination) : Maximum permissible working pressure verified and found within specified limits  
Min. thickness measured :  
Shell : 11.0 mm  
Dished End : 11.0 mm
16. Where repairs affecting the maximum working pressure are required, state the working pressure:
- a) Before the expiration of the period specified in (14) : Nil
- b) After the expiration of such period if the required repairs have not been completed : Nil
- c) After the completion of the required repairs : Nil
17. Other observations : Presently the vessel is found to be working Satisfactorily for routine operations.

I certify that on **26<sup>th</sup> December, 2020**, the pressure vessel or plant described above was thoroughly cleaned and (so far as its construction permits) made accessible for thorough examination and for such tests as were necessary for thorough examination and that on the said date, I thoroughly examined this pressure vessel or plant, including its fittings and that the above is a true report of my examination.

**This report is valid up to 25<sup>th</sup> June, 2021**

Govt. of Andhra Pradesh, Factories Department  
Authority Letter No.: LAEOS-12021(68)/7/2020-B, dated: 23-03-2020  
Valid From: 27-03-2020 to: 26-03-2021  
For Inspection, Testing and Certification of  
Lifts, Hoists, Lifting Machinery, Lifting Tackles,  
Pressure Vessels/Plant, Safety Belts,  
Thermic Fluid Heaters, Ovens and Driers.

for VARAANGA ENGINEERS PVT.LTD.



**RANGA RAO VUPPU**

B.Tech, MBA, DIS, ASNT Level II

Competent Person

Under A.P. Factories Rules

This test report depicts the actual position as seen by us at the time of examination & testing. Any remarks made are without any prejudice, only from the points of view of safety for men, material & equipment. **Varaanga Engineers Pvt.Ltd.**, are not responsible for any damage or failure due to misrepresentation of information/specifications of equipment's, improper operations/maintenance, change in operating conditions, invisible intrinsic defects that cannot be detected in the reported examination (or) testing. In case of failure, intimate us immediately and preserve conditions for the investigation.

<b>HAP</b>	<b>HATSUN AGRO PRODUCT LIMITED</b>	<b>ISSUE NO</b>	<b>07</b>
<b>HAP/CTR/SOP/MAINT/83/0</b> 0	<b>STANDARD OPERATING PROCEDURE</b>	<b>DATE OF ISSUE</b>	<b>06/04/2020</b>

**SOP FOR PREVENTIVE MAINTENANCE**

**1.0 Purpose:-**

To lay down the procedure for preventive maintenance.

**2.0 Scope:-**

It is applicable for process equipment & utility equipment.

**3.0 Responsibility:-**

Maintenance- Junior Assistant / Assistant / Senior Assistant / Supervisor / junior officer/Officer.

**4.0 Accountability:-**

Maintenance In charge.

**5.0 PPE:-**

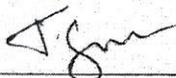
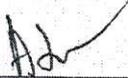
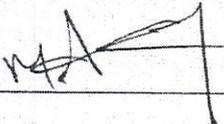
Use gloves, Wear Helmet with chinstrap, Safety Shoes, Goggles and Earplug.

**6.0 Procedure:-**

- 6.1. Preventive maintenance shall be carried out based on the schedule date.
- 6.2. Preventive maintenance check list can be prepared based on OEM recommendation, maintenance manual or from past experience.
- 6.3. Each check list to be approved by concern engineering head.
- 6.4. Ensure the availability of all spares before starting the preventive maintenance activity.
- 6.5. Take necessary clearance from concern dept & get work permit for the same.
- 6.6. Ensure the power supply is isolated & tag under maintenance label to the equipment.
- 6.7. Carry out preventive maintenance action based on Check-list.
- 6.8. After completing the preventive maintenance take trail & remove the under maintenance tag.
- 6.9. If the machine performance is satisfactory handover the machine to respective user dept & do the necessary cleaning action.
- 6.10. In case if the machine is not available for preventive maintenance due to production plan, maintenance activity to be reschedule based on clearance from concern dept.

**7.0 Documents:-**

- Preventive Maintenance Schedule for Milk plant –HAP/CTR/MAINT/02
- Preventive Maintenance Schedule for Curd plant –HAP/CTR/MAINT/06
- Preventive Maintenance Schedule for Condense plant –HAP/CTR/PMS/04

Prepared By	Reviewed By	Approved By
		

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<b>HAP</b>	HATSUN AGRO PRODUCT LIMITED	ISSUE NO	07
HAP/CTR/SOP/MAINT/84/0 0	STANDARD OPERATING PROCEDURE	DATE OF ISSUE	06/04/2020

### SOP FOR LUBRICATION OF MACHINERY

**1.0 Purpose:-**

To lay down the procedure for lubrication of process & utility equipment.

**2.0 Scope:-**

It is applicable for process equipment & utility equipment.

**3.0 Responsibility:-**

Maintenance- Junior Assistant / Assistant / Senior Assistant / Supervisor / junior officer/Officer

**4.0 Accountability:-**

Maintenance In charge

**5.0 PPE:-**

Use gloves, Wear Helmet with chinstrap, Safety Shoes, Goggles and Earplug.

**6.0 Procedure:-**

6.1.Ensure the correct lubricant to be applied for the equipment from OEM recommendation or from Manual.

6.2.Check the Gear box , Crank case oil level, Bearings & other system to be lubricated as per maintenance check list in regular interval.

6.3.Lubricate the sealing gasket, o-ring & other components with Food grade Grease (SKF LGFP-2) which is in food contact area.

6.4.Use Non food grade or High Temp grease (SKF LGFH-2/5) in other area where there is no food contact.

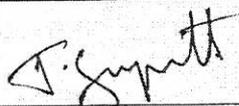
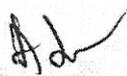
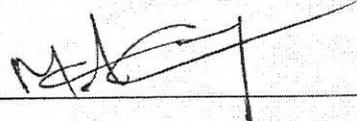
6.5.In-order to Re change the lubrication from the system drain the existing lubricant & clean the area if any spillage occurred.

6.6.Remove Lubricant to be collected in waste oil storage can.

6.7.Ensure the system to be lubricated is clean free from dirt & moisture before applying lubrication.

6.8.Ensure correct quantity of lubricant to be applied to the system as per user manual.

6.9.Make necessary Documentation for changing of Lubrication.

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### SOP FOR INTERLOCK CHECKLIST

#### 1.0 Purpose:-

To lay down the procedure to verify the Interlock System

#### 2.0 Scope:-

It is applicable to verify the interlock system for Auto 30kl PHE, Curd 10kl PHE & Automated CIP at periodic intervals.

#### 3.0 Responsibility:-

Food Safety Team & Maintenance In-Charge

#### 4.0 Accountability:-

Maintenance In charge

#### 5.0 Procedure:

- ✓ Auto 30kl PHE, Curd 10kl PHE, Automated CIP Interlock checklist to be validated monthly once.
- ✓ During shutdown mode only checklist activities will be carried out.
- ✓ To change the parameter in Auto program, Food safety team has to give clearance to Maintenance In-charge.
- ✓ In program there are 3 User ID
  - A) Operator
  - B) Technical Officer
  - C) Manager
- ✓ Access Control table are given below

Category	Auto	Manual	Parameter Setting Change
Operator	✓	x	x
Technical Officer	✓	✓	x
Manager	✓	✓	✓

- ✓ Interlock verification or Parameter change (if any) will be done by Manager Password only.
- ✓ Once all the setting are checked then we changed to production mode for operation

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<i>T. Gupta</i>	<i>Ad</i>	<i>M. J.</i>	

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<b>HAP/CTR/SOP/MAINT/82/0</b> 0	<b>STANDARD OPERATING PROCEDURE</b>	<b>DATE OF ISSUE</b>	<b>06/04/2020</b>

### SOP FOR BREAKDOWN MAINTENANCE

**1.0 Purpose:-**

To lay down the procedure for breakdown maintenance.

**2.0 Scope:-**

It is applicable for process equipment & utility equipment.

**3.0 Responsibility:-**

Maintenance- Junior Assistant / Assistant / Senior Assistant / Supervisor / junior officer/Officer

**4.0 Accountability:-**

Maintenance In charge

**5.0 PPE:-**

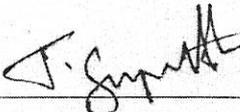
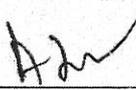
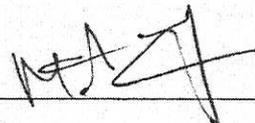
Use gloves, Wear Helmet with chinstrap, Safety Shoes, Goggles and Earplug.

**6.0 Procedure:-**

- 6.1. Communicate the Breakdown to concern Engineering Department.
- 6.2. Maintenance dept head will allocate the technician & Raise the work permit to attend the breakdown.
- 6.3. Discuss the breakdown incident with operator to understand the issue & inspect the machine.
- 6.4. Flush the product in the equipment with water before attend the work if required.
- 6.5. After identifying the cause of breakdown, if any part/assembly to be dismantle mark them properly with identification & place it in a tray and clean it thoroughly.
- 6.6. If any spares required make a necessary reservation for material & collect it from stores.
- 6.7. Once the repair action carried out, check the assembly for smooth operation & fix it on the machine.
- 6.8. Lubricate the parts where ever lubrication required as per machine requirement.
- 6.9. After completing the repair task clear the tools & other foreign object from corresponded area.
- 6.10. Make a trail run with water before starting equipment for production & check the performance of machine.
- 6.11. Do the CIP of the system before starting the production & get the necessary clearance from Lab. Enter the incident in breakdown register.

**7.0 Documents :-**

- Breakdown register - HAP/CTR/MAIN/13

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HAP/CTR/SOP/MAIN/01/00	STANDARD OPERATING PROCEDURE	DATE OF ISSUE	06/04/2020

### SHIFT OPERATION – REFRIGERATION PLANT

**1.0 Purpose:-**

To lay down the procedure for Shift operation of Utility plant consists of Refrigeration, Cooling tower, Cold room.

**2.0 Scope:-**

It is applicable for all the Utility plant operators in the manufacturing facility.

**3.0 Responsibility:-**

Utility Operator – Assistant Junior Assistant / Senior Assistant / Supervisor.

**4.0 Accountability:-**

Maintenance Incharge

**5.0 Safety, Health & Environment (SHE) related Hazards, Consequences, & Precautions:**

Hazards	Consequences	Precautions
1.Noise during operation	Ear injury	Use Ear plugs / Ear muffs.
2.Hitting during movement around the equipment	Serious head injury on hitting on the structures.	Wear safety helmet with chinstrap.
3.Oil / water spillage in floor	Physical injury	Ensure proper housekeeping. Use safety shoes , Safety helmet & Safety goggles
4.Refrigerant leak	Environmental effect	Ensure proper tightening of pipelines and fittings. Use Breathing apparatus
5.Hot surface contacts	Hot burns	Use cotton gloves
6.Cold surface contacts	Cold burns	Use Low temperature gloves
7.Major refrigerant leak	Environment affect and unconsciousness	Use Ammonia PVC Suit / Ammonia canister / Breathing apparatus (SCABA). Use safety shoes , Safety helmet & Safety goggles

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<i>T. Gupta</i>	<i>Ad</i>	<i>MA</i>

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**PPEs: -**

- Use Cotton gloves, Helmet with chinstrap, Safety Shoes, Goggles, Ear plug

**6.0 Procedure:-**

- 6.1. Check the Water Storage tank level and ensure 50% level is maintained.
- 6.2. Check Cooling tower water level.
- 6.3. Check the Glycol level in the tank and ensure 1 feet level maintained above the suction pipe.
- 6.4. Check the IBT water level in the tank is maintained above the coil.
- 6.5. Check the Overhead tank water level if applicable and ensure 50% level is maintained.
- 6.6. Start / Stop the Compressor & Accessories as per the required temperature, pressure for the process requirement.
- 6.7. Check the oil level in the compressor and top up if required.
- 6.8. Check the ammonia level in the receiver and top up if required.
- 6.9. Dosing of cooling tower chemical to maintain the water quality.
- 6.10. Check & record all the parameter of Compressor / Cooling tower / Chilled water / Chilled Glycol temperature / pressure for every 1 hour.
- 6.11. Check & record the temperature of Milk cold room, Blast room & Curd cold room for every 1 hour.
- 6.12. Record the compressor running hours, power consumption for all the compressor record and utility plant power consumption.
- 6.13. If there is any deviation in utility parameter like temperature / pressure / tank level necessary action to be taken immediately. If the problem extends same to be communicated to maintenance in charge and the process person in time to avoid the deviation in the product quality.

Prepared By	Reviewed By	Approved By
<i>T. Gupta</i>	<i>Adh</i>	<i>M. J.</i>

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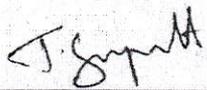
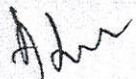
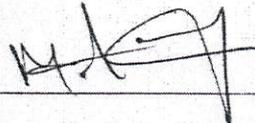
6.14. Check the operation of Freon cold room / frozen room and record the temperature for every 1 hour.

6.15. Check and record the temperature of additional refer container if applicable.

6.16. Record the shift activity in logbook and handover the shift with proper communication.

**7.0 Documents:-**

- Checklist for Refrigeration Plant- HAP/CTR/MAINT/24

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<b>HAP</b>	HATSUN AGRO PRODUCT LIMITED	ISSUE NO	07
HAP/CTR/SOP/MAIN/02/00	STANDARD OPERATING PROCEDURE	DATE OF ISSUE	06/04/20

## OPERATION OF AMMONIA GLYCOL REFRIGERATION PLANT

### 1.0 Purpose:-

To lay down the procedure for operation of ammonia glycol refrigeration plant.

### 2.0 Scope:-

It is applicable for all the Utility plant operators in the manufacturing facility.

### 3.0 Responsibility:-

Utility Operator – Assistant Junior Assistant / Senior Assistant / Supervisor

### 4.0 Accountability:-

Manager-Maintenance

### 5.0 Safety, Health & Environment (SHE) related Hazards, Consequences, & Precautions:-

Hazards	Consequences	Precautions
1.Noise during operation	Ear injury	Use Ear plugs / Ear muffs.
2.Hitting during movement around the equipment	Serious head injury on hitting on the structures.	Wear safety helmet with chinstrap.
3.Oil / water spillage in floor	Physical injury	Ensure proper housekeeping. Use safety shoes , Safety helmet & Safety goggles
4.Refrigerant leak	Environmental effect	Ensure proper tightening of pipelines and fittings. Use Breathing apparatus Use cotton gloves
5.Hot surface contacts	Hot burns	Use Low temperature gloves
6.Cold surface contacts	Cold burns	Use Low temperature gloves
7.Major refrigerant leak	Environment affect and unconsciousness	Use Ammonia PVC Suit / Ammonia canister / Breathing apparatus (SCABA). Use safety shoes , Safety helmet & Safety goggles

Prepared By	Reviewed By	Approved By
<i>T. Gupta</i>	<i>Adh</i>	<i>[Signature]</i>

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**PPEs:-**

- Use Cotton gloves, Helmet with chinstrap, Safety Shoes, Goggles, Ear plug, SCABA

**6.0.Procedure:-**

**6.1.Start up procedure:-**

- 6.1.1. Check and ensure the surrounding area of the equipment is kept clean.
- 6.1.2. Ensure guards are available for all rotating equipment.
- 6.1.3. Check and ensure the water in the cooling tower is up to 3/4<sup>th</sup> of the sump level or above the suction pipe.
- 6.1.4. Check and ensure the Glycol level in the tank is maintained 1 feet above the suction pipe.
- 6.1.5. Check and ensure the Specific gravity of glycol is 20% concentration to avoid freezing .
- 6.1.6. Check the ammonia in the receiver and maintain minimum of 200 mm level is maintained in the sight glass to ensure the entry of liquid ammonia to the evaporator.
- 6.1.7. Check and ensure the inlet and outlet valves of Glycol water Pump, Chiller, Condenser water pump and condenser are kept open.
- 6.1.8. Check the inlet & outlet valves of cylinder head cooling are open.
- 6.1.9. Start the Cooling tower fan , CT water pump , Glycol water pump as per the system available.
- 6.1.10. Check and ensure the oil level in the compressor is maintained 3/4<sup>th</sup> of the sight glass.
- 6.1.11. Check and ensure the necessary inlet and outlet refrigerant valves of the compressor, condenser and accumulator circuit are in open condition.
- 6.1.12. Start the refrigeration compressor.
- 6.1.13. Check and ensure the operation of temperature / pressure capacity control as applicable.
- 6.1.14. Load / unload the compressor as per the temperature / suction pressure / discharge pressure if the compressor is operated in manual mode.
- 6.1.15. Check and ensure the liquid line solenoid valve is operating with reference to level controller.

Prepared By	Reviewed By	Approved By
<i>T. Gupta</i>	<i>Adm</i>	<i>[Signature]</i>

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6.1.16. Monitor the compressor amps are within the limit.

6.1.17. Check and ensure that the following parameters are maintaining during normal operation of the refrigeration compressor.

Suction pressure : 25 to 35.0 psig  
 Discharge pressure : 160 to 220 psig  
 Oil pressure : 45 to 55 psig  
 Glycol Temperature : 0 to -3.0deg.c

6.1.18. Consider Air purging & oil drain once in a week or as per requirement.

6.1.19. Record the parameters once in hour in the current version of the approved log format.

**2. Stop procedure: -**

6.2.1. Close the Liquid feed valve to evaporator and compressor suction stop valve.

6.2.2. Stop Compressor, Condenser pumps and close suction / Discharge valves, Glycol Pump and close suction / Discharge valves, Cooling Tower fan and close make up water valve.

**6.3. Long Shutdown:-**

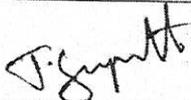
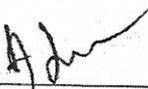
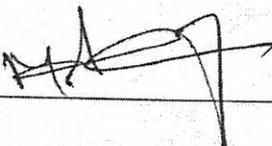
6.3.1. In case of long shut-down or maintenance activities, the entire refrigerant shall be pump down in the receiver.

**6.4. Disposal of Glycol:**

6.4.1. During mix-up of milk with Glycol the drained Glycol in the plant to be handed over to ETP for disposal.

**1.0 Documents:-**

- Refrigeration -NIL

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**OPERATION OF AMMONIA COLD ROOM**

**1.0 Purpose:-**

To describe the procedure for operation of Ammonia Cold room Refrigeration Plant.

**2.0 Scope:-**

It is applicable for all the Utility plant operators in the manufacturing facility.

**3.0 Responsibility:-**

Utility Operator – Assistant / Junior Assistant / Senior Assistant / Supervisor.

**4.0 Accountability:-**

Manager-Maintenance

**5.0 Safety, Health & Environment (SHE) related Hazards, Consequences, & Precautions:-**

Hazards	Consequences	Precautions
1.Noise during operation	Ear injury	Use Ear plugs / Ear muffs.
2.Hitting during movement around the equipment	Serious head injury on hitting on the structures.	Wear safety helmet with chinstrap.
3.Oil / water spillage in floor	Physical injury	Ensure proper housekeeping. Use safety shoes , Safety helmet & Safety goggles
4.Refrigerant leak	Environmental effect	Ensure proper tightening of pipelines and fittings. Use Breathing apparatus
5.Hot surface contacts	Hot burns	Use cotton gloves
6.Cold surface contacts	Cold burns	Use Low temperature gloves Low temperature boots Low temperature suits
7.Major refrigerant leak	Environment affect and unconsciousness	Use Ammonia PVC Suit / Ammonia canister / Breathing apparatus (SCABA). Use safety shoes , Safety helmet & Safety goggles

Prepared By	Reviewed By	Approved By
<i>T. Gupta</i>	<i>AD</i>	<i>[Signature]</i>

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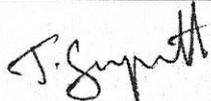
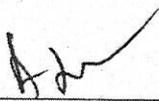
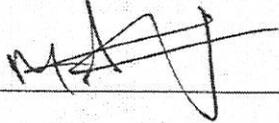
**PPEs:**

- Use Cotton gloves, Helmet with chinstrap, Safety Shoes, Goggles, Ear plug, SCABA.

**6.0 Procedure:**

**6.1.Startup Procedure:-**

- 6.1.1.Check and ensure the surrounding area of the equipment is kept clean.
- 6.1.2.Ensure guards are available for all rotating equipment.
- 6.1.3.Check and ensure the water in the cooling tower is up to 3/4<sup>th</sup> of the sump level or above the suction pipe.
- 6.1.4.Check the ammonia in the receiver and maintain minimum of 200mm level is maintained in the sight glass to ensure the entry of liquid ammonia to the evaporator .
- 6.1.5.Check and ensure the inlet and outlet valves of Chiller,Condenser water pump and condenser are kept open.
- 6.1.6.Check the inlet & outlet valves are kept open in compressor cylinder head.
- 6.1.7.Start the Cooling tower fan , CT water pump per the system available.
- 6.1.8.Check and ensure the oil level in the compressor is maintained 3/4<sup>th</sup> of the sight glass.
- 6.1.9.Check and ensure the necessary inlet and outlet refrigerant valves of the compressor, condenser and accumulator circuit are in open condition.
- 6.1.10.Start the ACU fan in the cold room.
- 6.1.11.Ensure all the main doors are closed in the cold room.
- 6.1.12.Start the refrigeration compressor.
- 6.1.13.Check and ensure the operation of temperature / pressure capacity control as applicable.
- 6.1.14.Load / Unload the compressor as per the temperature / Suction pressure / Discharge pressure if the compressor is operated in manual mode

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6.1.15. Check and ensure the Air coil unit Liquid line solenoid valve is operating with reference to Level controller.

6.1.16. Monitor the compressor amps are within the limit.

6.1.17. Check and ensure that the following parameters are maintaining during normal operation of the refrigeration compressor.

6.1.18. Drain oil in evaporator coil periodically with necessary PPEs.

**Milk Cold room**

- Suction pressure : 25 to 35.0 psig
- Discharge pressure : 160 to 220 psig
- Oil pressure : 45 to 55 psig
- Cold room Temperature :  $\leq 4^{\circ}\text{C}$

6.1.19. Record the parameters once in hour in the log book.

**6.2. Stop procedure: -**

6.2.1. Switch of the ACU Fan unit.

6.2.2. Close the Liquid feed valve to evaporator and compressor suction stop valve. Stop Compressor.

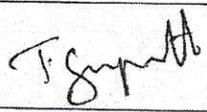
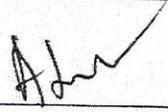
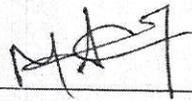
6.2.3. Stop Condenser pumps and close suction / Discharge valves, Cooling Tower fan and close make up water valve.

**6.3. Long Shutdown:-**

6.3.1. In case of long shut-down or maintenance activities, the entire refrigerant shall be pump down in the receiver.

**7.0. Documents:-**

- Refrigeration -NIL

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### OPERATION OF BLAST & CURD COLD ROOM

**1.0 Purpose:-**

To laydown an operating procedure for Blast & curd cold room.

**2.0 Scope:-**

It is applicable for all the Ref plant operators in the manufacturing facility.

**3.0 Responsibility:-**

Ref Operator – Assistant / Junior Assistant / Senior Assistant / Supervisor.

**4.0 Accountability:-**

Maintenance Incharge

**5.0 Safety, Health & Environment (SHE) related Hazards, Consequences, & Precautions:-**

Hazards	Consequences	Precautions
1.Noise during operation	Ear injury	Use Ear plugs / Ear muffs.
2.Refrigerant leak.	Environmental effect	Ensure proper tightening of pipelines and fittings.
3.Oil / water spillage in floor	Physical injury	1. Ensure proper housekeeping. 2. Use safety shoes and safety helmet. 3.Use safety goggles
4.Hot surface contacts	Hot burns	Use cotton gloves
5.Cold surface contacts	Cold burns	Use Low temperature gloves Low temperature boots Low temperature suits

**PPEs:-**

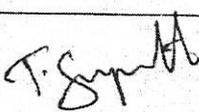
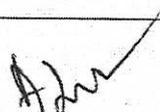
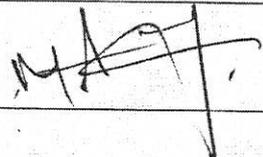
- Use PVC, Kevlar and Wear Helmet with chinstrap, Safety Shoes, Goggles. Ear plug

**6. 0 Procedure:-**

**6.1.Startup Procedure:-**

6.1.1.Check and ensure that the surrounding area and equipment is kept clean.

6.1.2.Check and ensure the level of cooling tower water & maintain the tower parameter as per standard.

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- 6.1.3. Check and ensure all the necessary refrigerant valves are in open condition.
- 6.1.4. Check the gas leak in the system regularly.
- 6.1.5. Start the refrigeration system from the local push button / MCC Feeder.
- 6.1.6. Switch on the cooling tower Pump & Fan, ensure the water valves are open in condenser & oil cooler.
- 6.1.7. Set the curd cold Room (3-4°C) & Blast cold room (0°C) temperature as per requirement.
- 6.1.8. Monitor the compressor amps are within the limit.
- 6.1.9. Check and ensure that the parameters are maintaining within the limit during normal operation of the refrigeration compressor.

**Curd & Blast Cold room**

- Suction pressure : 2.5 to 4.5 bar
- Discharge pressure : 14 to 22 bar
- Oil pressure : 12 to 16 bar

6.1.10. Record the parameters once in hour in log book.

**6.2. Stopping procedure: -**

- 6.2.1. Switch off the Refrigeration system from the local push button / MCC Feeder.
- 6.2.2. In case of long shut-down or maintenance activities, the entire refrigerant shall be pump down.

**7.0 Documents:-**

- Blast Room Compressor Log book Data -NIL

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### CHARGING OF AMMONIA IN THE REFRIGERATION PLANT

**1.0 Purpose:-**

To lay down a procedure for charging of ammonia gas in refrigeration system.

**2.0 Scope:-**

It is applicable for charging of ammonia in the refrigeration plant in the manufacturing facility.

**3.0 Responsibility:-**

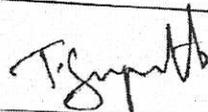
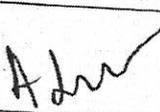
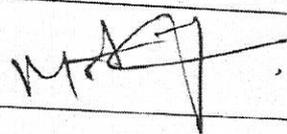
Utility Operator – Assistant / Junior Assistant / Senior Assistant / Supervisor.

**4.0 Accountability:-**

Maintenance Incharge

**5.0 Safety, Health & Environment (SHE) related Hazards, Consequences, & Precautions:-**

Hazards	Consequences	Precautions
1. Toxic gas leakage (R717) while removing the safety valve if there is valve passing.	Environment affect and unconsciousness	1. Ensure Complete isolation of valves and ensure no valve passing before doing maintenance work. 2. Use PVC gloves and suit and Nh3 canister / breathing apparatus (SCBA), goggles.
2. High Temperature while doing maintenance activity in the compressor discharge line.	Hot burn.	1. Ensure Complete isolation of valves and ensure no valve passing before doing maintenance work. 2. Allow some time to cool down before doing maintenance work 3. Use Kevlar gloves and goggles.
3. Low Temperature while doing maintenance activity in the compressor suction line.	Cold burn.	1. Allow some time to warm up before doing maintenance work. 2. Ensure Complete isolation of valves and ensure no valve passing before doing maintenance work. 3. Use cryogenic gloves and goggles.
4. Hitting while doing maintenance activity in the compressor.	Serious head injury on hitting on the structures.	Wear safety helmet with chinstrap.
5. Noise while working in the floor.	Hearing problem	Wear ear plug/muff while entering in to the floor.
6. Sharp cornered edges in the safety valve body while doing maintenance work.	Hand cut injury	1. Wear Cut resistance gloves (Cotton impregnated with Neoprene gloves)

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**PPEs:**

- Use PVC, Cotton impregnated with Neoprene gloves, Use NH<sub>3</sub> canister / breathing apparatus (SCABA), and Wear Helmet with chinstrap, Safety Shoes, Goggles. Ear plug and use PVC Suit.

**6.0 Procedure:**

The responsible person shall carry out the following activities: -

- 6.1. Obtain work permit from the operating person to carry out the maintenance activity.
- 6.2. Ensure the Charging hose is in good condition and suitable for high pressure application (400PSI).
- 6.3. Keep the ammonia cylinder in the slanting position (Upside down).
- 6.4. Connect the charging hose one end to the cylinder and other end to the charging valve in the receiver.
- 6.5. The non-condensable gases present in the charging hose shall be purged out by opening the service valve in the refrigerant cylinder.
- 6.6. The charging valve in the refrigeration system shall be opened.
- 6.7. The refrigerant shall be charged in the refrigeration system as per the requirement.
- 6.8. The service valve in the refrigerant cylinder shall be isolated first.
- 6.9. The valve in the charging port of the refrigeration system shall be isolated.
- 6.10. The charging hose shall be disconnected.
- 6.11. The quantity of refrigerant charged shall be recorded in the current approved version of log book

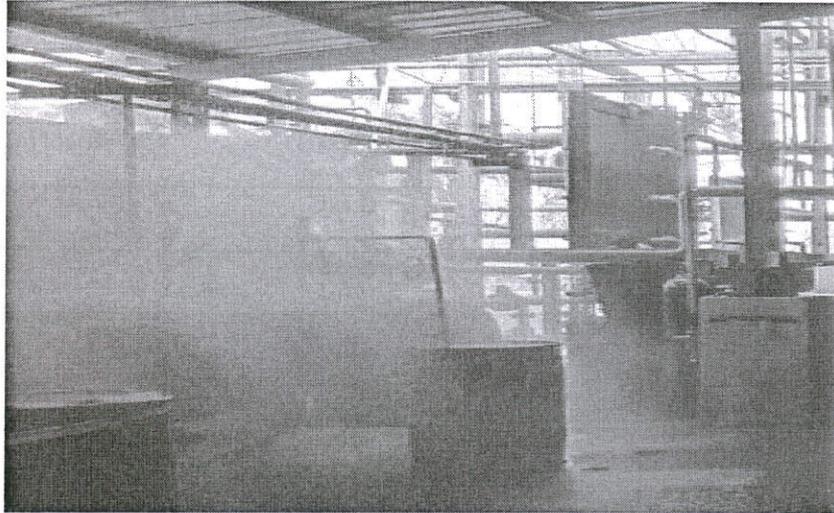
**7. Documents:-**

- Full ammonia cylinder stock register -NIL

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# AMMONIA EVACUATION MOCK DRILL

OBSERVATION REPORT

AMMONIA LEAK/ 19.02.2021/ 2:31PM

Organized by  
HAP Safety

## Observation Points

### Before Drill

S.No	Description	Observation	Comments/ Recommendation	Remarks
1	Type of Drill	Advance notice	Good	Mutually agreed
2	Drill Date & Time agreed with Plant operation	Yes	Good	Mutually agreed
3	Is the event scenario discussed	Yes	Good	Briefing done by Safety Dept
4	Evacuation Manager Identified	Yes	Good	Sr.Officer Production
5	Assembly Point Manager identified	Yes	Good	Sr.Officer Recycle Mangement
6	Plant Safety Team Involvement	Yes	Good	

### During Drill

S.No	Description	Observation	Comments/ Recommendation	Remarks
1	Was language used is easy for communication	Yes	Good	Tamil and Telugu
2	Was tools used for communication	Yes	Good	Mobile phones
3	Was the fire alarm system activated	Yes	Good	Manual call point
4	Does anyone working near the drill area and all clear procedures followed	Yes	Good	Workers cleared immediately from work spot by evacuation team
5	Was there a victim identified and injured	Yes		
6	Was emergency exit guide signs available at places	No	Shall include sign guides	Only Available at Exit Doors
7	Was any hindrance noticed in pathway before drill and removed during the drill	No	Good	
8	Was enough space available for vehicle for easy turning	Yes	Good	
9	Was the Fire hoses point free of hurdles during drill	Yes	Good	
10	Was utilities turned off (EB power, AHU etc)	No		Planned drill outside production area
11	Was enough water and water pressure available	Yes	Good	7 bar pressure maintained
12	Was pumping system having standby	Yes	Good	
13	Response time by all team	Yes	Good	
S.No	Description	Observation	Comments/ Recommendation	Remarks

14	Was Effective communication made between the team (Safety, Production, Logistics etc)	Yes	Good	
15	Was security alerted	Yes	Good	
16	Was entry for outside vehicle(Ambulance, Fire system etc) movement clear	Yes	Good	Pedestrian Walkway marking needed
17	Was sign language used during fire fighting drill	Yes	Sign language used	
18	Was enough space available for assembly point	No	Shall plan adequate area as per manpower	Was congested and difficult for head count
19	Was fire safety system easy for use	Yes	Good	End caps & Keys are checked on daily basis
20	Was effective response time carried by team on victim clearance	Yes	Good	Refer attached photo

### After Drill

S.No	Description	Observation	Comments/ Recommendation	Remarks
1	Was proper briefing done	Yes	Good	By Mr.Boopathi(Manager HSE)
2	Was announcement loud and clear during briefing	Yes	Good	Megaphone used
3	Was all clear announcement made back to work	Yes	Good	Used long siren
4	Was thank you note given by Safety Team	Yes	Good	By Mr.Thiagu (Sr.manager HSE)
5	Was the feedback received about the drill	Yes	Good	

### Major Noticeable Points

1. Response time by Team is good
2. Siren was not audible at many places need to centralise with existing outdoor siren Also
3. Fire fighting system free of hindrance
4. Emergency exit arrows needed inside the production hall & Cold room.
5. Only Minimum emergency exit available needed another 2-3 exits from cold room and production area
6. Safe Assembly point floor marking to be done for easy head count.
7. PPE's such as helmet , Reflective vest & CAP printed as ERT is needed for easy identification of ERT members.
8. Training & certification of First AID team to be provided

## Observers Observation Point

Mr.Madhusudhanan at Safe Assembly point observed the following;

1. The observer was near maingate while siren alarmed . He noticed the alarm sound is not audible up to maingate as the drill was pre-planned the workers evacuated the admin block & moved to safe Assembly point even the alarm sound is low.
2. Observed one puff vehicle driver Mr.Balu reached the safe Assembly point first
3. Some ladies move to the safe assembly point slowly & observed lack of seriousness
4. The last person Ms.Pavithra who was working at scrap yard reached safe Assembly point by 2:39 PM.
5. At safe Assembly point good awareness among ladies was observed while communicating with them.

Mr.Johnwesley as Evacuation team member in Process hall observed the following;

1. Observed some of ladies found running while Evacuation siren Alarmed.
2. Most employees used only hygiene block exit to reach Safe Assembly point.
3. Employees not aware of using material loading shutter available near hygiene block as emergency shutter
4. Contract labor named Ms Aruna evacuated from the production hall first.
5. Packing machine operator Mr.Vignesh Ensured all packing machines are shut downed properly & Evacuated last from the production hall.

Mr.Prabhakaran as observer at incident spot;

1. The Repair and task force team arrived incident spot at 2:38 PM & at the same time medical team also reached
2. Medical team took the victim affected by Ammonia to open area and started providing first AID
3. The Repair & task force team started suppressing Ammonia leak by
  - A. Automatic water screen was activated Manually.
  - B. First AID hose reel was used
  - C. Triple Purpose nozzle was used by connecting with hydrant system.
4. The ammonia leakage was arrested by refrigeration operator with Use of SCBA at 2:44PM
5. During Ammonia suppressing , Low water pressure is observed at first AID hose reel.
6. Water pressure at hydrant point & at water screen is good and sufficient

Mr.Sathyamoorthy as observer at maingate & Pump house;

1. Observed siren sound was not sufficient for evacuation.
2. Once the evacuation started 2 ERT members 1 security & 1 CL reached the maingate and the maingate was kept open
3. During the evacuation 1 driver and 1 vendor approaches the plant from outside explained the situation and stopped them near maingate
4. At 2:41PM the victim was taken through bolero to hospital
5. At 2:40 PM the jockey pump start running & alarmed , Immediately Electrical pump also started running .
6. At 2:44PM the hydrant pump got stopped and 7 bar pressure maintained at hydrant line.

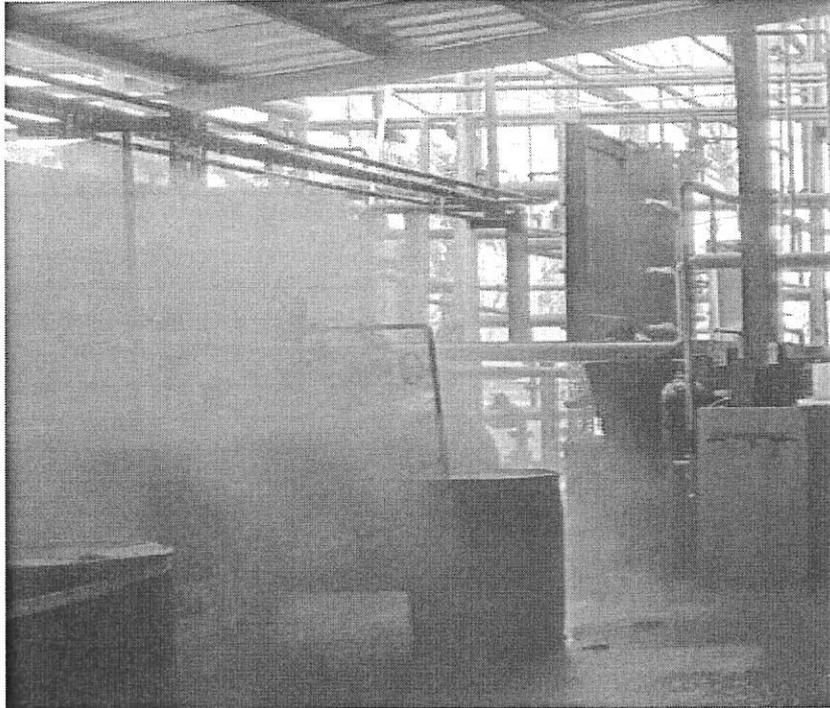
## Time Log

Time	Description
02:31:00 PM	Ammonia leak Identified
02:32:00 PM	MCP Pressed & informed to security
02:33:00 PM	Siren alarmed (Intermittent siren for 3 times), All clear procedures followed at spot
02:33:00 PM	Evacuation Manager Reported spot
02:35:00 PM	ECC made to Assembly Point Manager
02:38:00 PM	Repair & Task force team reached spot
02:38:00 PM	First Aid & Safety Team arrived spot
02:38:00 PM	Team approached victim
02:40:00 PM	Victim recovered from spot through stretcher to exit area by fast walking
02:42:00 PM	Water opened for Ammonia supression by task force team
02:40:00 PM	Vehicle for recovery of victim reached
02:44:00 PM	Ammonia leakage arrested
02:46:00 PM	Repair & Task force team assembled at safe assembly point
02:48:00 PM	Briefing at assembly point completed
02:49:00 PM	All clear long siren

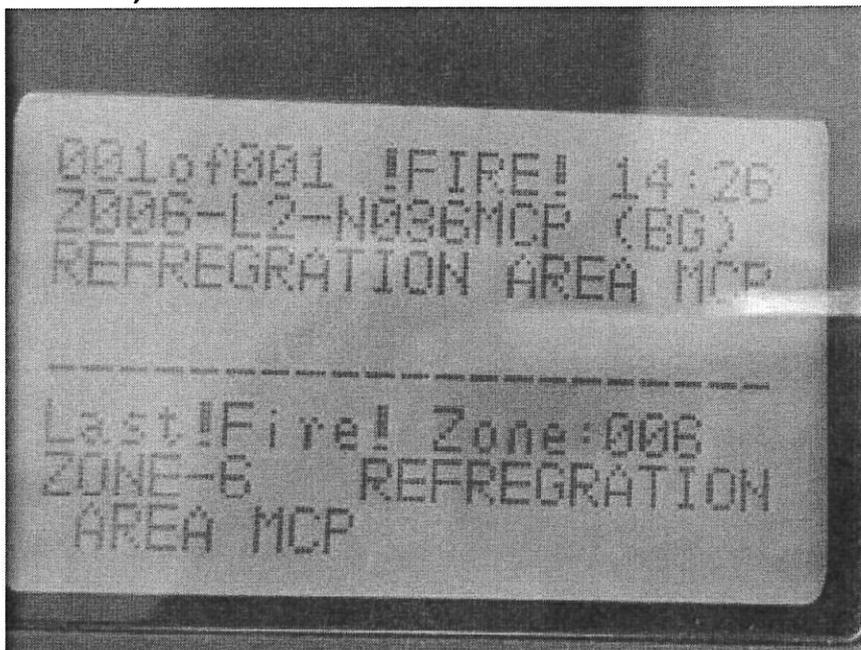
**Total Reaction Time: 18 minutes**

Observation Pictures;

1. Ammonia Leakage,

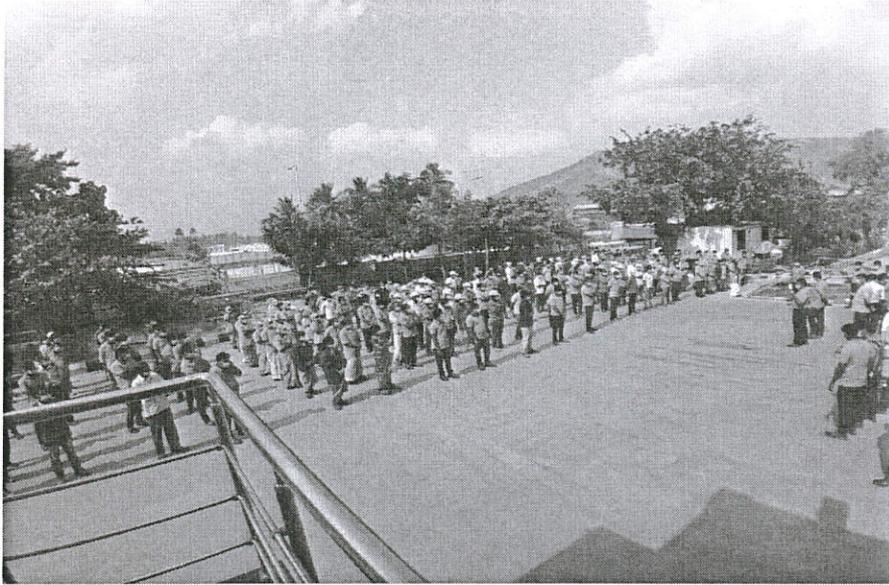


MCP Activated ,

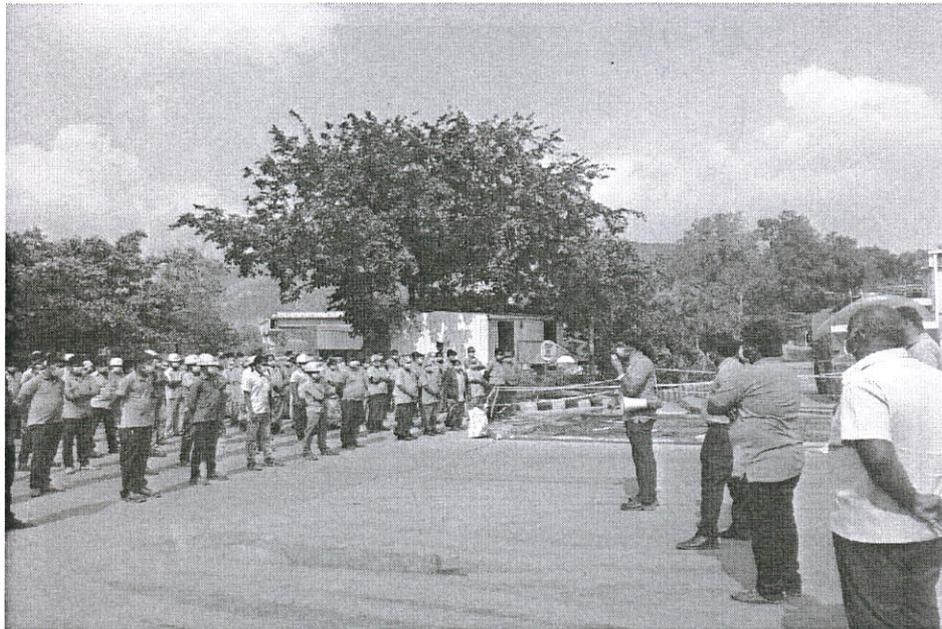


(Centralised Fire Alarm panel time 5 mins delay from standard time)

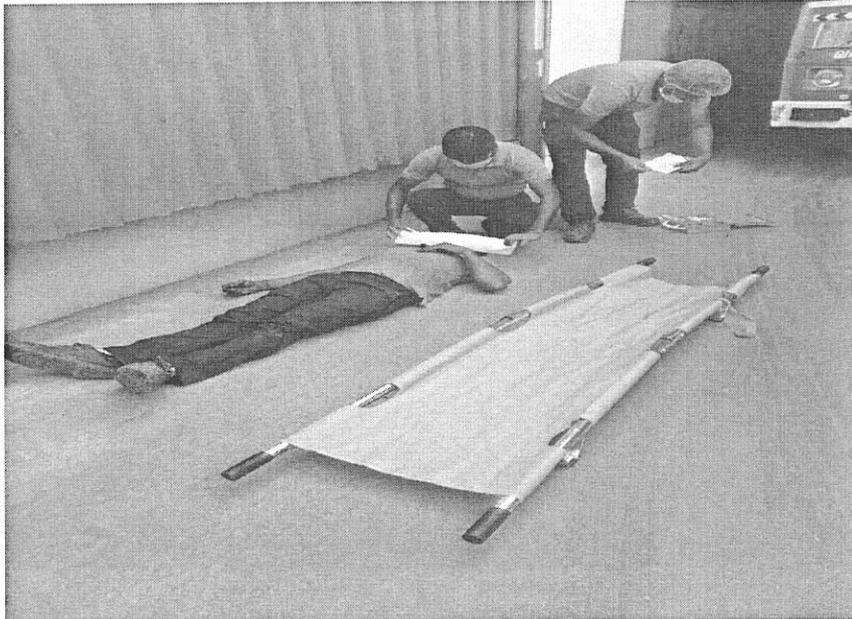
**Employees Evacuated the work area and assembled at safe assembly point;**



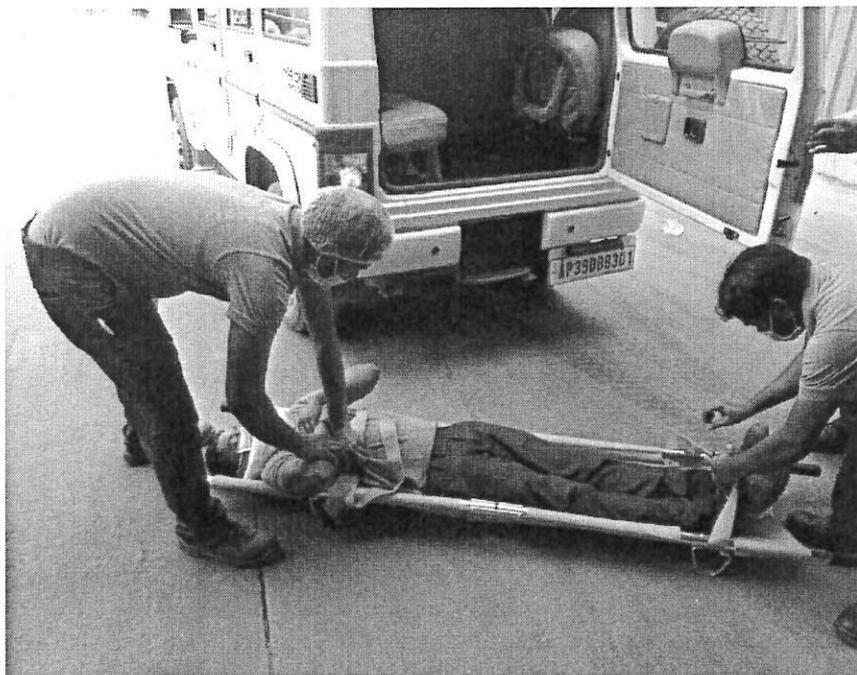
**Briefing about incident scenario , do's and don't during emergency.**



**Providing First AID to the victim by First AID team**



**Transporting victim to nearby hospital ,**



**Ammonia suppressing using triple purpose nozzle & leakage arresting**



**Discussing observations with ERT team members,**





**Government of Andhra Pradesh**  
**A.P. State Disaster Response and Fire Services Department**

**Provisional Fire No Objection Certificate**

To  
The Commissioner of Industries,,  
A.P., Vijayawada.  
Sir/Madam,

File No: 10237/CTR/DFO/2019  
Date: 06/02/2021

Sub: Andhra Pradesh State Disaster Response and Fire Services Department - Issue of Provisional No Objection Certificate for the Proposed Construction of Non Multi Storeyed Building of (HATSUN AGRO PRODUCT LIMITED) D SATHYANARAYAN, Sy.No.821&822 M. Bandapalli Village, Puthalapattu Mandal, Chittoor - 517124 -.Regarding.

Ref: 1. Online Application Dt. 27-01-2021 , D SATHYANARAYAN, Sy.No.821&822 M. Bandapalli Village, Puthalapattu Mandal, Chittoor -517124  
2. Online Inspection Report submitted by Officers of this Department on 06-02-2021.

It is to inform that D SATHYANARAYAN have applied for Provisional No Objection Certificate on 27-01-2021 for proposed construction of Non Multi Storeyed Building for HATSUN AGRO PRODUCT LIMITED at Sy.No.821&822 M. Bandapalli Village, Puthalapattu Mandal, Chittoor - 517124. The officers of the department have scrutinized the information, documents and plans submitted by the applicant along with the undertaking provided by the applicant, and have submitted the following report.

### Admin & Storage Area

2. The builder has proposed to construct a Non Multi Storeyed Building with Ground Floor + One Upper Floor with a height of 6 Mtrs for Industrial Occupancy (Category - G1) in a total plot area of 18964 sq. meters.

3. The builder has proposed open spaces all around the building

Side	Open Space Required as per GO.Ms.No.119(APBR, 2017) of MA & UD Dept	Open Space Proposed by the Builder	Remarks
North	3 Meters	3.00 Meters	-Nil-
East	5 Meters	6.00 Meters	-Nil-
South	5 Meters	6.00 Meters	-Nil-
West	5 Meters	6.00 Meters	-Nil-

4. The builder has proposed to provide following means of escape, as per clauses 4.4.2.4.3.2 and 4.4.2.4.3.4 , Part - IV NBC 2016

Sl	Details of Staircases	Required Nos / Meters as per NBC	Required based on Floor Area	Proposed Nos / Meters	Deficit
1	Internal Staircases	Min 1 No. - 1.5 Meters	--	1 No. - 1.50 Meters	-Nil-
2	External Staircases	Min 1 No. - 1.5 Meters	--	1 No. - 1.50 Meters	-Nil-
3	Ramp (above Ground)	Min 1 No. - 2.0 Meters	--	0 No. - 0.00 Meters	-Nil-

Sl	Details of Staircases	Required Nos / Meters as per NBC	Required based on Floor Area	Proposed Nos / Meters	Deficit
4	Basement Ramp	Min 1 No. - 1-Way: 3.6 / 2-Way: 5.4 Meters	--	0 No. - 0.00 Meters	-Nil-
Total		2 Nos.	0 Meters	3.00 Meters	-Nil-

5. The builder has proposed to provide Occupant Load as per unit Exit width:

Sl	Floor	Built up area (Sq Mtrs)	Occupancy as Type	No of Occupants as declared by the builder	No of Occupants as per NBC	Aggregate width of Staircases/Doors Required (Meters)	Aggregate width of Staircases/Doors Proposed (Meters)	Deficit
1	Ground Floor	945.2	Industrial	1	94	0.01	1	-Nil-
2	First Floor	120	Industrial	1	12	0.01	1.5	-Nil-
Total		1065.2		2	106			

6. The minimum Fire Fighting Installations required as per Table 7 of Part 4 of National Building Code of India 2016 are:

Sl	Fire Safety System	Minimum Required
1	Fire Extinguishers	6 Nos.
2	Hose Reel Systems	3 Nos.
3	Down Comer	2 Nos (For Each Floor)
4	Manually Operated Electric Fire Alarm System	2 Nos.
5	Terrace Tank	25000 Ltrs
6	Booster Pump	450 LPM

7. The builder has proposed to provide the following floorwise Fire Fighting installations as per Table 7 of Part - 4 of NBC of India 2016.

Sl.	Floor	Fire Ext.	Hose Reel	Down Comer	MCP	Terrace Tank	Booster Pump
1	Ground Floor	5	2		1		
2	First Floor	1	1		1		
Total		6	3	2 Nos (For Each Floor)	2	25000 Ltrs	450 LPM

- Provide ABC 5 kg/6 kg fire extinguishers
- WetRiser / DownComer - 100mm with single outlet landing valves.

## MAIN PROCESSING

2. The builder has proposed to construct a Non Multi Storeyed Building with Ground Floor with a height of 7 Mtrs for Industrial Occupancy (Category - G1) in a total plot area of 18964 sq. meters.
3. The builder has proposed open spaces all around the building

Side	Open Space Required as per GO.Ms.No.119(APBR, 2017) of MA & UD Dept	Open Space Proposed by the Builder	Remarks
North	3 Meters	3.00 Meters	-Nil-
East	5 Meters	5.00 Meters	-Nil-
South	5 Meters	5.00 Meters	-Nil-
West	5 Meters	5.00 Meters	-Nil-

4. The builder has proposed to provide following means of escape, as per clauses 4.4.2.4.3.2 and 4.4.2.4.3.4, Part - IV NBC 2016

Sl	Details of Staircases	Required Nos / Meters as per NBC	Required based on Floor Area	Proposed Nos / Meters	Deficit
2	Internal Staircases	Min 1 No. - 1.5 Meters Each	--	0 No. - 0.00 Meters	-Nil-
3	External Staircases	Min 1 No. - 1.5 Meters Each	--	1 No. - 1.50 Meters	-Nil-
4	Ramp (above Ground)	Min 1 No. - 2.0 Meters	--	0 No. - 0.00 Meters	-Nil-
5	Basement Ramp	Min 1 No. - 1-Way: 3.6 / 2-Way: 5.4 Meters	--	0 No. - 0.00 Meters	-Nil-
Total		0 Nos.	0 Meters	1.50 Meters	-Nil-

4. The builder has proposed to provide following Doorways / Level Components

Sl.	Description	Width (Mtrs)	Location
1	DOOR	2	East

5. The builder has proposed to provide Occupant Load as per unit Exit width:

Sl	Floor	Built up area (Sq Mtrs)	Occupancy Type	No of Occupants as declared by the builder	No of Occupants as per NBC	Aggregate width of Staircases/Doors Required (Meters)	Aggregate width of Staircases/Doors Proposed (Meters)	Deficit
1	Ground Floor	3367.55	Industrial	1	336	0.01	2	-Nil-
Total		3367.55		1	336			

6. The minimum Fire-Fighting Installations required as per Table 7 of Part 4 of National Building Code of India 2016 are:

Sl	Fire Safety System	Minimum Required
1	Fire Extinguishers	17 Nos.
2	Hose Reel Systems	7 Nos.
3	Down Comer	7 Nos (For Each Floor)
4	Manually Operated Electric Fire Alarm System	1 Nos.
5	Terrace Tank	25000 Ltrs
6	Booster Pump	450 LPM

7. The builder has proposed to provide the following floorwise Fire Fighting installations as per Table 7 of Part - 4 of NBC of India 2016.

Sl.	Floor	Fire Ext.	Hose Reel	Down Comer	MCP	Terrace Tank	Booster Pump
1	Ground Floor	17	7		1		
	Total	17	7	7 Nos (For Each Floor)	1	25000 Ltrs	450 LPM

- Provide ABC 5 kg/6 kg fire extinguishers
- WetRiser / DownComer - 100mm with single outlet landing valves.

8. The Officers of the department have recommended to issue The Provisional No Objection Certificate for the proposed construction of Non MSB Industrial Building (G1) belonging to **D SATHYANARAYAN Sy.No.821&822 M. Bandapalli Village, Puthalapattu Mandal, Chittoor - 517124**, subject to the following conditions.

1. The permission accorded does not confer any ownership rights. If it is found that the information furnished is false and fabricated, the permission will be revoked at any stage and the applicant will be liable for criminal prosecution as per IPC.
2. This permission is given based on the information, documents and drawings provided by the applicant. The applicant confirms that the information provided and the documents and drawings submitted electronically are correct. The final approvals of proceedings are subject to verification of documents by concerned official including site visit. Any deviation noticed will lead to cancellation of NOC.
3. Prior approval should be obtained separately for any change of nature of occupancy or change of number of floors or area.
4. Structural safety shall be the responsibility of the Owner / Builder / Developer / Architect or Engineer.
5. Provide one entry and one exit to the premises with minimum width of 4.5 mts and height clearance of 5.0 mtrs.
6. Provide diesel generator of required capacity as alternate source of electric supply.
7. Provide emergency lighting in corridors, common passages and staircases.
8. The occupant load and occupants per unit exit width and minimum travel distance for occupancy shall be as per clause 4.3 (Table 3), clauses 4.4.2.1, Table 4 Capacity factors, Clauses 4.4.2.1, 4.4.2.3(c), 4.4.2.4.2(a) and Table 5 Clauses 4.4.2.1, 4.4.2.2, of part 4-NBC 2016
9. The building shall be suitably compartmented so that fire/smoke remain confined to the area where fire incident has occurred and does not spread to the remaining parts of the building as per clause 4.5 Part 4 of National Building Code of India 2016.
10. Openings in any separating walls in any floor shall be limited to 5.6 meters in area with maximum height of 2.75 meters. Every wall opening shall be protected with Fire resisting doors having fire rating of not less than 2 hrs. All openings in the floors shall be protected by vertical enclosures extending above and below such openings, the wall of such enclosures having a fire resistance of not less than 2 hrs and all openings there in being protected with a fire resisting assembly strictly complying with IS:3614 Part-I 1966 and Clause 3.4.5 of NBC 2016, Part 4. Fire doors should be provided in each floor.
11. Illumination of means of Exit in Staircases and Corridors shall be provided with DG Set Electrical Power as per Clause 3.4.7 of Part 4 of NBC of India 2016.
12. Smoke Venting facilities for safe use of exits shall be provided as per clause 3.4.8, 4.4.2.5 & 4.6 Part -IV of NBC 2016. Emergency Power Supply shall be provided for smoke venting equipment with DG Supply.

13. All Fire Safety Systems shall be provided as per the provisions of Part -4 of NBC of India 2016
14. Levelled hard open spaces as mentioned in the Provisional NOC including 7 meters drive way all around the building for operation of fire vehicles shall be provided.
15. Fire doors with 2 hrs Fire Resistance shall be provided at appropriate places along the escape route and particularly at the entrance to the lift lobby, corridors and staircases.
16. Ventilation of Staircases shall comply with Clause 4.4.2.5, 4.6 of Part 4 of NBC 2016.
17. No Hazardous materials such as Petroleum products, explosives, chemicals etc should be stored on any floor of the building.

The builder is hereby advised to follow the conditions mentioned below while applying for Occupancy NOC :

1. Clause 6.1.2, NBC-PART-IV-2016: Additional Precautions

- a) Flammable liquids for household purposes shall be kept in tightly stopper or sealed containers. For the limits of quantities of flammable liquids to be allowed in various occupancies, reference may be made to appropriate regulations.
- b) No stove or combustion heater shall be located directly under or immediately at the foot of stair or otherwise so located as to block escape in case of malfunctioning of the stove or heater.
- c) All kitchen exhaust fans, where provided shall be fixed to an outside wall or to a duct of non-combustible material, which leads directly to the outside. The ducts shall not pass through areas having combustible materials. However, in case of centralized ducting, the duct shall be provided with adequate protection to limit the spread of fire.
- d) Stores, engineering workshops, areas of high hazard etc used for storage of substantial amount of flammable liquids be of 120 min fire resistance rating wall. Such areas shall be provided with fire doors, to be kept closed and shall be posted with a sign on each side of the door in 25 mm high block letters stating Fire Doors \_ Keep Closed.

2. ANNEX-D, part-IV, NBC-2016

i. D-3 DRILLS

- D-3.1 Fire drills shall be conducted, in accordance with the fire safety plan, at least once every three months for building during the first two years. Thereafter, fire drills shall be conducted at least once every six months.
- D-3.2 All occupants of the building shall participate in the fire drill. However, occupants of the building, other than building service employees are not required to leave the floor or use the exits during the drill.
- D-3.3 A written record of such drill shall be kept on the premises for a three years period and shall be readily available for fire brigade inspection.

ii. D-4 SIGNS AND PLANS

- D-4.1 Signs at lift Landings A sign shall be posted and maintained in a conspicuous place on every floor at or near lift landing in accordance with the requirements, indicating that in case of fire, occupants shall use the same, unless instructed otherwise. The sign shall contain a diagram showing the location of the stairways except that such diagram may be omitted, provided and signs containing such diagram are posted in conspicuous places on the respective floor.

iii. D-5 FIRE SAFETY PLAN

- D-5.1 A Format for the fire safety plan shall be as given in D-9.10.
- D-5.2 The applicable parts of the approved fire safety plan shall be distributed to all tenants of the building by the building management when the fire safety plan has been approved by the Fire Authority.
- D-5.3 The applicable parts of the approved Fire safety plan shall be distributed by the tenants to all their employees and by the building management to all their building employees.

- D-5.4 In the event there are changes from conditions existing at the time the fire safety plan for the building was approved. and the changes are such as to require amending the fire safety plan, within 30 days after such, changes an amended fire safety plan shall be submitted to the fire brigade for approval.

iv. D-6 FIRE COMMANDS CENTRE

- A Fire Command Center shall be established in the building.

9. The following deficiencies are identified by the officers of the department and needs to be attended to by the management.

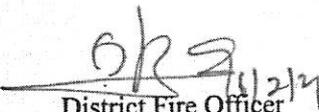
1. All fire safety measures as advised above should be provided without fail. 2. As per clause 13.1 of part-II of the National Building Code of India "neither granting of the permit nor the approval of the drawings and specifications, nor inspections made by the Authority during erection of the building shall in any way relieve the owner of such building from full responsibility for carrying out the work in accordance with the requirements of the National Building Code of India". 3. As per Clause 9.3 of part II of the National Building Code of India "the Licensed Architect/Engineer/Structural Engineer/Supervisor/Town Planner shall be responsible for supervision of the construction and for the completion certificates. In the event of violation of the provisions of the code he shall be liable to penalties as prescribed by the Authority including cancellation of the License." 4. Fresh Provisional Fire NOC would be required for any change or addition/alterations in the building structure as per NBC and building bye laws. 5. Additional/Alteration, if any, in the proposed building may be verified by building authority. 6. As on date of inspection building construction completed. The applicant is requested to provide Fire fighting equipment as per norms and apply Occupancy No Objection Certificate immediately. As per recommendation of the committee and the A.P Government EoDB, policy to encourage the establishment of industry as per GO.Ms.No.90, Dt. 20-06-2017 the Provisional No Objection Certificate issued.

10. This Provisional No Objection Certificate is issued with the advice that the Non Multi Storeyed Building should not be occupied and the operations shall not be commenced without obtaining No Objection Certificate for Occupancy from this Department about the satisfactory installation of above fire safety measures.



10237/CTR/DF0/2019

Your Sincerely,

  
District Fire Officer  
Andhra Pradesh, Chittoor

Copy to D SATHYANARAYAN, Sy.No.821&822 M. Bandapalli Village, Puthalapattu Mandal, Chittoor - 517124

Copy to Assistant District Fire Officer concerned

Copy to Station Fire Officer concerned

Email

APPOTHERI NARENDRA BABU

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**PCB-RO-TPT- Joint inspection committee constituted by Hon'ble NGT - Inspection report along with Environmental Compensation - Communicated - Reg**

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**From :** APPOTHERI NARENDRA BABU <rotpt-ee1@appcb.gov.in>

Tue, Mar 16, 2021 05:11 PM

1 attachment

**Subject :** PCB-RO-TPT- Joint inspection committee constituted by Hon'ble NGT - Inspection report along with Environmental Compensation - Communicated - Reg**To :** paramasivan p <paramasivan.p@hap.in>

Sir,

Please find here with attached

Regards,  
EE,RO,TPT**Compansation.pdf**637 KB

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**APPENDIX**

**Report of the Joint Committee on**

**Tribunal on its own motion-SUO MOTU based on the News item in India Today Web Portal Dated 21.08.2020, “several hospitalised after ammonia gas Leakage at dairy unit in Andhra Pradesh’s Chittoor”**

**Vs**

**Union of India and 8 Ors**

**In**

**Original Application No.162 of 2020**

**Submitted to**

**Before the National Green Tribunal  
South Zone, Chennai**



**REPORT OF THE JOINT COMMITTEE IN COMPLIANCE WITH THE HON'BLE  
NGT (SZ) ORDER DATED NOVEMBER 4, 2020 IN ORIGINAL APPLICATION NO.  
162 OF 2020 IN THE MATTER OF SUO MOTO CASE REGISTERED BY NGT**

**1.0 Preamble**

The National Green Tribunal (NGT) Southern Zone, Chennai in O. A. No. 162 of 2020 in the matter of SUO MOTO case has passed an order dated November 4, 2020 and the operative portion of the order is reproduced as under and the copy of the NGT order is annexed as *Annexure 1*:

*“9. ....So, under such circumstances, it cannot be said that they are not liable to pay any environmental compensation as mentioned by the committee. It is also mentioned in the report that they have failed to install ammonia gas sensors and alarm system in case of accident, so as to alert the workers to take immediate steps to go out or to arrest the leak immediately. So as per the guidelines given by the Central Pollution Control Board, environmental compensation has to be assessed applying the ‘Polluter Pays Principle’ for these violations. When this was pointed out the learned counsel appearing for the Central Pollution Control Board who is the nodal agency of the committee submitted that they will work out the environmental compensation as per the guidelines and submit a further report.....”*

**2.0 Assessment of Environmental Compensation**

As per the direction dated February 19, 2019 in case of O.A. No. 593/2017 (W.P. Civil No.375/2012), CPCB has developed a methodology for assessing environmental compensation (EC) based on the pollution index of industries. Environmental Compensation calculated as per the honourable NGT direction dated November 4, 2020 is deliberated below as per the formula (EC= PI x N x R x S x LF):

- **PI (Pollution Index)** is calculated as per the categorisation of industries as red, orange, green & white. Andhra Pradesh Pollution Control Board has categorized this industry into red category of industries and accordingly the Combined consent & Authorisation

have been granted. For red category of industries, average pollution index is 80 as suggested for environmental compensation calculation (PI = 80)

- ***N (Number of days of violation took place)*** the number of days for which violation took place is considered as the period between the day of violation observed and day of compliance verified by the APPCB. From the available records, it is observed that APPCB issued stop production directions to M/s Hatsun Agro Products Ltd on 21.08.2020 after the incident (20.08.2020) and the industry was issued temporary revocation of stop production on 17.09.2020 after the compliance of certain direction. Based on this, 28 days (from 21-08-2020 to 17-09-2020 including both the days) is considered for calculation of environmental compensation (N = 28 days).
- ***R (Rupee factor)*** as per the environmental compensation estimation guidelines, factor of rupees may be minimum of Rs 100/- and maximum of Rs 500/- . Since the incident occurred due to operational negligence, human error and lack of standard operating procedure, the committee decided to take Rupee factor as 300 for environmental compensation calculation (R = 300).
- ***S (Scale of operation)*** since the industry falls in medium scale as per the consent to operate issued by APPCB, the S factor is taken 1.0 as suggested in environmental compensation calculation (S = 1.0).
- ***LF (Location Factor)*** is considered as 1, since the industry is located at Vavilthota village of Puthalapattu mandal of Chittoor district and having population less than one million. (LF = 1.0).

Report of the Joint Committee in case of O. A. No. 162 of 2020

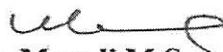
S. No.	Period of non-compliance	PI	N (days)	R (Rs)	S	LF	Environmental compensation (Rs)
1	21.08.2020 to 17.09.2020 (inclusive of both days)	80	28	300	1	1	6,72,000/-
<b>Total EC for violating</b>						<b>28</b>	<b>6,72,000/-</b>
<b>Rupees Six Lakhs Seventy Two Thousand Only</b>							

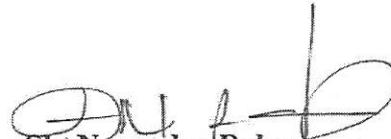
Committee suggested imposing environmental compensation of Rs. 6,72,000/- (Rupees Six Lakhs Seventy Two Thousand only) as illustrated above for 28 days till compliance (17-09-2020).

### 3.0 Recommendations

M/s Hatsun Agro Products Limited, Vavilthota Village, Puthalapattu Mandal , Chittoor district shall pay Environmental Compensation of Rs. 6,72,000/- (Rupees Six Lakhs Seventy Two Thousand only) with APPCB within a period of one month.

Report dated December 9, 2020

  
Sh. Murali M S  
District Revenue Officer &  
Additional District Magistrate  
Chittoor

  
Sh. Narendra Babu  
EE, RO-Tirupati  
Andhra Pradesh Pollution  
Control Board

  
Smt. Poornima B M  
Scientist D  
Central Pollution Control Board  
Regional Directorate - Chennai