


**BEFORE NATIONAL GREEN TRIBUNAL
PRINCIPAL BENCH, NEW DELHI
ORIGINAL APPLICATION No. 107/2020**

COMMITTEE REPORT IN THE MATTER OF OA NO.107/2020 SUBMITTED TO HON'BLE
NATIONAL GREEN TRIBUNAL, PRINCIPAL BENCH, DELHI IN COMPLIANCE TO
HON'BLE NGT ORDER DATED 6TH JULY, 2020

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Kurnool

28.10.2020
Kurnool

Report of the Joint Committee in the matter of OA No. 107/2020 (PB)

AMMONIA GAS LEAKAGE ACCIDENT OCCURRED IN M/S S.P.Y. AGRO INDUSTRIES LTD AT APIIC, NEW INDUSTRIAL ESTATE, UDUMULAPURAM (V), NANDYAL (M), KURNOOL DISTRICT, ANDHRA PRADESH.

REPORT OF THE JOINT COMMITTEE COMPRISING REPRESENTATIVES OF CENTRAL POLLUTION CONTROL BOARD (CPCB), ANDHRA PRADESH POLLUTION CONTROL BOARD (APPCB), DISTRICT COLLECTOR AND MAGISTRATE, KURNOOL, PROF. CH. V. RAMACHANDRA MURTHY, ANDHRA UNIVERSITY, VIZAG AND PROF. PULIPATI KING, HEAD OF CHEMICAL ENGINEERING DEPARTMENT, ANDHRA UNIVERSITY, VIZAG IN THE MATTER OF OA.

NO. 107/2020(PB) DATED: 6thJULY, 2020



Submitted to

Hon'ble National Green Tribunal

Principal Bench, New Delhi

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Report of the Joint Committee in the matter of OA No. 107/2020 (PB)

I. Preamble

An accident occurred at M/s S.P.Y. Agro Industries Ltd at APIIC, New Industrial Estate, Udumulapuram (V), Nandyal (M), Kurnool District on 27.06.2020. Hon'ble National Green Tribunal Principal Bench in light of newspaper report of 28.06.2020 "one person died and three persons exposed to ammonia gas during accident at M/s S.P.Y. Agro Industries Ltd" have initiated Suo-moto case. The Hon'ble NGT, vide order dated 06th July, 2020 has constituted a joint committee comprising of representatives of CPCB, State PCB, District Magistrate, Kurnool, Prof. Ch. V. Rama Chandra Murthy, Andhra University, Vizag and Prof. Pulipati King, Head of Chemical Engineering Department, Andhra University, Vizag to assess final compensation to the victims and for restoration of the environment and suggestions for precautions in future. APPCB will be the nodal agency for compliance.

II. Orders of the Hon'ble Tribunal dated 06.07.2020

"We further direct constitution of a Committee comprising representatives of CPCB, State PCB, District Magistrate, Kurnool, Prof. Ch V. Rama Chandra Murthy, Andhra University, Vizag and Prof. Pulipati King, Head of Chemical Engineering Department, Andhra University, Vizag to assess final compensation to the victims and for restoration of the environment and suggestions for precautions in future. The Committee may give its report within three months by e-mail atjudicial-ngt@gov.in preferably in the form of searchable PDF/OCR Support PDF and not in the form of Image/PDF. State PCB will be the nodal agency for compliance. The Committee may visit the site, consider the view point of management, workers or any other stakeholders. The Chief Secretary, Andhra Pradesh may identify and take appropriate action against persons responsible for failure in overseeing the execution of on-site and off-site emergency plans and holding of mock drills as per statutory requirement. MoEF&CC may look into this incident also while furnishing its report in OA 73/2020, In re: Gas Leak at LG Polymers Chemicals Plant in RR Venkatapuram Village, Visakhapatnam in Andhra Pradesh." Copy of the Hon'ble NGT order dated 06.07.2020 is placed as **Annexure-I**. In compliance to Hon'ble NGT order, committee comprising of following members was composed:

1. District Collector and Magistrate, Kurnool
2. Prof. Ch V. Rama Chandra Murthy, Andhra University, Vizag
3. Prof. Pulipati King, Head of Chemical Engineering Department, Andhra University, Vizag
4. Smt. Mahima T, Scientist-D, Central Pollution Control Board, Regional Directorate, Chennai
5. Sh. K. Venkateswara Rao, Joint Chief Environmental Engineer, Zonal Office, A.P. Pollution Control Board, Kurnool(Nodal agency)

III. Scope of Committee

The Committee has been vested with the mandate to visit and inspect the site in question and vested with following scope vide the Order dated 06.07.2020:

- a. Sequence of events, Causes of failure, Ascertain facts
- b. Determine responsibility
- c. Extent of damage to human life and environment
- d. Assess final compensation for the victims and environment
- e. Steps taken for compensating the victims and for restoration of the environment
- f. Measures to prevent recurrence and other incidental issues
- g. To consider the view point of all the stakeholders.
- h. Quantification of final compensation and preparation of restoration plan

IV. Site Visit by the NGT Committee

The committee convened its first meeting on 08.08.2020 through video conference (VC) and devised an action plan to proceed further in the case and minutes of first meeting is submitted as **Annexure-II**. The committee inspected the unit on 21st & 22nd September, 2020, interacted with unit officials, unit personnel who were present during the accident occurred around 9:30 am on 27.06.2020 near ammonia storage tank (CO₂ unit). During the accident one person died and four were exposed to ammonia gas. APPCB has issued stop production order. The Committee monitored the ammonia levels near ammonia storage tank and area surrounding CO₂ unit.

V. About M/s SPY Agro Industry Limited, Nandyal

V.(a) General information

M/s S.P.Y Agro Industry is a grain based distillery, established in 2008 for manufacture of total spirit-134 KLD OR 125 KLD Extra neutral alcohol with Cogeneration power plant of capacity 4MW. The industry is located at APIIC, New Industrial Estate, Udumulapuram(V), Nandyal(M), Kurnool District in about 43 acres, in which built-up area of 14.87 acres and green belt area of 14.30 acres.

V.(b) Environmental Clearance and CFE & CFO issued by MOEF&CC and APPCB

- a. APPCB issued Consent for Establishment (CFE) dt:04.01.2006 to setup distillery for manufacture of Total Spirit-134 KLD (OR) Extra Neutral Alcohol (ENA)-125 KLD with Cogeneration Power Plant of capacity-4MW. First CFO was issued by APPCB to the unit vide order dt. 07.07.2008.

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- b. MoEF&CC issued Environmental Clearance (EC) dt:28.06.2007 for 134 KLPD grain based distillery unit RS/ENA / Ethanol &4MW Co-generation power plant.
- c. APPCB issued CFE dt.07.07.2008 for establishment of CO₂ recovery plant and industry has established CO₂ recovery plant in the name of M/s Nandyala gases Pvt Ltd during 2008. APPCB issued first CFO 28.03.2009 to operate CO₂ plant and the same was renewed vide order dated:29.08.2011 with a validity upto 30.09.2014. After the expiry of consent during 2014, M/s Nandyala gases Pvt Ltd (CO₂ plant) did not apply for renewal of consent and APPCB, RO, Kurnool issued notice to the industry for not submitting the application for renewal of consent, vide notice No.171 / KNL / PCB / RO / KRNL / Notices / 2014, dt: 13.03.2015. Consequent to the notice, M/s Nandyala gases Pvt Ltd informed vide their letter dated:27.05.2015 that M/s Nandyala gases Pvt Ltd (CO₂ plant) has been merged with M/s S.P.Y. Agro Industries (distillery cum co-generation power plant) and copy of Hon'ble High Court Order dt: 09.07.2012 was submitted as proof of merger. Since then APPCB has issued common consent to distillery, CO₂ plant and Co-generation power plant.
- d. MoEF&CC issued Environmental Clearance for expansion dt: 14.02.2015 for expansion of production capacity of Total Spirit from 134 KLD to 500 KLD (OR) ENA from 125 KLD to 475 KLD and Co-generation power plant from 4MW to 16.5MW.
- e. APPCB issued CFE for expansion dt:27.04.2015 for expansion of production capacity of Total Spirit from 134 KLD to 500 KLD (OR) ENA from 125 KLD to 475 KLD and Co-generation power plant from 4MW to 16.5MW. The industry has not implemented this proposed expansion activity till now except increasing the capacity of co-generation power plant from 4MW to 6.5MW.
- f. APPCB has renewed the CFO to M/s S.P.Y. Agro Industries Limited on 15.04.2010, 30.10.2013, 13.03.2015 with a validity period upto 31.03.2017. The Board vide auto renewal order dt:26.04.2018 has extended the validity of the CFO for the period upto 31.10.2019. The latest CFO was issued on 03.03.2020 (**Annexure-III**) with a validity upto 31.10.2021 for Total Spirit – 134 KLD (OR) Extra Neutral Alcohol (ENA) – 125 KLD and Co-generation of Power Plant – 6.5 MW.

V.(c) Location of the unit:

M/s S.P.Y Agro Industries Limited is located at latitudes 15⁰28'52.23" N; Longitudes 78⁰26'44.40" E at an elevation of 204 mts. The industry is surrounded by

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North: Proposed residential plots (presently no habitation) developed by Ganesh Nagar & Maruthi Nagar Development Society (about 100mts distance)

South: M/s Nandi Plasticizers and other industrial activities

East: Private vacant land followed by agricultural lands

West: Agricultural lands.



The aerial distance between the distillery and Venkateswarapuram, V.C colony, Moolasagaram and Krishna nagar is around 0.6KM, 2KM, 2.84 KM and 2.9KM respectively. The Nandyala town is located at about 2 Kms distance in eastern direction from the industry, Kundu river is the nearest water body at a distance of about 1.25Kms in North-Eastern direction from the industry.

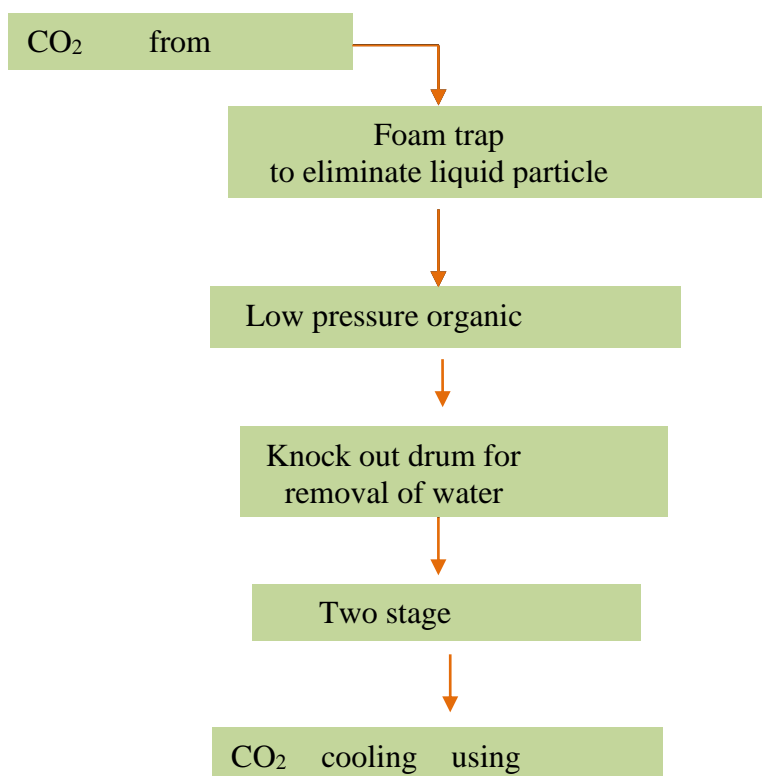


V.(d) Workers:

431 persons are employed in the unit including 331 permanent employees and 100 contract workers.

V.(e) Production process:

Grain flour @ 60% starch content (Maize, Sorghum, Bajra & broken rice):339 TPD, Enzymes:0.5 TPD are the raw materials required in distillery. Rice husk: 120 TPD & Coal: 150TPD are used in co-generation power plant. The raw material is liquefied and then fermented to produce alcohol. Carbon-dioxide is produced during fermentation. The CO₂ gas so produced is collected and stored for further use. The gaseous CO₂ is converted into liquid CO₂ using ammonia as a refrigerant. During bio chemical reaction in fermentation section, the Carbon dioxide (CO₂) is generated as by-product along with Ethyl alcohol. This raw CO₂ gas having 99% v/v purity (dry basis) is taken for purification followed by liquefaction.



CO₂ is cooled and maintained -25⁰C hence liquid ammonia which is at a temperature of -30⁰C is used. Ammonia gas does not react with CO₂ and is used only as coolant, hence ammonia loss takes place due to evaporation etc. Purified liquid CO₂ of desired quality will be sent to liquid CO₂ storage tank. Liquid CO₂ and ammonia storage tank has to be equipped with all necessary accessories like pressure safety valves, insulation. After the scrubber, the pressurized CO₂ will be liquefied and stored in the storage container which will be disposed through tankers to the soft drink manufacturing units. Total CO₂ production will be 80 T/day.

VI. Accident occurred at S.P.Y Agro distillery, sequence of events and causes for accident

An accident occurred in the unit at around 9.30 AM on 27.06.2020 (Saturday).

VI.(a) The sequence of events are described as follows:

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26.06.2020 03.00 P.M	<p>Workers noticed that there is a problem in Ammonia pipeline solenoid valve, which is passing from ammonia receiver tank to economizer. It is informed to the plant General Manager, Sri K. Srinivasa Rao. Upon instructions of the plant General Manager, the production of liquefied CO₂ has been stopped at 3.00 PM on 26/06/2020. After verification Sri K. Srinivasa Rao, General Manager has instructed to replace the solenoid valve to resume the production.</p> <p>Sri K. Srinivasa Rao, General Manager instructed the workers namely Sri P. Ravi Chandrudu, Fitter cum operator and Sri K. Madhusudhanachari, Fitter to replace the solenoid valve.</p>
26.06.2020 06.00 P.M	<p>The new solenoid valve was issued by the instrumentation team of SPY Agro Industries Limited for replacement of old one and started the work of replacement by Sri P. Ravi Chandrudu, Fitter cum Operator and Sri K. Madhusudhanachari, Fitter.</p>
27.06.2020 5:00 A.M	<p>Replacement of new solenoid valve was completed by the fitters around 05:00 a.m. on 27-06-2020. The valve was fitted to the pipelines by welding.</p>
27.06.2020 09.00 A.M	<p>Sri K.SrinivasaRao, General Manager instructed to restart the CO₂ plant and requested officials from instrumentation department to come to CO₂ plant. CO₂ plant was restarted by Sri P. Ravi Chandrudu and Sri K. Madhusudhananchari. Sri K.Thippa Reddy, Manager-Instruments, Sri G.Tirumala, Superivisor, Sri Harin, Instrument Engineer from M/s S.P.Y Agro Industries Limited, came to the CO₂ plant. At this stage six members were present in the CO₂ plant.</p> <p>Sri K.SrinivasaRao, General Manager of the plant and overall in charge of the operations and instrumentation division</p> <p>Sri K.Thippa Reddy, Manager-Instruments</p> <p>Sri Harin, Instrument Engineer</p> <p>Sri G.Tirumala, Superivisor</p> <p>Sri K. Madhusudhananchari, Fitter</p> <p>Sri P. Ravi Chandrudu, Fitter cum operator</p> <p>Sri K.SrinivasaRao started the CO₂ compressor plant and adjusted the parameters of each equipment of Programmable Logic Control (P.L.C) and others were verifying the fields of each equipment in the plant. Sri K.Madhusudhanachari went out to check up the liquefied CO₂ storage tanker, which is located outside the machinery hall.</p>

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27.06.2020 09.30 A.M	<p>Sri K.SrinivasaRao instructed Sri P.Ravichandrudu to open the ammonia gas pipeline valve, which is at the ammonia receiver. Sri P. Ravichandrudu opened ammonia pipeline valve and came near the Programmable Logic Control unit (P.L.C) where Sri K.SrinivasaRao was operating. The ammonia storage tank and PLC controller are present at the ground floor while solenoid valve and other associated machinery are present at an elevation.</p> <p>Sri K.SrinivasaRao operated ammonia compressor at P.L.C. Immediately, the portion of the ammonia pipe connected by welding burst open and ammonia gas stored at -30C leaked and spilled from top on of Sri K.SrinivasaRao standing below. Since ammonia was at -30C, soon after it spilled, he has freezed, burnt and he was unable to escape. The other employees though were exposed to gas but managed to escape safely without any major injuries.</p> <p>Sri K.Thippa Reddy informed the HR Department and HR Department inturn informed to fire department and other departments.</p>
27.06.2020 10.00 A.M	<p>Fire department persons arrived at the unit and started spraying of water into the machinery hall to dilute the Ammonia gas.</p> $\text{NH}_3 + \text{H}_2\text{O} = \text{NH}_4\text{OH}$ <p>Ammonia dissolves with water to form ammonium hydroxide</p>
27.06.2020 12.40 P.M	<p>The Fire department persons went inside the machinery hall by wearing self-contained breathing apparatus and brought out Sri K. Srinivasa Rao and he was sent in ambulance to Government Hospital, Nandyal, where it was declared that he was brought dead.</p>
27.06.2020 02.00 P.M	<p>Sri P. Ravi Chandrudu, Fitter/Operator, Fire Department Team and Safety team of M/s Sree Rayalaseema Alkalies and Allied Chemicals Limited, Kurnool went inside the machinery hall by wearing self-contained breathing apparatus and closed the Ammonia gas main valve at 14:00 hrs and leakage of Ammonia gas was arrested. On 27.06.2020, from 9:30 AM till 14:00 hrs (4 ½ hrs) ammonia gas has leaked into the atmosphere and water spraying was carried out to dilute it.</p>

VI.(b) Causes of failure:

The accident occurred mainly due to the following two reasons:

1. The solenoid valve must be installed with the arrow on the valve body in the direction of flow through the valve. If the valve is backwards, the flow will not be stopped when the valve is electrically de-energized, reversal of pressure occurs in the system so the outlet pressure exceeds the inlet pressure by more than 0.07 bar (11 psi) reverse flow will occur. It was observed that valve was not fitted correctly which has resulted in reverse flow.

2. The committee observed that ammonia pipeline was connected to solenoid valve by both welding and threading of flanges. Just after the solenoid valve, there is a cut in the ammonia pipeline and it is joined by welding. The cut portion of the ammonia pipeline is not properly welded. After the solenoid valve was replaced and when ammonia was charged, pressure has increased due to flow reversal and the portion of the ammonia pipeline which is joined by welding burst and ammonia leaked into surrounding area.
 - a. It is essential that after replacing the valves, it has to be pressure tested prior to charging the system with ammonia. The pressure testing or functionality testing of solenoid valves is to be carried out as per the Manufacturers/ Operator manual or by instrumental air supply. After pressure testing of valve, before putting valves into service, all pipe connections, valve seats and seals should be tested for leaks at pressure levels using instrumental air. In this particular accident, when the valve was replaced the pressure testing was not done and ammonia was directly charged.
 - b. Standard procedure was not devised for replacing the solenoid valve by the unit or by Late Sri K.Srinivas Rao, Unit Manager who was overall incharge for safe operations of the entire unit.
 - c. It is observed that lot of machinery, ammonia storage tank, condensers are compactly housed in the gas cooling section. There is insufficient ventilation and difficult to escape during accidents.
 - d. People doing any work on a refrigeration system must be qualified and completely familiar with the system which was lacking in the present case. For the protection of people and products, all refrigerant must be removed from the section to be worked on or it should be isolated before a valve, strainer, or other device is opened or removed.
 - e. Personal Protective Equipment (PPE), including SCBA (Self-Contained Breathing Apparatus), must be used for safety while handling ammonia. A risk assessment must be conducted to determine the level of personal protective equipment likely to be needed for various activities, including access. PPE's such as chemical safety goggles, face shield chemical protective clothing and boots to be worn by personnel while working. It was informed to the committee that the employees involved were not wearing PPEs other than mask due to covid-19 pandemic.
 - f. During the visit, it was informed to the committee that this was the third time the solenoid valve was replaced in the ammonia refrigeration section since establishment of CO₂ plant. The fitters who carried out the welding were not trained for welding operation of solenoid valve considering that the frequency of replacing the valve was only three times.

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- g. The cut portion of the pipeline is loosely joined by welding which could not withstand the pressure and joint portion opened.
- h. Lack of training and poor emergency preparedness of the personnel.
- i. Operational Negligence, Human error, Lack of Standard Operating Procedures(SOPs) for solenoid valve replacement, poor ventilation in the machinery room, Non-issuance of Personnel protective equipment by unit to employees are the causes for accident. **The employees and Management of the unit, both are responsible for the accident.** The immediate trigger to the accident was improper installation of solenoid valve (not in compliance with instrument manual) which lead to reverse flow and pressure increase, not conducting the pressure test and leak test in all pipe connections, valve seats and seals before charging ammonia and loosely joining the cut portion of the pipeline by welding which caused ammonia leakage.



VI.(c) Qualification & experience of deceased/ injured employees:

Six employees were present near the accident spot at the time of accident on 27.06.2020. The qualification, designation, experience of these six employees is given in Table 1. From the qualification, experience of the employees and by interaction with these employees, the committee is of the opinion that the unit had employed qualified staff and were also experienced in unit but were not experienced in replacing solenoid valve.

Sl. No	Emp Code	Name of the employee	D-O-B	Date of joining unit	Designation	Educational Qualification	No. of years experience in unit
1	9211	K.Srinivasa Rao	10-07-1973	01-12-2010	G.M (CO ₂)	B.Tech (Mech)	9yrs, 6mths
2	9209	P.Ravi Chandra	02-06-1977	08-06-2010	Operator & Fitter	ITI(Fitter)	10 yrs
3	4014	K.Thippa Reddy	01-05-1972	13-07-2011	E & I Manager	Diploma(EE)	8yrs, 11mths
4	9218	K.Madhusudha nachari	05-07-1981	01-04-2017	Operator & Fitter	ITI(Fitter)	3yrs, 2mths

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5	4013	G Tirumala	24-11-1977	21-11-2010	Inst Supervisor	ITI(Electronics &mechanic)	9yrs, 7mths
6	4022	N.Harin	03-06-1985	05-07-2013	Sr.Engineer	MSc in Instrumentation	6yrs, 11 mths

VII Measures taken by M/S S.P.Y Agro unit, District Collector, APPCB, Fire Department and Inspector of Factories after accident

VII.(a) *Immediate Measures taken by M/s SPY Agro*

HR department from the unit informed to the Fire Department, Police, APPCB and Inspector of Factories. The employees were alerted to move away from the accident spot. The workers from Odissa workers shed located near CO₂ plant were evacuated to safe places. Sri K. Srinivasa Rao was taken in ambulance to Government Hospital, Nandyal, where it was declared that he was dead. The unit took complete responsibility to shift the mortal remains to his residence. For immediate requirement, the unit paid Rs.20.00 lacs in cash to the deceased wife.

VII.(b) *Immediate measures taken by the Collector & District Magistrate, Kurnool*

Soon after receipt of phone call from fire department about the ammonia gas leakage accident occurred in M/s SPY Agro Industries Limited, Udumulapuram Village, NandyalMandal, Kurnool District on 27.06.2020, the Collector and District Magistrate, Kurnool rushed to the accident spot along with Joint Collector (Revenue), Superintendent of Police and Revenue Divisional Officer, Nandyal. As per the directions of the Collector and District Magistrate, the Superintendent of Police evacuated the people in the radius of 1.0 Km and 4 fire engines were brought to the unit. With the co-ordination of all the stake holder departments, the situation was brought under the control. Till such time, the Collector and District Magistrate was there until the gas leakage was contained and thus, loss to people and surrounding environment was minimised. Due to the presence of Collector and District Magistrate at the accident spot till the leakage was arrested, the people around the plant felt relieved.

The Collector and District Magistrate, Kurnool vide Procs.Rc.No. D4.829/2020, Dt.27/06/2020 constituted a Committee with the following Members to enquire into the incident of Ammonia Gas Leakage occurred at M/s SPY Agro Industries Limited, Udumulapuram Village, Nandyal Mandal, Kurnool District with a direction to inspect the incident place and to submit the report for onward submission to the Government.

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1	General Manager, District Industries Centre, Kurnool	Chairman
2	Revenue Divisional Officer, Nandyal	Members
3	Zonal Manager, APIIC, Kurnool	Members
4	Inspector of Factories, Kurnool	Members
5	District Fire Officer, Kurnool	Members
6	Deputy Commissioner of Labour, Kurnool	Members
7	Environmental Engineer, APPCB, Kurnool	Members
8	Deputy Superintendent of Police, Nandyal	Members

The detailed enquiry report of the committee constituted by District Magistrate dt:30.07.2020 is attached (**Annexure-IV**). As per the report, the causes for accident are as follows:

- a. The replacement of break down solenoid valve has not been done by an Certified Agency with qualified team. The method of welding of joint of Ammonia pipe line is unsafe. The person who carried out such welding of pipeline is neither qualified nor trained to do such type of welding work.
- b. The Team has not led in a proper way following safety codes. Failed to do proper testing of the ammonia pipe line after the welding work was carried out with water pressure for its strength of the welding joint by the competent person, before putting it into use.
- c. Failed to ensure the working conditions of the ammonia gas Pressure gauges in the Factory.
- d. Failed to provide personal protective equipment like insulated gloves, chemical aprons, face shields and self-contained breathing apparatus to all the workers working in the Factory.
- e. Failed to appoint qualified and experienced persons as operators in the Factory.
- f. Overall negligence attitude of the Management in focusing on the Safety standards in the Factory.

VII.(c) Measures taken by APPCB

APPCB officials along with Joint Chief Environmental Engineer, Zonal Office, Kurnool arrived to the accident spot soon after receiving the telephonic information and assisted in evacuating the employees to safe zones and in mitigating the impacts. APPCB along with Dy. Chief Inspector of Factories and unit employees arrested the leakage with the help of Fire Department & employees of M/s TGV SRAAC Ltd. and brought situation under control. APPCB officials monitored ambient ammonia concentration and employees were halted in safe zones. APPCB issued “Stop Production Order to the

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unit". APPCB gave first priority to arrest the leakage. After the valves were closed and leakage was stopped and situation was under control, APPCB started monitoring of ambient ammonia.

VII.(d) *Monitoring of ammonia concentration after the accident*

APPCB monitored ambient ammonia in and around of M/s S.P.Y. Agro Industries Limited from 14:10 hrs of 27.06.2020 to 13:00 hrs of 28.06.2020 using hand held PID gas detector with minimum detection limit of 0.1ppm ($69.38\mu\text{g}/\text{m}^3$). The concentrations of ammonia are as follows:

Table 2: Concentration of ammonia $\mu\text{g}/\text{m}^3$ measured around 2.10 p.m on 27.06.2020

Sl.No	Location	Concentration of ammonia ($\mu\text{g}/\text{m}^3$) measured around 2.10 p.m on 27 th day of June, 2020
1.	Near security gate of M/s S.P.Y Agro Industries Ltd. (Bottling division)	610.61
2.	Near the accident spot of CO ₂ recovery plant	607.14
3.	Near the workers quarters towards North East from the accident area	520.40
4.	Near the road towards south side from the accident area.	364.28

In addition to above locations, APPCB monitored ambient ammonia in 12 locations in and around the industry and concentrations are as follows:

Table 3: Ambient ammonia monitoring results

Sl. No	Location	Concentration of Ammonia in $\mu\text{g}/\text{m}^3$			
		27.06.2020 (4.10pm to 6.00 pm)	27.06.2020 (9.00pm to 11.00 pm)	28.06.2020 (7.30am to 9.00 am)	28.06.2020 (11.30am to 1.00 pm)
		NAAQM Standard: (for 24 hours) $400\mu\text{g}/\text{m}^3$			
1.	Near Security gate of bottling unit at a distance of 300 m	508.16	138.77	138.77	69.38
2.	Near bottling shed (150 m)	69.38	69.38	69.38	BDL
3.	Near CO ₂ storage tanker (20 m)	69.38	69.38	69.38	BDL

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4.	Near accident spot (10 mtrs)	485.71	208.16	69.38	69.38
5.	Near Odisha people/Worker (30 m)	277.55	69.38	BDL	BDL
6.	SPY worker housing colony (Under construction – No habitation (1.5 KM) North direction	555.10	277.55	138.77	138.77
7.	Near Katasani Rami Reddy Lay out (2 Kms) North direction	484.71	277.55	138.77	69.38
8.	Near YSR Colony (3.5 KM) North direction	208.16	138.77	69.38	BDL
9.	Auto nagar (0.5 KM) – South Side	138.77	138.77	69.38	BDL
10.	Near Hyundai Showroom (1 Km) South side	138.77	138.77	BDL	BDL
11.	Near Venkateswarapuram (0.5 KM) East direction	208.16	138.77	BDL	BDL
12.	Near Kundu River Bridge (1.5 Km) East Direction	138.77	138.77	BDL	BDL

Table 4: Ambient Air Quality Monitoring results carried out for 24 hours (27/06/2020 to 28/06/2020)

Sl. No.	Parameter	Shift	Concentration in $\mu\text{g}/\text{m}^3$	Day average concentration in $\mu\text{g}/\text{m}^3$	Standard as per NAAQM (24 Hrs.) in $\mu\text{g}/\text{m}^3$
1.	Ammonia (as NH_3)	I-A	510.4	291.2	400
		I-B	464.0		
		II-A	417.6		
		II-B	227.9		
		III-A	70.5		
		III-B	56.8		

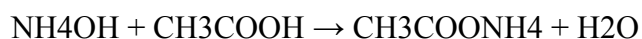
2.	Sulphur dioxide (as SO ₂)	I-A	4.2	4.3	80
		I-B	4.6		
		II-A	4.4		
		II-B	4.2		
		III-A	4.2		
		III-B	4.0		
3.	Nitrogen dioxide (as NO ₂)	I-A	28.6	26.5	80
		I-B	30.2		
		II-A	28.7		
		II-B	26.4		
		III-A	24.6		
		III-B	20.8		
4.	Particulate Matte (as PM ₁₀)	I	82	50.3	100
		II	26		
		III	43		

Analysis reports are enclosed as (**Annexure-V** (a), (b) & (c) respectively. From the ammonia monitoring results, it is clear that due to water spraying the ammonia gas dissolved in water and thereby the impact was greatly minimized. It is observed that the concentrations of ammonia gradually decreased due to dispersion & dilution.

VII.(e) Safe disposal of left over ammonia in the tank

The process of draining of remaining ammonia gas in the Ammonia receiver started at 05.35 p.m on 29.06.2020. The safety team of TGV SRAAC Limited, Kurnool and the operator Sri P. Ravichandrudu of the said CO₂ plant, by wearing self-contained breathing apparatus arranged a pipe, fixed at the drain pipe of ammonia receiver. The other end of the pipe was put into drum which contain 400 litres of water and slowly opened the drain pipe valve to dissolve the ammonia into the water and the ammonia gas from the storage tank was drained by dissolving in 3 drums of 400 litres water each. The ammonium hydroxide so formed (ammonia gas reacts with water to form ammonium hydroxide), about 1200 litres was transferred to the Effluent Treatment Plant (E.T.P) of M/s S.P.Y Agro Industries Limited for treatment. In ETP, the ammonium hydroxide (weak base) was first neutralized using acetic acid (weak acid) followed by clarification and filtration. Ammonium acetate salt is formed which gets precipitated and is removed as ETP sludge.





VIII. Assessment of Damage and Quantity of ammonia gas leakage:

The ammonia gas leakage from the CO₂ plant of M/s S.P.Y Agro distillery started at 9:30 AM on 27.06.2020. From 10:00 AM on 27.06.2020, the fire department personnel started water spraying to suppress fire and to dilute and dissolve ammonia but however ammonia leakage continued till 02:00 PM on 27.06.2020 (4 ½ hrs). Around 2:00 PM, the unit officials closed valve and stopped leakage. The capacity of ammonia storage tank was 2 Tons and as per information given by unit and inspector of Factories 750 Kgs of ammonia was stored in the tank. Out of which 500 Kgs of ammonia is discharged into the environment due to leakage. The remaining 250 Kgs of ammonia was safely neutralized with water. At 3.00 pm Sri P.RaviChandrudu (operator) has furnished the details of ammonia gas leakage through a letter dt:21.10.2020 addressed to the Deputy Inspector of Factories to that affect and also furnished the photocopy of the stock register showing the ammonia quantity was also furnished. The damages caused are summarized as follows:

VIII.(a) Contribution of Ammonia gas emissions into the atmosphere:

Ammonia is a colourless, corrosive, alkaline gas that has a very pungent odour. The odour detection levels ranges from 5 to 53 ppm. Ammonia is very soluble in water. Because of its exothermic properties, ammonia forms ammonium hydroxide and produces heat when it contacts moist surfaces, such as mucous membranes. The corrosive and exothermic properties of ammonia can result in immediate damage (severe irritation and burns) to the eyes, skin, and mucous membranes of the oral cavity and respiratory tract. In addition, ammonia is effectively scrubbed in the nasopharyngeal region of the respiratory tract because of its high solubility in water. At concentration more than 100ppm it causes severe eye, throat and nose irritation. At concentration more than 500ppm, it will cause coughing, bronchospasm and chest pain along with severe eye irritation and tearing. At concentrations more than 1000ppm it causes chemical bronchitis, fluid accumulation in lungs, chemical burns of the skin.

Table 5: Effects of Ammonia

Concentration (ppm)	Symptoms	Signs	Consequences
Less than 5000	Stinging in eyes and mouth, pain when swallowing, hoarseness, tightness of throat, cough	Reddening of Conjunctivae, lips, mouth and tongue, swelling of eyelids, edema of throat	Usually recovery without pulmonary complications

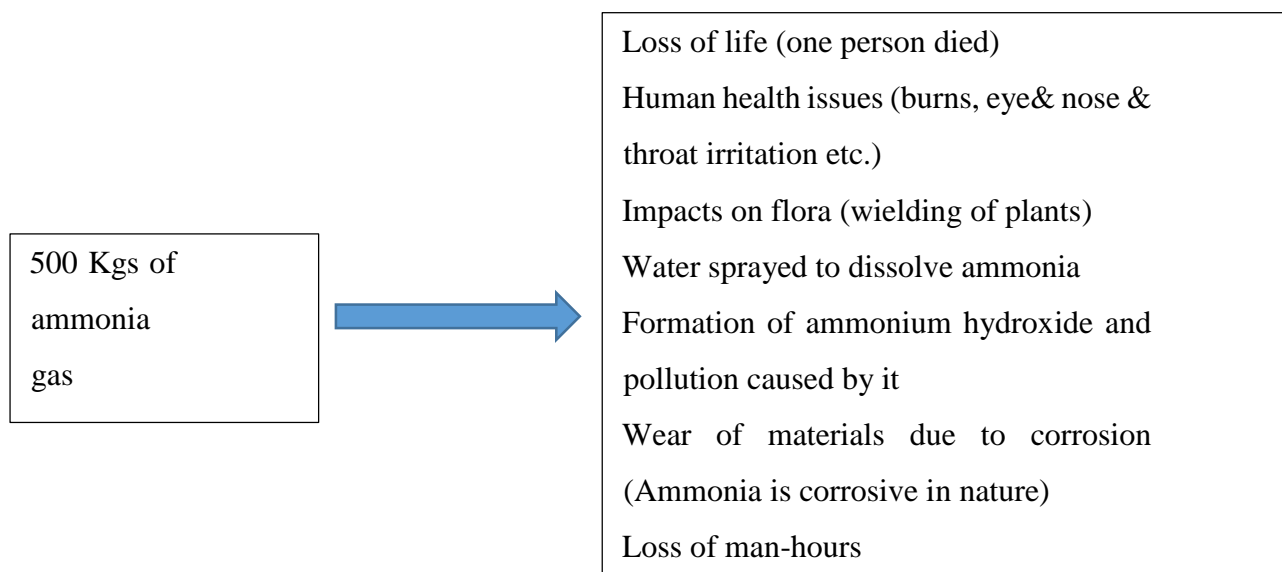
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5000-10,000	Aggravation of above symptoms, tightness in chest, difficulty swallowing, loss of voice, cough with sputum and sometime blood	Distress, increase in pulse and respiration rates, swelling of eyelids, burning of mucous membranes	Fatalities due to obstruction of airways
>10,000	Similar to above symptoms, persistent cough with copious frothy sputum	Shock, restlessness, distress, rapid pulse of poor volume, cyanosis, difficulty breathing	Death as a result of asphyxiation; survivors may die immediately or later as a result of complications

At the time of accident, the predominant wind direction was towards north-east, where there is no habitation upto 3.5 kms, except Odisha workers sheds. These sheds are about 150mts away from the accident location. The workers came from Odisha and are working in M/s S.P.Y Agro Industries Limited. These workers were evacuated from these sheds immediately after accident.

Valuation of environmental damages due to ammonia release:

The damage caused and the level of impact due to ammonia release is expressed in monetary terms by the committee which is one of the ways by which the scale of impact can be communicated. In order to quantify the impacts in monetary terms, it is essential to understand the mechanism by which the impact happens. The impact pathway reveals, how emitted pollutants lead to different adverse outcomes on human wellbeing and other natural environment. The committee has used both market price method and opportunist cost method to express the damage in monetary terms.



For valuation of NH₃, UK-Defra values have been taken for calculating the monetary value of damages. UK defra values are converted into Indian values using suitable conversions. The Indian values per tonne of emission hence arrived are used for valuation of damages



- 17 g NH₃ reacts with 18 g of H₂O to give 35 g of ammonium hydroxide. But the solubility of ammonia gas in water is 31% w/w at 25 °C.
- 1 g of ammonia needs: 2.226 ml of water.
- 500 Kgs of ammonia = 1113 litres of water = 1613 litres of ammonium hydroxide is formed as per stoichiometry
- Actual water sprayed to dissolve and control the situation is likely to be double the stoichiometric requirement = 2226 Lts. The excess water so used shall dilute the NH₄OH so formed.

Valuation of environmental damages due to ammonia release	=	Pricing of 500 Kg ammonia released	+	Pricing of 2226 L of water used to dissolve ammonia
		a *	+	b
	=	1529 INR X 500Kgs		20 INR X 2226
	=	764500	+	44520
	=	8,09,020/- is pricing for impact to environment excluding compensation to injured and deceased Rupees Eight lacs Nine thousand and twenty only		

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a *	=	UK-Defra mid-point values are adopted considering nature of impact = € 17.5/ Kg of ammonia = €17.5 X INR exchange rate + inflation rate in 2020 = 17.5 X 84.6028+ 17.5 X 84.6028*3.34/100 =1529INR/Kg of ammonia using Ref: Environmental Prices Handbook, EU28 version published in October, 2018. https://www.cedelft.eu/en/publications/2191/environmental-prices-handbook-eu28version
b	=	water is most essential commodity and committee for assessment purpose has considered the market cost as Rs.20/liter of water

VIII.(b) Assessment of Environment Compensation for not complying with the directions of APPCB

In response to CPCB letter dated 08/05/2020 with regard to Strict safety precautions to be taken before resuming operation of units involved in manufacture storage and import of hazardous chemicals, APPCB, ZO, Kurnool directed M/s S.P.Y Agro Industries, Nandyal vide letter No. Lt.No. APPCB/ZO-KNL/MAH/2020 Dt:

02.06.2020 (**Annexure-VI**) to ensure compliance of the following:

- a. *A proper safety and hazard audit should be undertaken by all the units before resuming operations. The industries shall follow the Rules stipulated that manufacture, store or import hazardous chemicals while resuming their operations after COVID-19 lockdown, only after they have taken adequate and necessary steps to prevent the occurrence of any chemical leakage / accident*
- b. *The industry shall ensure the pollution control equipment connectivity of OCEMS with CPCB /SPCB servers, effluent treatment plants including safety equipment and its machineries shall be kept in good operable condition before resuming operation in present COVID-19 situation.*
- c. *The industry shall ensure all the units take utmost care in handling hazardous chemicals by using trained manpower.*
- d. *The industry shall closely monitor the situation and ensure that environmental norms are not violated by any unit.*
- e. *The industry shall ensure safety of the workers and residents in the vicinity.*
- f. *In addition to the above, you are hereby informed to furnish the safety measures, off site / onsite emergency plans, disaster management plan and risk analysis report carried by the industry.*

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- g. Keeping in view of the CPCB circular and Board circular you are once again informed to keep a close watch on the maintenance of safety measures with due emphasis on the awareness of the workers with regard to the safety measures and protocol to be maintained.*
- h. Detailed write up on the Hazardous chemicals, storage & handling and the safety measures adopted has to be submitted along with the above mentioned reports with photographic evidence within 10 days from the date of receipt of this letter.*

APPCB, RO, Kurnool issued show cause notice vide Notice No.KNL205/PCB/RO/KRNL/Notice-2020-82, dt: 12.06.2020 (**Annexure-VII**) regarding odour nuisance.

From the available records, it is observed that the unit has not complied with the directions of APPCB since 02.06.2020 hence the committee has calculated Environmental Compensation (EC) as per CPCB formula: $EC=PI \times N \times R \times S \times LF$

Where,

EC = Environmental Compensation in INR

PI = Pollution Index of industrial sector= 80

N = Number of days of violation took place (start of unit operation to date of accident)=24

R = A factor in Rupees for EC (Rs. 250/-)

S = Factor for scale of operation (large-1.5)

LF = Location factor (present in Nandyala where population is less than 10 lakh=1)

VIII.(c)Pollution Index of industrial sector (PI):

Andhra Pradesh Pollution Control Board has categorized this industry into red category of industries and accordingly the combined consent & Authorization have been granted. For red category of industries, average pollution index is 80.

- i. Number of days of violation (N): 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 CPCB/ APPCB. From the available records, it is observed that APPCB issued directions to unit on 02.06.2020 and accident occurred on 27.06.2020. Based on the criteria, 24 days (from 02-06-2020 to 27-06-2020 excluding both the days considering delivery period of one day) is considered for calculation of period of violation for estimating EC.*
- ii.** Scale of operation (S): The industry is considered as large. Thus, scale of operation (S) for EC estimation is considered as 1.5.

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- iii. Location factor (LF): The industry is located in Nandyala which has a population of around 2 lacs. Thus location factor (LF) is considered as 1 for EC estimation. LF is considered as 1 for city/ town having population less than one million
- iv. Factor in Rupees (R) (Rs): As per the environmental compensation estimation guidelines, factor of rupees may be minimum of Rs 100/- and maximum of Rs 500/-. The factor of rupees is considered as Rs. 250/- for estimating environmental compensation for this industry, considering its pollution potential.

S.N	Period of noncompliance	PI	S	LF	R (Rs)	N (days)	Environmental compensation (Rs)
1	02.06.2020 to 27.06.2020 (excluding both days)	80	1.5	1	250/-	24	7,20000/-
Total EC for violation in first accident						24	7,20,000/-
Rupees Seven Lacs Twenty Thousand Only							

VIII.(d) Loss of life and status of award of compensation:

Six employees were present near CO₂ plant (one employee was present outside CO₂ plant and no injuries or panic suffered) at the time of accident out of which one person died in the accident spot and four employees managed to escape safely outside the CO₂ plant. The committee interacted with all five employees who were present and it was informed that they did not suffer any injuries except Sh. Thippa Reddy and he informed that he developed minor burn and it was only washed with water. No hospital treatment was taken by employees. During the committee visit, all the five employees appeared healthy but however their health conditions shall be ascertained by qualified medical practitioner. All five employees also informed to the committee that they are not facing any health issues after accident and they managed to escape without any injuries and gas was inhaled for a small duration.

The expenses towards health check-up will be borne by the unit. Based on the assessment of health conditions and recommendations of the qualified medical practitioner, the District Magistrate may decide whether compensation is required or not and the amount of compensation if any to these four employees exposed to ammonia gas. Since the employees were not injured and no hospital treatment undertaken by them, the unit has not paid any compensation to the employees exposed to gas.

VIII.(e) Late Sh. K. SrinivasRao, General Manager-CO₂ plant:

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Ammonia spilled on Late Sh. K. SrinivasRao, General Manager at around 9:30 AM and was shifted outside the accident spot at around 12:40 PM on 27.06.2020. Shift Incharge immediately collapsed in the unit. Further from post-mortem examination it is understood that the burnt wounds are found all over the body confirm the fact the death is caused due to ammonia gas exposure in the unit and is liable to be compensated. The unit has already paid compensation of Rs.50.00 lacs to the dependents of the deceased. To ascertain the adequacy of compensation, the committee has calculated compensation by two methods: 1. As per the Judgement dated 16th August 2019 of Hon'ble Supreme Court of India in civil appeal No. 6339 of 2019 in the matter of Sunita Tokas vs New India Insurance Co. Ltd. and as per Employee Compensation Act, 1923 and the lowest among two is taken to determine whether compensation of Rs.50.00 lacs paid by the unit is adequate or not. Since both management and Late Shri K Srinivas Rao, General Manager are responsible for accident the minimum of two is considered for ascertaining the adequacy of compensation.

Table 6: Assessment of compensation

Name of the deceased	A* Amount of compensation in INR as per Hon'ble Supreme Court Judgement in civil appeal No. 6339 of 2019 and civil appeal No.3483 of 2008	OR	B As per Employee Compensation Act, 1923
Late Sh. K. Srinavas Rao	Rs. 70,26,720/-	OR Whichever is less is considered by committee as compensation amount since the employee being a General Manager was also responsible for accident	Compensation= fifty percent of the monthly wages of the deceased x relevant factor = Rs. 7500/- x 166.29 & = Rs. 12,47,175/-

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Late Sh. Lakshmana Murthy	Rs. 22,75,680/-	OR Whichever is more is considered by committee as compensation amount since the unit has violated the APPCB directions and unit was responsible	Compensation= fifty percent of the monthly wages of the deceased x relevant factor = Rs. 7500/- x 106.52 & = Rs. 7,98,900/-
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* A → calculation is explained in table-7.

& → As per EC Act, 1923 the Central Government has specified has specified Rs.15,000/- as monthly wages with effect from 03.01.2020. The relevant factor as per EC Act, 1923 is 166.29 (the completed years of age on the last birthday of the workman immediately preceding the date on which the compensation fell due).

Among the compensation calculated by these two methods, committee observed that the compensation of Rs.12,47,175/- is lowest among the two and **the compensation amount of Rs.50lacs paid by the unit to the dependents of the deceased is adequate on the basis of Employee Compensation act, 1923. The unit (employer) has already deposited Rs. 50 lacs to the dependents of the deceased.**

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Table 6: A → Amount of compensation in INR as per Hon'ble Supreme Court Judgement in civil appeal No. 6339 of 2019 and civil appeal No.3483 of 2008

Name	DOB & Age at the time of death	Qualification & Designation	Salary per month for permanent employee	Future prospects (40% of the income)	less tax	Salary after deducting tax	Deduction towards personal expenses	Loss of monthly income to the dependents	Annual income	loss of future income	Expense s for shifting mortal remains and Los of estate & funeral expenses (app. cost)	Loss of Love and affecti on	Compensation
			A	B	C	D	$E^T = 50\% \text{ of } D$	$F = D - E$	G	H [#]	I ^{\$}	J ^{&}	$L = ((A + BDXEXF) + G + H) + I + J$
K. Srinivas Rao	7/10/1973 47	BE General Manager, Instrumentation	88000	35200	36960*	86240	43120	43120	12	13	100000	200000	7026720
Lakshama namoorthy	1957 63	Fitter	28000	11200	0	39200	15680	23520	12	7	100000	200000	2275680

* As per current income tax slab rate, 30% tax deducted since salary exceeding 30 lakhs

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^TDeduction towards personal expenses varies @50% for age of the deceased 20yrs to 50yrs and @40% for age of the deceased more than

Depending on the age, the factor is fixed. 13 for age group 46-50 years and 7 for age group 61-65 years

^SEntire responsibility taken by unit for shifting mortal remains

& The committee fixed the amount as Rs.2,00,000/- for loss of love and affection

@ The committee fixed the amount as Rs.1,00,000/- for loss of estate

^TDeduction towards personal expenses varies @50% for age of the deceased 20yrs to 50yrs and @40% for age of the deceased more than 50

VIII.(f) Total Compensation M/s S.P.Y Agro Pvt Ltd is liable to Pay for first accident on 27.06.2020:

- a. Compensation to the deceased person Late Sh. K. SrinivasaRao → The unit has already paid Rs.50,00,000/- to the family of the deceased. The committee as per Employee compensation Act, 1923 has ascertained that the compensation is adequate.
- b. Environmental Compensation on account of contribution of emissions into environment → Rs. **8,09,020/-** Rupees Eight Lacs Nine Thousand and Twenty only. The unit shall pay the environmental compensation of Rs. **8,09,020/-** to APPCB.
- c. Environmental Compensation for not complying with APPCB directions: The unit shall pay the environmental compensation of **Rs. 7,20,000/-** to APPCB for not complying with directions of APPCB.

IX. Status of the Unit post –accident-Action taken by APPCB, Inspector of Factories

IX.(a) Directions issued by Inspector of Factories post-accident:

- a. A show cause notice RNo.47841/2020/Special, dt: 13.05.2020 has been issued to the Management Sri S. Sreedhar Reddy (Director) Occupier cum Manager of the said factory for contraventions of Section 7A-2 read with Section 41 and Rule 61-F(2), Rule 61-F(3) and Rule 61-E read with Section 87 and Rule 95 Schedule XV Part-II (11) and (15) under the Factories Act 1948.
- b. **Prohibitory order issued by Inspector of Factories:** Deputy Chief Inspector of Factories, Kurnool issued Prohibitory Order No.R.101055/2020-1/Special, dt: 29.06.2020 (**Annexure-VIII**) to M/s Nandyala Gases Pvt Ltd, Nandyal(M), Kurnool District. Inspector of Factories has issued separate licenses for distillery and Nandyala Gases Pvt Ltd (CO₂ plant) and there is no restriction or prohibition direction from Inspector of Factories to operate the distillery unit.

IX.(b) Directions issued by APPCB pre-accident & post-accident

- a. APPCB, Zonal Office, Kurnool, vide letter No.APPCB/ZO-KNL/MAH/2020 Dt.02.06.2020, directed the industry to ensure the compliance of certain directions during operation of industry as circulated by CPCB and one of the directions is as follows:
 - *“A proper safety and hazard audit should be undertaken by all the units before resuming operations. The industries shall follow the Rules stipulated that manufacture, store or import hazardous chemicals while resuming their operations after COVID-19 lockdown, only after they have taken adequate and necessary steps to prevent the occurrence of any chemical leakage / accident”*
- a. On 12.06.2020, the Regional Office, Kurnool has issued a show cause notice to the industry with a direction to show cause as to why legal action shall not be initiated against your industry under section 33 (A), 44 of Water (Prevention and Control of Pollution) Act, 1974 and under section 31 (A), 37 of the Air (Prevention and Control of Pollution) Act, 1987 and

Amendments thereof, for violation of CFO order conditions and thereby causing odour nuisance, clearly mentioning that failing which action will be initiated against the industry under above said acts.

- b. Further, the Regional Office, Kurnool, vide show cause notice NO:KNL 205/PCB/RO/KRNL/Notice-2020, Dt. 27.06.2020, informed the industry that they *“have not carried out comprehensive safety audit and not taken any safety measures to meet the emergencies & not complied CFO conditions thereby causing lot of air pollution and occurrence of ammonia gas leakage due to negligence attitude of the management towards safety measures”*.
- c. In continuation of the instructions issued on 02.06.2020 with regard to safety measures, the Zonal Office, Kurnool, directed the industry to carryout comprehensive safety audit through a reputed agency vide letter No.APPCB/ZO-KNL/MAH/2020 – 96 Dt.29.06.2020 and to furnish at the earliest. The industry was also directed to carry out the risk analysis and mock drills as per the protocol. Further, the industry was directed that

“the date of mock drill shall be intimated to this office in advance. The time bound programme of carrying out comprehensive safety audit and other analysis as stated above shall be furnished to this office within 7 days from the date of receipt of this letter”.

As the industry has not responded to the notice even after 8 days, Zonal Office, Kurnool reminded the industry vide notice No. APPCB/ZOKNL/MAH/2020, Dt.09.07.2020 to submit a time bound programme with regard to carrying out comprehensive safety audit and other reports like risk analysis and intimation of conducting mock drill.

- d. It is further submitted that the Zonal Office, Kurnool has conducted review meeting on 22.07.2020 regarding safety measures adopted by the industries covered under MS&IHC Rules, 1989. In the above meeting, M/s S.P.Y Agro industries Limited was also reviewed and the following directions were given in the meeting:
- i. The mock drills shall be conducted as per the protocol and the dates shall be intimated to Zonal Office one week in advance without fail.
 - ii. The safety measure including valve regulated system shall be regularly checked and the concerned workers involved in the activity shall be properly trained. The compliance of the above shall be intimated to Zonal Office.
 - iii. The industries shall update the comprehensive safety audit, on-site and off-site emergency plans and risk analysis reports periodically as per the protocol and ensure that the reports are furnished to Zonal Office.
 - iv. The industries shall update the Public Liability Insurance (PLI) duly paying the premiums in time and shall submit the updated status of PLI.
- e. The A.P Pollution Control Board vide order dated: 13.07.2020 (**Annexure -IX**) issued stop production orders to M/s. S.P.Y. Agro Industries Ltd., under section 33 (A) of Water (Prevention & Control of Pollution) Act, 1988 and under Section 31 (A) of Air (Prevention

& Control of Pollution) Act, 1987 for non-compliance of Board directions, Consent Conditions and also for causing the accident in the industry on 27.06.2020

IX.(c) Status of unit:

The unit informed that in compliance with the “Stop Production order” issued by APPCB on 13.07.2020, the unit immediately stopped its production activities on 14.07.2020.

The industry started production several times after issue of stop production order, violated the Board directions. The industry submitted letter dt. 20-10-2020(**Annexure - X**) for the reasons of the violation which is as follows:

The unit is using broken rice & grains for production of alcohol and due to sudden stoppage of production, the in-process wash (fermented grain solids etc.) started to putrefy and volatile acids build up was more than 1000ppm causing odour nuisance. 10lakh liters of the wash in fermenter required processing and also effluent re-circulation was required in bio digester. The unit further informed that it was essential to operate the aeration plant to keep the micro-organisms active. In view of the above, the unit operated from 19th July to 22nd July, 2020. The ETP was operated by recirculating effluent to keep microbes active. To sustain ETP operation, the unit continued to operate power plant with minimal load. The industry further replied as follows:

“On 29th of July, we once again faced issue with in process liquids in the fermenter and bio-digester culture. The 10 lakh liters of the wash in the fermenter needed to be processed and the bio- digester needed effluent circulation as the biomethanation time is 10 – 15 days (28th July-5th August). Similarly we needed to run the aeration plant to control the COD and BOD in the effluent. The company was also putting into operation the scrubber mandated by the PCB on the wet caking drying plant. The plant was running well below full installed capacity”.

The industry further operated the plant from 10th September, 2020 to 18th September, 2020 and explained the reason for the operation as follows:

“On 30th August, 2020, we have requested the Chief Inspector of Factories to issue a temporary revocation to process a further 40 lakh liters of wash. The department requested us to complete a safety audit and furnish details regarding the precautions taken to avoid a similar incident. We then submitted the same and started operation on 10th September upto 18th September, 2020”.

IX.(d) Second accident that occurred on 05.08.2020:

The committee submits to Hon’ble NGT that, an accident occurred once again in M/s S.P.Y. Agro Industries at around 10.00 PM on 05.08.2020. While conducting hydraulic test to the 50 TPH boiler of Co-Generation power plant, the water wall tube (steam raiser pipe line) burst. It is reported that one employee of M/s S.P.Y. Agro Industries Ltd., viz., Sri Lakshmanamoorthy, Sr. Fitter, 63 years was exposed to steam and died at about 6:00 AM on 06.08.2020 due to severe burns. The other two employees sustained with minor injuries and they were discharged after treatment.

As per the instructions of the Collector & District Magistrate, Kurnool on 06.08.2020, the GM DIC, Kurnool, Deputy Chief Inspector of Factories, Kurnool & the Environmental Engineer, R.O, Kurnool along with JSO, ZO, Kurnool have visited the unit at 11.15AM. It was informed to

Report of the Joint Committee in the matter of OA No. 107/2020

the committee that the 50TPH boiler connected to the Co-Generation power plant was taken for maintenance on 05.08.2020 at 6.00P.M.

After completion of maintenance work, while carrying out hydraulic test, the water wall tube (steam raiser pipe line) got burst as the pipe could not withstand for the pressure. As a result of this, Sri Lakshmanamurthy, Sr. Fitter, 63 years was exposed to steam. He was initially admitted at Govt. General Hospital, Nandyal. As the case was critical, he was shifted to Govt. General Hospital, Kurnool for better treatment and he died at 6.00 A.M on 06.08.2020 due to severe burns. It was informed to the committee that the unit has paid Rs.30,00,000/- as compensation to the family of the deceased person Late Sh. Lakshmanamurthy. The committee has assessed the adequacy of compensation as explained in table 6 and ascertained that the compensation paid to Sh. Lakshmanamurthy is adequate. In this particular case the committee has considered the highest amount of the two for ascertaining the adequacy of compensation since the unit has violated APPCB directions and operated the unit. Among the two the highest amount is Rs.22,75,680/- and the unit has paid compensation of Rs. 30,00,000 lacs which is adequate. The expenditure towards treatment of the injured was borne by the unit. The health conditions of the injured shall be ascertained by qualified medical practitioner and as per the recommendation of the medical practitioner the District Magistrate may assess the compensation.

The unit has not complied with the instructions issued by APPCB vide letter dated 02.06.2020, Show-Cause Notice issued by APPCB dated 12.06.2020 and Stop Production Order dated 13.07.2020 and has operated the plant from 19/07/2020 to 22/07/2020, from 29/07/2020 to 31/07/2020, from 01/08/2020 to 04/08/2020 and from 10/09/2020 to 18/09/2020. The committee inspected the unit during September 21 & 22, 2020 and observed that the unit had not carried out safety audit and safety of installations was not ascertained. For the second accident, the committee has used the deterrent factor 2 for repeated violation since it was second time violation. The committee has assessed Environmental Compensation for the second accident using the formula $EC=PI \times N \times R \times S \times LF$

S.No.	Period of noncompliance	PI	S	LF	R (Rs)	N (days)	Environmental compensation (Rs)	Deterrent factor
1	28.06.2020 to 05.08.2020 and from 06.08.2020 to 21.09.2020 (deviations observed till the day of committee inspection)	80	1.5	1	250/-	85	25,50,000/-	(EC is increased on exponential basis i.e 2, 4, 6, 8...on each similar violation.)
	Total EC for 2 nd violation					85	25,50,000/- x 2	
							51,00,000/-	
Rupees Fifty One Lacs Only								

The committee interacted with Smt. P. Lakshmidevi, W/o Sri P.Lakshmana Murthy, Sr. Fitter and she has expressed her views to the committee as follows:

She has informed that her husband Late Sri P.Lakshmana Murthy, who worked as Sr. Fitter in M/s S.P.Y Agro Industries Limited, died due to exposure to steam at about 6:00 AM on 06.08.2020. She has informed that, she received Rs.30,00,000/- (Rupees Thirty Lakhs only) towards compensation from the industry on 06/08/2020. She has informed that she has received salary and she has not yet received the P.F amount and gratuity. The unit shall release P.F amount and gratuity to the family of the deceased within a period of one month.

IX.(e) Suggestions for restoration of Environment:

The committee did not observe any physical damage or damage to properties/ vegetation during the visit. Hence other than cleaning and proper maintenance of fermenters, distillation columns and proper operation of ETP, the committee does not suggest any restoration measure but however from safety point of view the committee recommends the unit to establish proper effluent conveyance system to transfer effluent from production block to ETP, to store coal in covered shed, to prevent odour nuisance by properly handling the dried fermented solids and to increase the vegetation cover in the unit, to place the online continuous emission and effluent monitoring systems as per CPCB guidelines. To improve ventilation in the CO₂ plant. The machineries are compactly housed in the CO₂ plant. The unit shall ensure that the machineries are so housed that adequate space is there for the personnel to operate and move to safe places during any mishap.

The storage capacity of ammonia in the CO₂ recovery plant is 2000 Kgs. At the time of accident, there was 750Kgs of ammonia. Out of 750 Kgs, 500 Kgs was released into environment at the time of accident and the remaining 250 Kgs was treated in the ETP.

The Ambient Air Quality monitoring was carried out by the officials of A.P. Pollution Control Board, Kurnool for the parameter ammonia in and around of M/s S.P.Y Agro Industries Limited from 27th day of June, 2020 to 28th day of June, 2020. The concentration of ammonia recorded was **610.61 µg/m³**(as against the standard of 400µg/m³) after the accident at about 2.00 p.m and the levels of ammonia has come down to the level below the standard of 400 µg/m³at 9.00 p.m on 27.06.2020. During the accident, the predominant wind direction was towards North-East direction, where there is no habitations upto 1.5 Kms. It was observed that there was only a localized impact very nearer to the CO₂ recovery plant and the restoration measures were taken by the industry by collecting and treating the left over ammonia in the storage tanks & used fire hydrant water in their Effluent Treatment Plant (ETP).

IX.f. View Points of Stakeholders: The unit has positive attitude and intends to implement corrective measures. The unit has submitted that temporary revocation order was issued by Inspector of Factories and prohibitory order by Inspector of Factories was issued only to M/s Nandyala Gases Pvt Ltd. To prevent putrefaction of in-process solids, it was essential to operate

the plant. Hence the unit has requested not to treat this as violation of APPCB directions. The submissions made by the unit is enclosed as Annexure-X.

X. Suggested remedies to avert such accidents in future:

1. Standard Operating Procedure shall be prepared for all industrial activities handling hazardous chemicals. To ensure that pressure test and leak test are conducted after replacement of valves, pipes, joints etc. as per the instrument manual or as per standard established procedure.
2. The unit shall conduct comprehensive safety & hazard audit, identify the non-compliances and take corrective actions for the non-compliances identified. Emergency plans shall be established to deal with leaks. The risk assessment should identify the control measures necessary in an emergency. These are likely to include, for example instructions to identify the leak and close key valves. Such valves should be marked and identified on drawings. Regular checks of such valves should be undertaken to ensure correct operation. A clear documented emergency procedure should be drawn up which details the precise duties of all staff and arrangements for evacuation, rescue, first aid, resuscitation, plant isolation etc.
3. The CO₂ plant where the ammonia tanks are placed is very congested and during any unwarranted situations, it is difficult to escape. The unit shall re-design ammonia refrigeration unit to have more working space for the personnel. Adequate means of escape and rescue shall be provided.
4. To install Emergency warm water showers and eyewash stations in locations where ammonia is handled for decontamination. They allow workers to flush away ammonia that can cause injury.
5. To install automatic tripping system during pressure build-up, leaks etc.
6. All pipework containing ammonia shall be identified by colour coding or labelling and positioned and protected to prevent damage. It is good practice to uniquely identify part of the system that contain gas or liquid and the direction of flow.
7. The CO₂ plant was poorly ventilated. Machinery rooms should be provided with sufficient permanent ventilation during normal operations to prevent the build-up of toxic concentrations of ammonia from any small operational releases (for example from seals, glands etc.). The unit shall improve the mechanical ventilation to facilitate natural circulation. In addition, the unit shall provide emergency ventilation to prevent flammable ammonia and air mixtures accumulating in the event of reasonably foreseeable plant or operational failure, like valve failure etc. The unit may install ammonia sensor and emergency ventilation may be interlinked with ammonia sensor.
8. To install check valves, relief valves at appropriate locations. Flow meters, sensors, measuring devices have to be regularly calibrated. Vents from relief valves shall be directed to a safe place.
9. Seals, glands and gaskets shall be regularly inspected, without dismantling. Leak test should be conducted in all piping, valves, seals, flanges, and other pertinent equipment at least four

- times a year. Some methods that can be used for leak testing are sulphur sticks, litmus paper, or a portable meter equipped with a flexible probe.
10. After the repair work is completed, it shall be verified by a strength pressure test followed by a tightness test and leak test.
 11. Anhydrous ammonia is very corrosive to copper, brass, and galvanized surfaces and materials. The unit shall not use copper, brass, zinc, and galvanized components in any part of an anhydrous ammonia refrigeration system. Support structure components should be readily visible such that they can be inspected for deterioration and replaced before a failure event can occur. All refrigeration piping should be periodically inspected for failed insulation/vapour barrier, rust, and corrosion. Ammonia piping underneath failed insulation should be carefully inspected for corrosion. Damaged and deteriorated ammonia piping should be replaced. All uninsulated piping should be cleaned, primed, and painted with an appropriate coating to protect the pipe from corrosion as well as being consistent with the colour coding scheme.
 12. During the visit, the committee has observed the following:
 - i. Stagnation of coloured effluents in drains and on roads
 - ii. Lot of stagnation of covered water in the storm water drains, on the roads and around the ETP units thereby causing ground water pollution.
 - iii. Leachete observed near drier
 - iv. Spillages near process area
 - v. ETP is in dilapidated condition
 - vi. Spillage of wet cake, entering into the storm water drains
 13. Photographs depicting the above violations are attached. Hence, the committee suggest that the industry has to maintain good housekeeping and to take-up preventive maintenance immediately to avoid all these problems and also to upgrade the ETP.
 14. Only fully trained and qualified operators shall be permitted to operate ammonia systems. The operator is required to take refresher training at least every 3 years to ensure the employee understands and adheres to the current operating procedures related to the process. To impart training to all employees on SOP's, product process, safety aspects. The employees shall be given hands on experience with the product process under the supervision of senior employees. The units only after ensuring that adequate training is imparted to its employees will engage the employees for independent works. Overall the industries should be prepared for emergency response readiness & effectiveness in terms of major & minor accidents.
 15. To conduct mock drills to the employees in controlled environment on actions to be taken during failures, gas leakage etc.
 16. To install suitable gas sensors and alarm system in the unit at appropriate locations where emission of gas is suspected so that any gas leaked is detected and the employees are immediately alerted. In sensitive areas of the unit where gas leakages are suspected, the unit shall work out an emergency prepared plan to vent out the gases safely.

17. The unit shall provide essential Personnel protective equipment like nose mask, Helmets, Safety Shoes, Safety Glasses, chemical Proof Gloves, chemical proof body suit/ clothing, self-contained breathing apparatus to all its employees and make it mandatory that the employees have to wear PPE's during working hours.
18. To develop 5mtrs thick green belt all along the boundary of the unit and also shall develop 33% of the total area as a green belt within the premises.
19. To install appropriate firefighting equipment / fire hydrant system.
20. The industry should conduct public awareness programmes in the surrounding villages about do's & don'ts during emergency

XI. Concluding remarks:

1. Operational Negligence, Human error, Lack of standard operating procedure for solenoid valve replacement, poor ventilation in the machinery room, Non-issuance of Personnel protective equipment by unit to employees working near hazardous areas, are the causes for accident. **The employees and Management of the unit, both are responsible for the accident. The main cause for accident is failure to comply with safety practices.** The immediate trigger to the accident was improper installation of solenoid valve (not in compliance with instrument manual) which lead to reverse flow and pressure increase, not conducting the pressure test and leak test in all pipe connections, valve seats and seals before charging ammonia and loose joining the cut portion of the pipeline by welding which caused ammonia leakage.
2. The immediate measures taken by District Administration, APPCB, Fire Department and Inspectorate of Factories to dilute the emissions by water spraying was very helpful in containing the emissions within the unit itself. This timely decision prevented disastrous impact of ammonia leakage. As per the directions of the Collector and District Magistrate, the Superintendent of Police evacuated the people in the radius of 1.0 Km and 4 fire engines were brought to the unit. Till the situation came to control, the Collector and District Magistrate was there. Due to the presence of Collector and District Magistrate at the accident spot till the leakage was arrested, the people around the plant felt relieved. The committee appreciates the efforts of District administration and APPCB for containing the ammonium hydroxide so formed (by mixing of water and ammonia) immediately and to divert the same to ETP for further treatment.
3. To prevent any untoward incidence, APPCB and Inspector of Factories with the assistance of similar industry in the region drained the 250 Kgs of ammonia left over in the container using 1200 litres of water and then entire ammonia water mixture was treated in ETP.
4. The compensation amount and the status is as follows:

Sl.No	Compensation	Status	Remarks of the committee
First Accident → occurred on 27.06.2020 at 9:30 AM			

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1	Compensation to the family of the deceased Sh. K. Srinivas Rao, GM- CO2 plant	Rs. 50.00 lacs paid to the family of the deceased by the unit	Adequate As per Employee Compensation Act, 1923, the compensation amount paid to the family of the deceased is adequate
2	500 Kgs of ammonia released Environmental Compensation on account of contribution of emissions into environment	Rs. 8,09,020/- Rupees Eight lacs Nine thousand and twenty only	The unit shall pay EC of Rs. 8,09,020/- with APPCB within a period of two months
3	The unit shall pay environmental compensation for not complying with the instructions issued by APPCB vide letter dated 02.06.2020	Rs. 7,20,000/- to APPCB	The unit shall pay EC of Rs. 7,20,000/- with APPCB within a period of two months.
Second accident → 05.08.2020			
4	Compensation to the family of the deceased Sh. Lakshamanamurthy, Sr. fitter	Rs.30.00 lacs paid to the family of the deceased by the unit	Adequate As per Hon'ble Supreme Court Judgement in civil appeal No. 6339 of 2019 and civil appeal No.3483 of 2008 and Employee Compensation Act, 1923, the compensation amount paid to the family of the deceased is adequate. The unit shall release the P.F amount, pending salary and other emoluments to the family of the deceased within a period of one month
5	The unit shall pay environmental compensation for operating the unit in violation of APPCB "Stop Production Order" dated 13.07.2020 causing an accident in the unit.	Rs. 51,00,000 Rupees Fifty One lacs	The unit shall pay EC of Rs. 51.00 lacs with APPCB within a period of two months.

	Period during which unit has operated in violation of directions: a. From 29/07/2020 to 31/07/2020 b. From 01/08/2020 to 04/08/2020 c. From 10/09/2020 to 18/09/2020		
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5. The committee suggests that APPCB and Chief Inspector of Factories shall verify the compliance of the unit, safety of installations and after ensuring compliance by the regulatory authorities, unit may be permitted for operation.
6. The committee did not observe any physical damage or damage to properties/ vegetation during the visit. Hence other than cleaning and proper maintenance of fermenters, distillation columns and proper operation of ETP the committee does not suggest any restoration measure but however from safety point of view the committee recommends the unit to establish proper effluent conveyance system to transfer effluent from production block to ETP, to store coal in covered shed, to prevent odour nuisance by properly handling the dried fermented solids, to increase the vegetation cover in the unit, to place the online continuous emission and effluent monitoring systems as per CPCB guidelines, to improve ventilation in the CO₂ plant and to improve housekeeping. The machineries are compactly housed in the CO₂ plant. The unit shall ensure that the machineries are so housed that adequate space is there for the personnel to operate and move to safe places during any mishap.
7. The committee humbly submits that the industries have to ensure self-compliance and the industry and its personnel are solely responsible for this negligent act which resulted in the accident. The committee humbly submits that the regulatory authorities can not involve & check on the day to day activities of the industries. It shall be the primary responsibility of the industries to ensure compliance. Self-monitoring and Self Compliance shall be enforced by all the industries. The Regulatory Authorities shall exercise periodic check & review of the industries as per the mandate. The sole responsibility of recruiting competent staff, imparting Industrial, Environmental and Safety training to the staff, conducting safety audit, onsite and off site emergency preparedness, obtaining necessary clearances, NOC's from various departments lies with the industry. The Regulatory Authorities shall immediately take action against the industry as per prevailing Rules if any non-compliances are noticed.
8. The committee humbly submits that the action taken against the industry and levying of EC from the unit will strengthen "Polluter Pay Principle" and will also be a lesson to other industries that they have to ensure self-monitoring, self-compliance and comply with


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statutory guidelines, safety measures, MOEF&CC, CPCB, APPCB, Directorate of Factories etc.


9. The unit shall ensure that the CO₂ plant and ammonia refrigeration system are safe by taking into consideration all stages & aspects of a plant like design, risk assessment, material of construction, fabrication process, inspection (including material supplied by vendors), maintaining standard operating parameters during normal operation, adherence to the guidelines during operation as well as maintenance. Periodic inspection of equipment and machineries could prevent failures and shutdowns in the plant resulting in improved performance. Further, periodic training, motivation and feedback from operating personnel are most important and should be followed in right spirit to improve the performance of plant.


**District Collector and Magistrate,
 Kurnool**


**Prof. Ch V. Rama Chandra Murthy
 Andhra University, Vizag**


**Prof. Pulipati King
 Head of Chemical Engineering Department,
 Andhra University,
 Vizag**


**Mahima T
 Scientist-D
 Central Pollution Control Board
 Regional Directorate, Chennai**


**K. Venkateswara Rao
 JCEE, Zonal Office,
 A. P. Pollution Control Board,
 Kurnool**

Photographs :

<p>Ammonia Levels monitored at CO₂ Plant</p>	<p>Fire & other departments involved in rescue operation</p>
<p>Post accident photograph – I</p>	<p>Post accident photograph – II</p>
	<p>BURSTED AMMONIA GAS PIPELINE AT SOLENOID VALVE</p>
<p>Post accident photograph - III</p>	<p>Post accident photograph – IV</p>
<p>AMMONIA GAS RECEIVING TANK</p>	<p>LIQUIFIED CO₂ STORAGE TANKS</p>
<p>BURSTED AMMONIA GAS PIPELINE AT SOLENOID VALVE</p>	<p>OVERHEAD CO₂ AND STEAM PIPELINES FROM S.P.Y. AGRO INDUSTRIES LIMITED</p>

	
<p>Stagnation of coloured effluents in drains and on roads</p>	
	
<p>Lot of stagnation of coloured water in the storm water drains, on the roads and around the ETP units thereby causing ground water pollution</p>	
	
<p>Leachete observed near drier</p>	<p>Spillages near process area</p>
	
<p>ETP is in dilapidated condition</p>	<p>Spillage of wet cake, entering into the storm water drains</p>
	

<p>Photo during NGT committee - 1</p>	<p>Photo during NGT committee- 2</p>
	
<p>Photo during NGT committee - 3</p>	<p>Photo during NGT committee- 4</p>
	
<p>Photo during NGT committee - 5</p>	<p>Photo during NGT committee- 6</p>
	
<p>Photo during NGT committee - 7</p>	<p>Photo during NGT committee- 8</p>
	
<p>Photo during NGT committee - 9</p>	<p>Photo during NGT committee- 10</p>

Item No. 02 & 03

Court No. 1

**BEFORE THE NATIONAL GREEN TRIBUNAL
PRINCIPAL BENCH, NEW DELHI**

(By Video Conferencing)

Original Application No. 106/2020

In Re: News item published in the local daily "Economic Times" dated 30.06.2020 titled "Another Gas Leakage at Vizag Factory kills two, critically injures four..."

AND

Original Application No. 107/2020

In Re: News item published in the local daily "Indian Express Sunday Express" dated 28.06.2020 titled "Gas Leak in Agro Company Claims life of one"

Date of hearing: 06.07.2020

**CORAM: HON'BLE MR. JUSTICE ADARSH KUMAR GOEL, CHAIRPERSON
HON'BLE MR. JUSTICE S. P. WANGDI, JUDICIAL MEMBER
HON'BLE DR. SATYAWAN SINGH GARBYAL, EXPERT MEMBER
HON'BLE DR. NAGIN NANDA, EXPERT MEMBER**

For Respondent(s): Mr. Raj Kumar, Advocate for CPCB
(in OA 106/2020) Mr. Mahfooz A. Nazki, Advocate for State of AP
Mr. Padyala Venkaiah Naidu, Advocate for Sainor Life Sciences

ORDER

1. Proceedings have been initiated *suo-motu* in these two matters in the light of newspaper reports. In first matter, report is that two persons died and four were injured on account of Benzimidazole gas leakage accident at Sainor Life Sciences factory at Parawada in industrial area on the outskirts of Visakhapatnam on 30.6.2020. Similar incident happened three years back due to reactor blast resulting in two deaths and injury to five persons. In second matter, report is that there was Ammonia gas leakage accident at Nandyal in Kurnool District, Andhra Pradesh in Spy

Agro Industry on 26.06.2020 resulting in death of one person and injury to three workers in respect of second matter.

2. On 01.07.2020, the Registry issued advance notice of hearing to the Central Pollution Control Board (CPCB), State Pollution Control Board (State PCB), District Magistrate, Visakhapatnam and M/s. Sainor Life Sciences Pvt. Ltd., Visakhapatnam, Andhra Pradesh in respect of first matter and on 3.7.2020 to the Member Secretary, State PCB, CPCB, District Magistrate, Kurnool and M/s Spy Agro.

3. In first matter, State PCB has filed its response on 04.07.2020 to the effect that the District Collector constituted a four-members Committee on 30.06.2020 comprising Revenue Divisional Officer, General Manager District Industries Centre, Dy Chief Inspector of Factories and Environmental Engineer, APPCB and based on inspection conducted, the said Committee gave its report on the same day as follows:

*“M/s. Sainor Life Sciences Pvt Ltd. Producing **Omeprazole Sulphide** in which **Benzimidazole** is one of the Intermediate. During the transferring of Mother Liquor of the Benzimidazole Stage-III through AOD Pump into the Reactor SSR-107 H₂S gas was released, as the hose pipe was directly inserted through the nozzle instead of nipple arrangement. H₂S gas was spread in the Production Block which led to the exposure of the workers in the Production block. Only the workers present in the Production Block are exposed. There is no impact beyond the factory premises.*

*As per the preliminary investigation, **the gas release took place due to failure of the safety practice i.e. hose pipe was directly inserted through the nozzle instead of nipple arrangement while transferring Mother Liquor into the Reactor. Further non usage of Respiratory Protective Equipment are the reasons for the above said accident.**”*

4. Mr. Padyala Venkaiah Naidu, Advocate has put in appearance on behalf of the unit and made oral submissions. The District Magistrate, Visakhapatnam has also filed response on 05.07.2020. Reference has

been made to the constitution of the Committee and furnishing of the report mentioned above. Sequence of events and reasons of the accidents are mentioned in the report as follows:

“Sequence of events of the accident:

1. *M/s. Sainor Life Sciences Pvt Ltd was producing **Benzimidazole** which is the intermediate of **Omeprazole** having 4 stages.*
2. *On 29th night at 11:30 PM stage-3 product 3rd lot centrifugation was started. After centrifugation, the Mother liquor of IIIrd stage Benzimidazole is transferred to the SSR-107 reactor by AOD pump through Hose pipe by putting it directly into the reactor through the nozzle without fixing it properly with the nipple arrangement for air tightening.*
3. *Reactor 107 was previously used for storing of stage-I mother liquor. The chemist without checking the left over Mother Liquor of 1" stage Benzimidazole started pumping 3rd stage Benzimidazole Mother Liquor.*
4. *The 1st stage Mother Liquor was acidic in nature as it is containing acetic acid.*
5. *The acetic acid mother liquor of 1st stage reacted with the unreacted excessive sodium sulphide present in the 3rd stage mother liquor in the reactor resulting in H₂S gas generation.*
6. *The H₂S gushed through the gap between pipe and nozzle spreading the H₂S in the production block.*
7. *M. Gowri Shankar, Chemist working nearby the reactor inhaled the gas and fell unconscious. Then D. Janaki Ram other Chemist working nearby noticed the affected operator and informed to the shift incharge Mr. R.Narendra and others.*
8. *The Chemist stopped the AOD pump which is feeding the mother liquor to the reactor to stop the further release of H₂S. Further generation of H₂S gas was stopped.*
9. *The committee enquired the employees worked in the surrounding factories. As per their information, H₂S gas had not spread outside M/s. Sainor Life Sciences Pvt Ltd factory premises.*

Reasons for the accident:

1. *The Mother liquor of IIIrd stage Benzimidazole is transferred to the SSR-107 reactor by AOD pump through Hose pipe by putting it directly into the reactor through the nozzle without fixing it properly with the nipple arrangement for air tightening.*
2. *The Mother liquor of IIIrd stage Benzimidazole is transferred to the SSR-107 reactor without ensuring free from left over Mother Liquor of 1" stage Benzimidazole.*
3. *The workers did not use suitable respiratory breathing apparatus while carrying out rescue operation. The*

management of the company has not maintained sufficient number of suitable breathing apparatus.

4. **The management manufacturing of Benzimidazole, Omeprazole Sulphide, Fexo-10 without submitting HARA and HAZOP reports and its compliance to the recommendations made in the report.**
5. **The Standard operating procedures with safety integration are not developed for the storage and transfer of Mother liquor.**
6. **The workers are not imparted effective training about the potential Hazards which may arise during the course of work.**

Details of the deceased and affected workers:

Names& details of the workers:	1	Ravi Narendra, Shift-In-charge S/o R.Naga Seshulu, Age 33 years. Married, D.O.J 25-05-2019, Qualification M.Sc., (Organics), Experience: 11 Yrs.
	2	Mahanthi Gown Sankar, Chemist, S/o Lakshmu Naidu, ESI covered 7010410113, Married D.OJ 15-06-2019, B. Sc., (Chem). Experience: 3 Yrs

Name & details of affected workers:	1	Sri. Meesala Surya Narayana, Chemist, S/o M. Parameswara Rao, Age 31 years, ESI Covered 7010376119, Married, D.O.J 01-04-2019, B.Sc. (Chem). Experience: 7 Yrs
	2	Sri. Duggu Janakiram, Trainee Chemist (through S/o. D. Trinadha Rao, Age 24 ESI covered 7010834186, Unmarried, D.O.J. 17-06-2020, B.Sc. (Chem).
	3	Sri Pothula Anand Babu, Helper(through contractor), S/o. P. Sambhu Naidu, Age:40Yrs, Workmen's compensation Act applicable Married, D.O.J 29-06-2020, Inter & ITI
	4	Sr. LV. Chandra Sekhar, Helper(through contractor), S/o

	Adinarayana, Age 27 Years, Workmen's compensation Act applicable, Unmarried, D.OJ 29-06- 2020, B.Com.
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Present Status:

1. *In this accident two employees died namely R. Narendra, Shift in charge, G.Gowri Shankar-Chemist and 4 others affected and admitted in hospital. **Three of them were discharged who were undergoing treatment at R.K Hospital. The other one is undergoing treatment at Care Hospital.***
2. *After the accident the industry stopped production activity.*
3. *The management announced compensation Rs.35 lakhs to the families of deceased.*
4. *The police has filed FIR under section 304-11, 278, 284, 285, 337, 338 of IPC at Parawada Police Station, Visakhapatnam.*
5. *A.P Pollution Control Board issued closure order to the industry.*
6. *Factories Department issued prohibitory order to the industry.”*

5. It is clear from the above, the unit in question is dealing with **Benzimidazole** and **Omerprazole Sulphide** gases which are mentioned as hazardous chemicals in Schedule-I to the “Manufacture, Storage and Import of Hazardous Chemicals Rules, 1989” (1989 Rules). Once it is so, there is statutory liability to prepare and execute on-site emergency plan under Rule 13(by the occupier), and off-site emergency plan (by the statutory authorities) under Rule 14. Consistent with such plan, mock drill is required to be conducted every six months and report given to the concerned authority. This aspect has not yet been looked into. On being asked, learned counsel have not been able to give any response. The authorities have also not gone into the issue of planning remedial measures to prevent such occurrence in future and assessing the compensation to be paid to the heirs of the deceased and to the injured and for restitution of the environment. Under the Chemical Accidents (Emergency Planning, Preparedness and Response) Rules, 1996 (The

1996 Rules), Crisis Alert Systems are required to be established and made functional. The State Chief Inspector of Factories (CIFs) is to look into the safety issues under the Factories Act, 1948 and Petroleum and Explosives Safety Organization (PESO) is the nodal agency to approve the site of the industrial installation. We are of the view that these aspects need to be looked into.

6. Dealing with another incident of leakage of hazardous gas at VIZAG on 07.05.2020, this Tribunal, vide order dated 01.06.2020 considered various aspects including the quantification of compensation to be paid, remedial measures to prevent recurrence in future and looking into the failure of the regulatory framework. The Tribunal also referred to need for revamping of regulatory mechanism in the light of finding in various cases recorded by this Tribunal to the effect that there was need to do so. The Tribunal inter-alia directed:

- “iii. Final quantification of compensation may be assessed by a Committee comprising representatives of MoEF&CC, CPCB and NEERI. The said Committee will be at liberty to associate/co-opt any other expert institution or individual. The Secretary, MoEF&CC may ensure constitution of such Committee within two weeks from today. The Committee may give its report within two months thereafter. MoEF&CC will be the nodal agency for the purpose.*
- iv. The Chief Secretary, Andhra Pradesh may identify and take appropriate action against persons responsible for failure of law in permitting the Company to operate without statutory clearances within two months and give a report to this Tribunal*
- v. In view of the stand of the State PCB and the Company that it will not recommence its operation without requisite statutory clearances, we direct that if any such statutory clearances are granted and the Company proposes to recommence, this aspect must be brought to the notice of this Tribunal so that compliance of law is ensured.*
- vi. The MoEF&CC may also constitute an Expert Committee to suggest ways and means to revamp monitoring mechanism to check and prevent violation of environmental norms and preventing any such recurrence in future in any of the establishments dealing with hazardous chemicals. A special*

drive may be initiated in this regard. An action taken report may be furnished within three months from today.

vii. This order will not prejudice any criminal or other statutory proceedings in accordance with law.”

7. In the first case, while it is stated that compensation of Rs. 35 lakhs each has been given in respect of two deceased, no compensation has been paid to the injured already identified and noted above. Such compensation has to be paid by the Occupier company. We fix interim compensation to be Rs. 5 lakhs for each of the four injured. An amount of Rs. 20 lakhs be deposited with the District Magistrate, Visakhapatnam within two weeks from today failing which the amount be recovered by the District Magistrate using coercive means. The District Magistrate may disburse the amount directly to the injured by transfer to their bank account. In view of the report, there is failure of safety practice in running of the unit on account of which the State PCB withdrew the consent for operation of the industry and directed closure in the interest of public health and the environment.

8. We further direct constitution of a Committee comprising representatives of CPCB, State PCB, District Magistrate, Visakhapatnam, Prof. Ch V. Rama Chandra Murthy, Andhra University, Vizag and Prof. Pulipati King, Head of Chemical Engineering Department, Andhra University, Vizag to assess final compensation to the victims and for restoration of the environment and suggestions for precautions in future. The Committee may give its report within three months by e-mail at judicial-ngt@gov.in preferably in the form of searchable PDF/OCR Support PDF and not in the form of Image/PDF. State PCB will be the nodal agency for compliance. The Committee may visit the site, consider the view point of management, workers or any other stakeholders. The

Chief Secretary, Andhra Pradesh may identify and take appropriate action against persons responsible for failure in overseeing the execution of on-site and off-site emergency plans and holding of mock drills as per statutory requirement. MoEF&CC may look into this incident also while furnishing its report in *OA 73/2020, In re: Gas Leak at LG Polymers Chemicals Plant in RR Venkatapuram Village, Visakhapatnam in Andhra Pradesh.*

9. The second matter relates to leakage of **ammonia** gas from Spy Agro in Kurnool District in the course of storage of Liquefied CO₂ gas to the bottling plant in the unit for chilling purposes. The said gas is also covered by the Schedule to the 1989 Rules (serial no. 31).

10. No response has been received to the advance notice. We direct that M/s Spy Agro may deposit a sum of Rs. 15 lakhs as an interim compensation for the heirs of the deceased and Rs. 5 Lakhs each for the injured to the District Magistrate, Kurnool within two weeks from today, if no compensation has so far been paid or lesser compensation than this amount has been paid. On failure, the District Magistrate may recover the amount by coercive measures. The amount may be disbursed to the heirs of the deceased and the injured by direct transfer to their accounts. The above Committee (with substitution of District Magistrate) may enquire into this matter also in the same manner and give its report. Further directions in the first matter will also apply to *will* also apply to the second matter in respect of the Chief Secretary, Andhra Pradesh and the MoEF&CC.

A copy of this order be sent to Chief Secretary, Andhra Pradesh, CPCB, State PCB, District Magistrates, Visakhapatnam and Kurnool, Prof. Ch V. Rama Chandra Murthy, Andhra University, Vizag and Prof.

Pulipati King, Head of Chemical Engineering Department, Andhra University, Vizag by e-mail.

List for further consideration on 03.11.2020.

Adarsh Kumar Goel, CP

S. P. Wangdi, JM

Dr. Satyawan Singh Garbyal, EM

Dr. Nagin Nanda, EM

July 6, 2020
OA No. 106/2020 &
OA No. 107/2020
DV

ANNEXURE – II

Minutes of the meeting convened on 08.08.2020 with reference to O.A. No. 107/2020 in the matter of Suo moto case taken by Hon’ble National Green Tribunal, Principal Bench, New Delhi related to gas leakage at M/s Spy Agro Distillery, Nandyal, Kurnool, Andhra Pradesh

In light of the news item published in the local daily “Indian Express Sunday Express” dated 28.06.2020 titled “Gas Leak in Agro Company Claims life of one” Hon’ble NGT has taken suo-moto case. The incident is related to ammonia gas leakage at M/s Spy Agro Distillery, Kurnool, Andhra Pradesh.

The matter was taken up by Hon’ble NGT for hearing on 06.07.2020 and Hon’ble NGT has constituted a committee comprising of representatives of CPCB, APPCB, District Magistrate, Kurnool, Prof. Ch V. Rama Chandra Murthy, Andhra University, Vizag and Prof. Pulipati King, Head of Chemical Engineering Department, Andhra University, Vizag to assess final compensation to the victims and for restoration of the environment and suggestions for precautions in future. APPCB is the nodal agency. The Committee has to give report within three months by e-mail at judicial-ngt@gov.in preferably in the form of searchable PDF/OCR Support PDF and not in the form of Image/PDF. The case is listed for 03.11.2020.

In compliance to the Hon'ble NGT order, the committee comprising of following members is constituted.

Sl. No	Name of The Member	Organization
1.	Sri G.Veerapandyan	Collector & District Magistrate, Kurnool
2.	Prof. Ch V. Rama Chandra Murthy	Andhra University, Vizag
3.	Prof. Pulipati King,	Head of Chemical Engineering Department, Andhra University, Vizag
4.	Smt. Mahima T, Scientist-D	CPCB, Bengaluru
5.	Sh. K V Rao	JCEE & Zonal Officer, Andhra Pradesh Pollution Control Board, Kurnool (Nodal agency)

Scope of the Committee

The committee has been vested with the mandate to visit and inspect the accident site assess final compensation to the victims and for restoration of the environment and suggestions for precautions for future. Hon'ble NGT has also directed the committee to consider view point of management, workers or any other stakeholders.

In this connection, first meeting of the committee was convened on 08.08.2020 through video conference (VC). Sh. K V Rao, JCEE briefed about the accident and current status of the industry.

The following decisions were taken by the committee during the meeting:

1. APPCB to ensure that M/s Spy Agro Distillery is under strict surveillance and no activity is permitted in the unit premises. The committee was informed that one more accident has occurred in the industry during boiler repair and one person has deceased. The unit has violated the Stop Production order of APPCB and engaged in industrial activity resulting in one more accident. The committee is of the view that the industry may be violating the safety guidelines. In view of this APPCB shall direct the industry to furnish a report on existing safety measures. APPCB shall also furnish report the second accident occurred in the industry.

Action: Sh. K V Rao, APPCB

2. In fulfilling its mandate, the Committee has sought to adopt an inclusive approach and invited views from all affected persons, workers, management and stakeholders. Hence APPCB shall issue a public notice both in English and vernacular language on industry main gates and in local print and broadcast media and invite their views and to be submitted by 15 days time period by Email or post.

Action: Sh. K V Rao, APPCB

3. The committee shall also examine the cause of gas leak ; Extent of loss and damage caused to human life, environment, Damage and health hazard caused to the public, Whether any contamination has been caused to water, air and soil of the area and its vicinity.

Action: all committee members

4. To examine point 3, APPCB shall furnish the preliminary investigation report of the accident, air quality monitoring report, CAAQMS report, copy of CFE & CFO, latest inspection report of the industry, post-mortem report of the deceased and inspection report of Inspectorate of Factories. APPCB shall furnish information on how the leakage was arrested, how ammonia tanks were sealed and how the leftover ammonia from the tank was treated or disposed

Action: Sh. K V Rao, APPCB

5. APPCB shall direct the industry to provide the capacity of ammonia storage tanks, material balance, chemical reactions involved.

Action: Sh. K V Rao, APPCB

6. On behalf of the committee, APPCB shall direct the industry to prepare an action plan in consultation with APPCB, Inspectorate of factories and by engaging Professors/ environmental consultant accredited by NABET from any reputed university to prevent such accidents in future. The committee shall review the action plan and suggest preventive and remedial measures.

Action: K V Rao, APPCB and all committee members

The meeting ended with thanks to the committee members



ANDHRA PRADESH POLLUTION CONTROL BOARD
D.No.33-26-14 D/2, Near Sunrise Hospital, Pushpa Hotel Centre,
Chalamalavari Street, Kasturibaipet, Vijayawada - 520010

RED CATEGORY

RENEWAL OF CONSENT & AUTHORIZATION ORDER

Consent Order No: APPCB/KNL/KNL/17872/ HO/CFO/2016-

03/03/2020

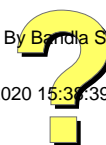
CONSENT is hereby granted for Operation under section 25/26 of the Water (Prevention & Control of Pollution) Act, 1974 and under section 21 of Air (Prevention & Control of Pollution) Act 1981 and amendments thereof and Authorisation under Rule 6 of the Hazardous and Other Wastes (Management & Transboundary Movement) Rules 2016 and the rules and orders made there under (hereinafter referred to as 'the Acts', 'the Rules') to:

**M/s. S.P.Y. Agro Industries Ltd.,
APIIC, New Industrial Estate,
Udumulapuram (V), Nandyal (M),
Kurnool District, Andhra Pradesh.
Email: spyagro_nandigroup@yahoo.com**

(hereinafter referred to as 'the Applicant') authorizing to operate the industrial plant to discharge the effluents from the outlets and the quantity of Emissions per hour from the chimneys as detailed below.

i) Out lets for discharge of effluents:

Outlet No.	Outlet Description	Max Daily Discharge	Point of Disposal
1.	Process & Washings	804 KLD	<ul style="list-style-type: none"> • Shall be sent to bio digester, secondary ETP followed by RO plants. • RO permeate shall be recycled. • RO rejects shall be sent to spray dryer. • MEE condensate shall be used for cooling tower makeup. • Cake from spray dryer shall be used as cattle feed and shall maintain ZLD.
2.	Boiler Blow down	50 KLD	
3.	Cooling Blow down	90 KLD	
4.	DM plant and softener regeneration	125 KLD	
5.	Domestic Effluents	8 KLD	Septic tank followed by soak pit.



ii) Emissions from chimneys

Chimney No.	Description of Chimney
1.	Attached to Rice husk/ coal fired FBC Boiler of capacity - 50 TPH
2.	Attached to 1850 KVA D.G. Set
3.	Attached to 1000 KVA D.G. Set

iii) HAZARDOUS WASTE AUTHORISATION (FORM - II) [See Rule 6 (2)]

M/s. S.P.Y. Agro Industries Ltd., APIIC, New Industrial Estate, Udumulapuram (V), Nandyal (M), Kurnool District, Andhra Pradesh is hereby granted an authorization to operate a facility for collection, reception, storage, transport and disposal of the following wastes with quantities as below:

• HAZARDOUS WASTES WITH RECYCLING OPTION:

S.No	Name of the Hazardous waste	Stream	Quantity of Hazardous Waste	Disposal Option
1.	ETP Sludge	34.3 of Schedule - I	90 TPM	Shall be used as manure/ use as fuel in boiler
2.	Used Oil	5.1 Schedule - I	500 LPA	To authorized recyclers / re-processors

The consent order is valid for manufacture of the following products along with capacities only.

S.No	Products	Capacity
1.	Total spirit	134 KLD
	(OR)	
	Extra Neutral Alcohol (ENA)	125 KLD
2.	Co-generation power plant	

This order is subject to the provisions of 'the Acts' and the Rules' and orders made there under and further subject to the terms and conditions incorporated in the schedule A, B & C enclosed to this order.

This combined order of consent & Hazardous Waste Authorisation shall be valid for a period ending with the **31st day of October, 2021.**

BANDLA SIVA SANKARA
PRASAD, CHAIRMAN, O/o
CHAIRMAN-APPCB

To
M/s. S.P.Y. Agro Industries Ltd.,
APIIC, New Industrial Estate,
Udumulapuram (V), Nandyal (M),
Kurnool District, Andhra Pradesh.
Email: spyagro_nandigroup@yahoo.com

Copy to

1. The JCEE, Zonal Office, Kurnool for information and necessary action.
2. The Environmental Engineer, Regional Office, Kurnool for information and necessary action.

SCHEDULE - A

1. Any up-set condition in any industrial plant / activity of the industry, which result in, increased effluent / emission discharge and/ or violation of standards stipulated in this order shall be informed to this Board, under intimation to the Collector and District Magistrate and take immediate action to bring down the discharge / emission below the limits.
2. The industry should carryout analysis of waste water discharges or emissions through chimneys for the parameters mentioned in this order on quarterly basis and submit to the Board.
3. All the rules & regulations notified by Ministry of Law and Justice, Government of India regarding Public Liability Insurance Act, 1991 should be followed as applicable.
4. The industry should put up two sign boards (6x4 ft. each) at publicly visible places at the main gate indicating the products, effluent discharge standards, air emission standards, hazardous waste quantities and validity of CFO and exhibit the CFO order at a prominent place in the factory premises.
5. Notwithstanding anything contained in this consent order, the Board hereby reserves the right and powers to review / revoke any and/or all the conditions imposed herein above and to make such variations as deemed fit for the purpose of the Acts by the Board.
6. The applicant shall submit Environment statement in Form V before 30th September every year as per Rule No.14 of E(P) Rules, 1986 & amendments thereof.
7. The applicant should make applications through Online for renewal of Consent (under Water and Air Acts) at least 120 days before the date of expiry of this order, along with prescribed fee under Water and Air Acts and detailed compliance of CFO conditions for obtaining Consent of the Board. The industry should immediately submit the revised application for consent to this Board in the event of any change in the raw material used, processes employed, quantity of trade effluents & quantity of emissions. Any change in the management shall be informed to the Board. The person authorized should not let out the premises / lend / sell / transfer their industrial premises without obtaining prior permission of the State Pollution Control Board.
8. Any person aggrieved by an order made by the State Board under Section 25, Section 26, Section 27 of Water Act, 1974 or Section 21 of Air Act, 1981 may within thirty days from the date on which the order is communicated to him, prefer an appeal as per Andhra Pradesh Water Rules, 1976 and Air Rules 1982, to Appellate authority constituted under Section 28 of the Water(Prevention and Control of Pollution) Act, 1974 and Section 31 of the Air(Prevention and Control of Pollution) Act, 1981.

SCHEDULE - B

Water Pollution:

1. The industry shall take steps to reduce water consumption to the extent possible and consumption shall NOT exceed the quantities mentioned below:

S.No	Purpose	Quantity
1.	Process & washings	1132 KLD
2.	Boiler feed	720 KLD
3.	Industrial cooling (make up)/ Humidification/ Water spraying	1615 KLD
4.	DM plant and softener regeneration	125 KLD
5.	Domestic	10 KLD
Total		3602 KLD

Separate meters with necessary pipeline shall be maintained for assessing the quantity of water used for each of the purpose mentioned above for cess assessment purpose.

2. The industry shall remit the water cess arrears within 15 days.

3. Rain water shall not be allowed to mix with either trade or domestic effluents. Industry shall maintain storm water drains properly. The industry shall ensure that there shall be no discharges of any wastewater outside the factory premises.

4. The industry shall maintain dyke wall at the process and ETP area for collection of spillages.

5. The industry shall maintain good house keeping by providing pucca storm drain along with boundary, proper collection of waste into lorries near the MEE area.

6. The industry shall comply with emission limits for DG sets upto 800 KW as per the Notification G.S.R.520 (E), dated 01.07.2003 under the Environment (Protection) Amendment Rules, 2003 and G.S.R.448(E), dated 12.07.2004 under the Environment (Protection) Second Amendment Rules, 2004. In case of DG sets more than 800 KW shall comply with emission limits as per the Notification G.S.R.489 (E), dated 09.07.2002 at serial no.96, under the Environment (Protection) Act, 1986.

7. The industry shall comply with ambient air quality standards of PM₁₀(Particulate Matter size less than 10 μ m) - 100 μ g/ m³; PM_{2.5}(Particulate Matter size less than 2.5 μ m) -60 μ g/ m³; SO₂ - 80 μ g/ m³; NO_x - 80 μ g/m³, outside the factory premises at the periphery of the industry.

Standards for other parameters as mentioned in the National Ambient Air Quality Standards CPCB Notification No.B-29016/20/90/PCI-I, dated 18.11.2009

Noise Levels: Day time (6 AM to 10 PM) - 75 dB (A)

Night time (10 PM to 6 AM) - 70 dB (A)

7. The emissions shall not contain constituents in excess of the prescribed limits mentioned below:

Chimney No.	Parameter	Emission Standards
1	Particulate Matter	50 mg/Nm ³

8. The facility shall not increase the capacity beyond the permitted capacity mentioned in this order, without obtaining CFE & CFO of the Board.

9. There shall not be any odour problem and ground water pollution in the surrounding villages due to distillery project.

10. The industry shall store the ash in closed shed only and utilize total quantity of ash for manufacture of bricks.

11. The industry shall monitor electrical conductivity in ground and surface water samples regularly and the reports shall be submitted to the Board.

12. The industry shall maintain digital flow meters for effluent generation,

MEE feed, MEE condensate, MEE rejects and maintain proper records.

13.The industry shall dispose solid waste (Non- Hazardous) as follows:

S.No.	Name of the Solid waste	Quantity	Disposal
1.	Ash from the boiler (with 100% biomass as a fuel)	19.6 TPD	Sold to brick manufacturers.
2.	Ash from the boiler (with 100% coal as a fuel)	11 TPD	Sent to their sister concern unit i.e. M/s. Panyam Cements Ltd., for mixing with clinker.

14.The industry shall maintain 33% greenbelt all along the premises.

15.The applicant shall submit Environment statement in Form V before 30th September every year as per Rule No.14 of E(P) Rules, 1986 & amendments.

SCHEDULE - C

[See rule 6(2)]

[CONDITIONS OF AUTHORISATION FOR OCCUPIER OR OPERATOR HANDLING HAZARDOUS WASTES]

1. The authorised person shall comply with the provisions of the Environment (Protection) Act, 1986, and the rules made there under.
2. The authorisation shall be produced for inspection at the request of an officer authorised by the State Pollution Control Board.
3. The person authorised shall not rent, lend, sell, transfer or otherwise transport the hazardous and other wastes except what is permitted through this authorisation.
4. Any unauthorised change in personnel, equipment or working conditions as mentioned in the application by the person authorised shall constitute a breach of his authorisation.
5. The person authorised shall implement Emergency Response Procedure (ERP) for which this authorisation is being granted considering all site specific possible scenarios such as spillages, leakages, fire etc. and their possible impacts and also carry out mock drill in this regard at regular interval of time;
6. The person authorised shall comply with the provisions outlined in the Central Pollution Control Board guidelines on “Implementing Liabilities for Environmental Damages due to Handling and Disposal of Hazardous Waste and Penalty”.
7. It is the duty of the authorised person to take prior permission of the State Pollution Control Board to close down the facility.
8. The hazardous and other waste which gets generated during recycling or reuse or recovery or pre-processing or utilization of imported hazardous or other wastes shall be treated and disposed of as per specific conditions of authorisation.
9. An application for the renewal of an authorisation shall be made as laid down under these Rules.
10. Any other conditions for compliance as per the Guidelines issued by the Ministry of Environment, Forest and Climate Change or Central Pollution Control Board from time to time.
11. Annual return shall be filed by June 30th for the period ensuring 31st

- March of the year.
- 12.The industry shall comply with the provisions of HWM Rules, 2016 in terms of interstate transport of Hazardous Waste and manifest document prescribed Under Rule 18 and 19 of the HWM Rules, 2016.
 - 13.The industry shall not store hazardous waste for more than 90 days as per the Hazardous and Other Wastes (Management & Transboundary Movement) Rules, 2016.
 - 14.The industry shall store Used / Waste Oil and Used Lead Acid Batteries in a secured way in their premises till its disposal to the manufacturers / dealers on buyback basis.
 - 15.The industry shall transport the hazardous waste to cement industries only through vehicle fitted with GPS tracking system.
 - 16.The industry shall maintain 7 copy manifest system for transportation of waste generated and a copy shall be submitted to concerned Regional Office of APPCB. The driver who transports Hazardous Waste should be well acquainted about the procedure to be followed in case of an emergency during transit. The transporter should carry a Transport Emergency (TREM) Card.
 - 17.The industry shall maintain proper records for Hazardous and Other Wastes stated in Authorisation in Form-3 i.e., quantity of Incinerable waste, land disposal waste, recyclable waste etc., and file annual returns in Form-4 as per Rule 20 (2) of the Hazardous and Other Wastes (Management & Transboundary Movement) Rules, 2016.
 - 18.The industry shall comply with the provisions of HWM Rules, 2016 in terms of interstate transport of Hazardous Waste and manifest document prescribed Under Rule 18 and 19 of the HWM Rules, 2016.

-

The industry shall submit Half yearly compliance reports to all the stipulated conditions in Consent for Establishment (CFE) and Consent for Operation (CFO) through website i.e., <https://pcb.ap.gov.in> by 1st of January and 1st July of every year. The first half yearly compliance reports shall be furnished by the industry and second half yearly compliance reports shall be the audited through NABL accredited third party.

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BANDLA SIVA SANKARA PRASAD, CHAIRMAN, O/o CHAIRMAN-APPCB

To
M/s. S.P.Y. Agro Industries Ltd.,
APIIC, New Industrial Estate,
Udumulapuram (V), Nandyal (M),
Kurnool District, Andhra Pradesh.
Email: spyagro_nandigroup@yahoo.com

Annexure-IV

DETAILED ENQUIRY REPORT
ON
AMMONIA GAS LEAK INCIDENT
OCCURRED IN
M/S SPY AGRO INDUSTRIES PRIVATE LIMITED
(NANDYALA GASES PRIVATE LIMITED)
IIDC, UDUMULAPURAM VILLAGE,
NANDYAL MANDAL,
KURNOOL DISTRICT
ON
27/06/2020

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REPORT OF COMMITTEE CONSTITUTED BY THE COLLECTOR AND DISTRICT MAGISTRATE, KURNOOL TO ENQUIRE INTO THE GAS LEAKAGE OCCURRED AROUND 9.30 A.M ON 27.06.2020 AT M/s S.P.Y. AGRO INDUSTRIES LTD, APIIC, NEW INDUSTRIAL ESTATE, UDUMULAPURAM(V), NANDYAL (M), KURNOOL DISTRICT.

Introduction:

An Ammonia Gas leakage incident was occurred in M/s SPY Agro Industries Limited, Udumulapuram Village, Nandyal Mandal, Kurnool District around 9.30 AM on 27/06/2020 and one Sri K. Srinivasa Rao, General Manager of the plant was died on the spot and remaining four persons were escaped. The Collector and District Magistrate, Kurnool vide Procs.Rc.No.D4.829/2020, Dt.27/06/2020 constituted a Committee with the following Members to enquire into the incident of Ammonia Gas Leakage occurred at M/s SPY Agro Industries Limited, Udumalapuram Village, Nandyal Mandal, Kurnool District with a direction to inspect the incident place and to submit the report for onward submission to the Government.

1	General Manager, District Industries Centre, Kurnool	Chairman
2	Revenue Divisional Officer, Nandyal	Member
3	Zonal Manager, APIIC, Kurnool	Member
4	Inspector of Factories, Kurnool	Member
5	District Fire Officer, Kurnool	Member
6	Deputy Commissioner of Labour, Kurnool	Member
7	Environmental Engineer, APPCB, Kurnool	Member
8	Deputy Superintendent of Police, Nandyal	Member

In obedience of the orders of the Collector & District Magistrate, Kurnool, the Committee visited incident place on 29.06.2020 and discussed on the incident and arrived the circumstances that have caused ammonia leakage from the industry. Accordingly, preliminary report was submitted to the Collector and District Magistrate, Kurnool

the Factories Department records the CO₂ plant is in the name of Nandyal Gases Private Limited only.

The Carbon dioxide recovery plant of the industry was originally established in the name & style of M/s.Nandyala Gases and the same was merged with M/s S.P.Y. Agro Industries Ltd., APIIC, New Industrial Estate, Udumulapuram (V), Nandyal (M), Kurnool District through Hon'ble High court order dt:09.07.2012. Since then, all the transactions pertaining to CO₂ recovery plant are being done in the name of M/s S.P.Y. Agro Industries Ltd only. The Industry has obtained Consent for Operation (CFO) from A.P. Pollution Control Board from time to time and the latest renewal of the CFO was issued by A.P.Pollution Control Board vide order dated.03.03.2020 with validity period up to 31.10.2021

Manufacturing Process And Role Of Ammonia Gas:

The Principal raw material i.e. Carbon Dioxide (CO₂) generated during the fermentation of the grains and this CO₂-Gas is being purified, compressed and dried in several steps and passes the liquefaction section to become liquid. The Liquid CO₂ will then be stored in the CO₂-storage tanks for further use. The various steps involved in the manufacturing process is explained hereunder:

The raw CO₂ is received in Foam Trap for purification. The purified CO₂ is then passed through Booster blower to boost the CO₂ gas from 500 mmwc to 1 Kg mmwc. The CO₂ gas goes to scrubber for removal of ethanol and then to knock drum for removal of suspended water droplets. Then CO₂ gas is compressed in 3 stages from 1Kg/Cm² to 16-20 Kg/Cm² and will carry to HP scrubber for removal of moisture in CO₂ gas. Then it will be sent to deodorizer for removing the carbon by

using steams at 40°C. Thus obtained CO₂ will be fed into the dryer to remove moisture and then to pre-cooler to reduce the temperature to -10°C. The pre-cooled CO₂ gas which is in vapour state will be sent to the chiller for liquefying purpose.

The Ammonia Gas is used as refrigerant for liquefying Carbon Dioxide (CO₂) and also for dry ice CO₂ Blocks. The management has installed ammonia refrigeration system by installing 2-Ton Ammonia Gas receiving tank. A solenoid valve was installed to maintain the Ammonia gas pressure at 3 Kg/cm² in the circuit between ammonia receiver tank and economizer. During the process, the Ammonia gas will convert into Ammonia vapours in chiller and pre-cooler and passes to Ammonia compressor. In turn, the Ammonia vapours passes through oil separator where oil will be separated and remaining ammonia gas vapours will go to condenser. In the condenser, the ammonia gas will be cooled and return back to ammonia receiver. The Cycle continues during the Liquefaction of Carbon Dioxide and also dry Ice (CO₂) blocks

Accident – Circumstances:

It is noticed by the plant people, that there exists a problem in Ammonia Pipe line solenoid valve passing from Ammonia receiver tank to economizer. The same has been informed to the plant General Manager, Sri K. Srinivasa Rao. Upon instructions of the plant General Manager, the production of liquefied CO₂ has been stopped at 3.00 PM on 26/06/2020. After verification by the plant General Manager, Sri K. Srinivasa Rao, it is felt necessary and essential to replace the failed solenoid valve to resume the production. Sri K. Srinivasa Rao, General Manager instructed the workers namely Sri P. Ravi Chandrudu,

Fitter / operator and Sri K. Madhusudhanachari, Fitter to replace the solenoid valve.

After receiving the instructions from Sri K. Srinivasa Rao, General Manager of the plant, Sri P. Ravi Chandrudu, Fitter / operator and Sri K. Madhusudhanachari, Fitter at 6.00 PM on 26/06/2020 have started the work to replace the break down solenoid valve with new one. The procedure carried out is explained hereunder.

Both the workers i.e Sri P. Ravi Chandrudu, Fitter / operator and Sri K. Madhusudhanachari, Fitter in the first instance have shut off the main Ammonia Gas valve which is at the Ammonia receiver tank. After shutting off, both the workers went up to the Ammonia Pipe Line existing between Ammonia receiver tank to economizer which is situated 4 Metres height from ground level and started work of cutting the ammonia pipe line with gas cutter on one side of the solenoid valve and other side which is connected to flange and removed the break down solenoid valve. Then the new solenoid valve has been replaced and fixed to the Ammonia Pipe Line carrying welding on one side and other side fitted to the flange. The work has completed by 5.00 AM on 27/06/2020 and informed to Sri K. Srinivasa Rao, General Manager of the plant about the work done on replacement of the breakdown solenoid valve and went to rest up to 9.00 AM.

At 9.00 AM, on 27/06/2020 Sri K. Srinivasa Rao, General Manager, upon resuming to duty in General shift, instructed Sri P. Ravi Chandrudu, Fitter / operator and Sri K. Madhusudhanachari, Fitter to restart the CO2 plant. Meanwhile the instrumentation team namely Sri K. Thippa Reddy, Manager-Instrumentation, Sri G. Tirumala, Supervisor, Sri Harin, Instrument Engineer came to the CO2 recovery plant as per the request of the plant General Manager. Sri K. Srinivasa Rao, Plant General Manager started the CO2 compressor plant and

adjusting the parameters of each equipment at Programmable Logic Control (PLC) and other team mentioned were verifying the fields of each equipment in the plant and Sri K. Madhusudhanachari went out to check up the liquefied CO₂ storage tank which is outside the machinery hall. While the procedure is going on, Sri K. Srinivasa Rao, plant General Manager instructed Sri P. Ravichandrudu to open the Ammonia gas pipeline valve located at Ammonia receiver. Sri P. Ravichandrudu opened the Ammonia pipeline valve and reached to Sri K. Srinivasa Rao, Plant General Manager operating at PLC. Sri K. Srinivasa Rao, Plant General Manager, operated Ammonia Compressor at Programmable Logic Control (PLC). Within no time Ammonia Pipeline, bursted at welding spot which was carried out on 26/06/2020 due to high pressure of Ammonia gas passing in the pipeline. As a result, huge quantity of Ammonia gas leaked and spread over into the atmosphere of the machinery hall. Sri K. Srinivasa Rao, General Manager of the plant was strucked inside the machinery hall. All other team who were in the machinery hall ran way and escaped from the incident.

Sri K. Thippa Reddy informed the situation to the HR Department about the incident, inturn informed to the local Fire department. At about 10.00 AM on 27/06/2020, on receipt of the rescue call message, the Station Fire Officer with Fire unit crews of Nandyal Fire Station have immediately turned out with 02 Fire Tenders and 01 Mist Vehicle and rushed to the above rescue spot i.e to M/s Nandyala Gases Private Limited, Udumulapuram Village, Nandyal Mandal. The District Fire Officer further deployed the Fire units of Kurnool, Allagadda and Banaganapalli Fire Stations to assist the above rescue accident. The local fire officer and team with personal protective equipment reached the CO₂ plant and started spraying water continuously into machinery hall with water tenders, to dilute the ammonia gas in order to avoid spreading to the surrounding areas. At about 12.40 PM, the fire

department persons went inside the machinery hall by wearing self-contained breathing apparatus and brought out Sri K. Srinivasa Rao, General Manager of the plant from the machinery hall and shifted to Hospital through Ambulance and thereby Doctors declared as brought dead. The Fire Department team along with Sri P. Ravichandrudu, Fitter/Operator by wearing self contained breathing apparatus entered into the Machinery hall along with Sri P. Ravichandrudu, Fitter/Operator by wearing self contained breathing apparatus, assisted by the safety team of M/s TGV SRAAC Limited, closed the main valve of Ammonia receiver under the supervision of District Fire Officer, Kurnool. Thereby the leakage of Ammonia gas was arrested and situation was brought under the control which was witnessed by Deputy Chief Inspector of Factories and other Officers who were present at the spot. The Fire Tenders along with rescue team consisting of 7 Fire Man was kept as standby on 29/06/2020 up to 10.00 PM at the accident place as a precautionary measure.

Accident-Causes:

- 1) The replacement of break down solenoid valve has not been done by an Certified Agency with qualified team. The method of welding of joint of Ammonia pipe line is unsafe. The person who carried out such welding of pipeline is neither qualified nor trained to do such type of welding work.
- 2) The Team has not led in a proper way following safety codes. Failed to do proper testing of the ammonia pipe line after the welding work was carried out with water pressure for its strength of the welding joint by the competent person, before putting it into use.

- 3) Failed to ensure the working conditions of the ammonia gas pressure gauges in the Factory.
- 4) Failed to provide personal protective equipment like insulated gloves, chemical aprons, face shields and self contained breathing apparatus to all the workers working in the Factory.
- 5) Failed to appoint qualified and experienced persons as operators in the Factory.
- 6) Overall negligence attitude of the Management in focusing on the Safety standards in the Factory.

Post Accident – Measures:

On 29.06.2020, the Fire Department has taken into task for emptying the left over Ammonia gas in the Ammonia Receiver under the Supervision of team of Officers consisting of General Manager, District Industries Centre, Kurnool, Revenue Divisional Officer, Nandyal, Zonal Manager, APIIC, Kurnool, Deputy Chief Inspector of Factories, Kurnool, District Fire Officer, Kurnool, Environmental Engineer, APPCB, Kurnool, Deputy Commissioner of Labour, Kurnool and Representative of Deputy Superintendent of Police, Nandyal.

The process of draining the remaining ammonia gas in the Ammonia receiver started at 5.35 PM on 29.06.2020. The safety team of M/s TGV SRAAC Limited, Kurnool and the operator Sri P. Ravichandrudu, CO2 plant with personal protection equipments such as self-contained breathing apparatus, fixed a pipe to the drain pipe of Ammonia receiver. The other end of the pipe was put into drum which contain 400 Litres of water and slowly opened the drain pipe valve to dissolve

the ammonia into the water. The entire left over ammonia in the receiver has got dissolved into 3 drums consisting of 400 litres of water each. The diluted Ammonia gas water of about 1200 litres transferred to the Effluent Treatment Plant (ETP) for further treatment and disposal. The entire process has been closely monitored and supervised by Deputy Chief Inspector of Factories, Kurnool, District Fire Officer, Kurnool and Environmental Engineer, APPCB, Kurnool.

Accident Deceased – Compensation and Ameliorative Measures:

Sri K. Srinivasa Rao, aged 47 Years has been working as General Manager in the factory for 10 years with a monthly salary of Rs.87,800/-. The deceased left behind his wife Smt. K. Lakshmi, 36 Years and two daughters namely Kum. K. Veda Sree, 12 years and Baby K. Jayani Sree, 03 years. As an ameliorative measure, the Management and wife of deceased has entered into an agreement and according to which the management has to pay an amount of Rs.50,00,000/- (Rupees Fifty Lakhs Only) to the wife of deceased. Out of which the management has paid Rs.20,00,000/- (Rupees Twenty Lakh Only) in cash to Smt. K. Lakshmi, wife of deceased on 29/06/2020 and an amount of Rs.10,00,000/- (Rupees Ten Lakh Only) has been paid to the wife of deceased Smt. K. Lakshmi on 07/07/2020 by account transfer from SPY Agro Industries Limited.

Further the management has deposited an amount of Rs.12,47,175/- with the Commissioner for Employees Compensation, Kurnool through DD No.37896938, Dt.10/07/2020 drawn in Union Bank of India, Nandyal towards compensation as decided by the Commissioner for Employees Compensation, Kurnool.

Violation of Acts and Action taken by the Departments:

a) **The Factories Act 1948 and Andhra Pradesh Factories Rules 1950 by the Factories Department.**

A show cause notice has been issued to the Management Sri S. Sreedhar Reddy (Director) Occupier cum Manager of the said factory for contraventions of Section 7A-2 read with Section 41 and Rule 61-F(2), Rule 61-F(3) and Rule 61-E read with Section 87 and Rule 95 Schedule XV Part-II (11) and (15) under the Factories Act 1948. . Reply is awaited.

b) **Water (Prevention and Control of Pollution) Act, 1974, Air (Prevention and Control of Pollution) Act, 1981 and Environmental Protection Act, 1986.**

The A.P Pollution Control Board vide order dated.13.07.2020 issued stop production orders to M/s. S.P.Y. Agro Industries Ltd under section 33 (A) of Water (Prevention & Control of Pollution) Act, 1988 and under Section 31 (A) of Air (Prevention & Control of Pollution) Act, 1987 for non compliance Board directions, Consent conditions and also for causing the accident in the industry on 27.06.2020

c) **Section 13 of A.P. Fire Services Act, 1999, and Rule.15 of A.P. Fire and Emergency Operations and levy Fee Rules, 2006 and Table 07 of Part-IV of National Building Code of India, 2016.**

Notices in Form-12, Dt.17/05/2020 and Form-14, Dt.26/06/2020 are issued to the Management for neglecting to undertake Fire Prevention and Fire Safety Measures in the Industry and violating the conditions laid down in the A.P. Fire Services Act 1999 & A.P.

Fire and Emergency Operations and Levy of Rules and thereby endangering lives and property of the inmates and public in and around the premises. Reply is awaited.

- d) Notice has been issued to the Management for payment of compensation of Rs.12,47,175/- by the Commissioner for Employees Compensation, Kurnool and Joint Commissioner of Labour, Kurnool District vide LrNo.C1/1067/2020, Dt.29/06/2020. Obligated and amount deposited. Further notice has been issued by the Assistant Commissioner of Labour, Nandyal and Controlling Authority under payment of gratuity Act 1972 for payment of gratuity of Rs.2,53,846/- (Rupees Two Lakhs Fifty Three Thousand Eight Hundred and Forty Six Only) under payment of Gratuity Act 1972 to the wife of the Deceased employee.
- e) The Company is due of Property Tax of Rs.2,12,154/- for the last 5 years. Apart from this, the management are defaulters in payment of property tax / lease amount pertaining to their group units existing in IE- Nandyal, IIDC- Nandyal to a tune of Rs.46,55,999/-.
- f) The Inspector of Police, Nandyal Taluka UPS has registered a case in Cr.No.473/2020 U/s 278, 284, 285, 304-A of IPC and Sec.92 of Factories Act and under investigation.
- g) The Tahsildar, Nandyal has submitted the factual report of the incident to the Collector and District Magistrate, Kurnool through Revenue Divisional Officer, Nandyal explaining the history of the plant and post accident measures taken by the Revenue Department.

PRESENT STATUS:

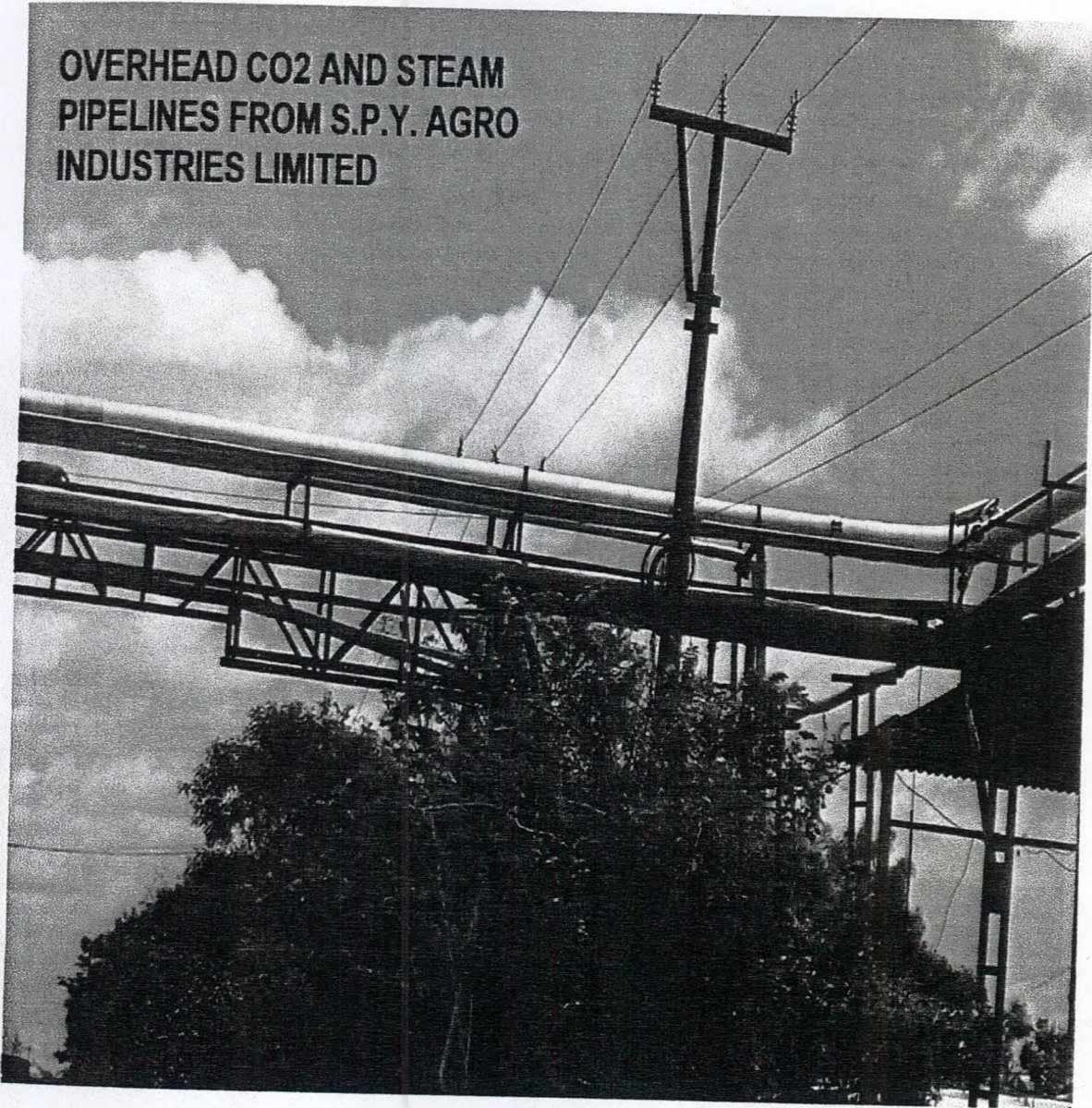
As per the instructions of the Director of Factories, A.P., Vijayawada, prohibitory orders under Section 40(2) of the Factories Act 1948 are issued by the Deputy Chief Inspector of Factories, Kurnool to the management of the said factory, prohibiting the usage of Carbon Dioxide (CO2) plant until further orders.

D. S. S. Reddy
30/7/2020

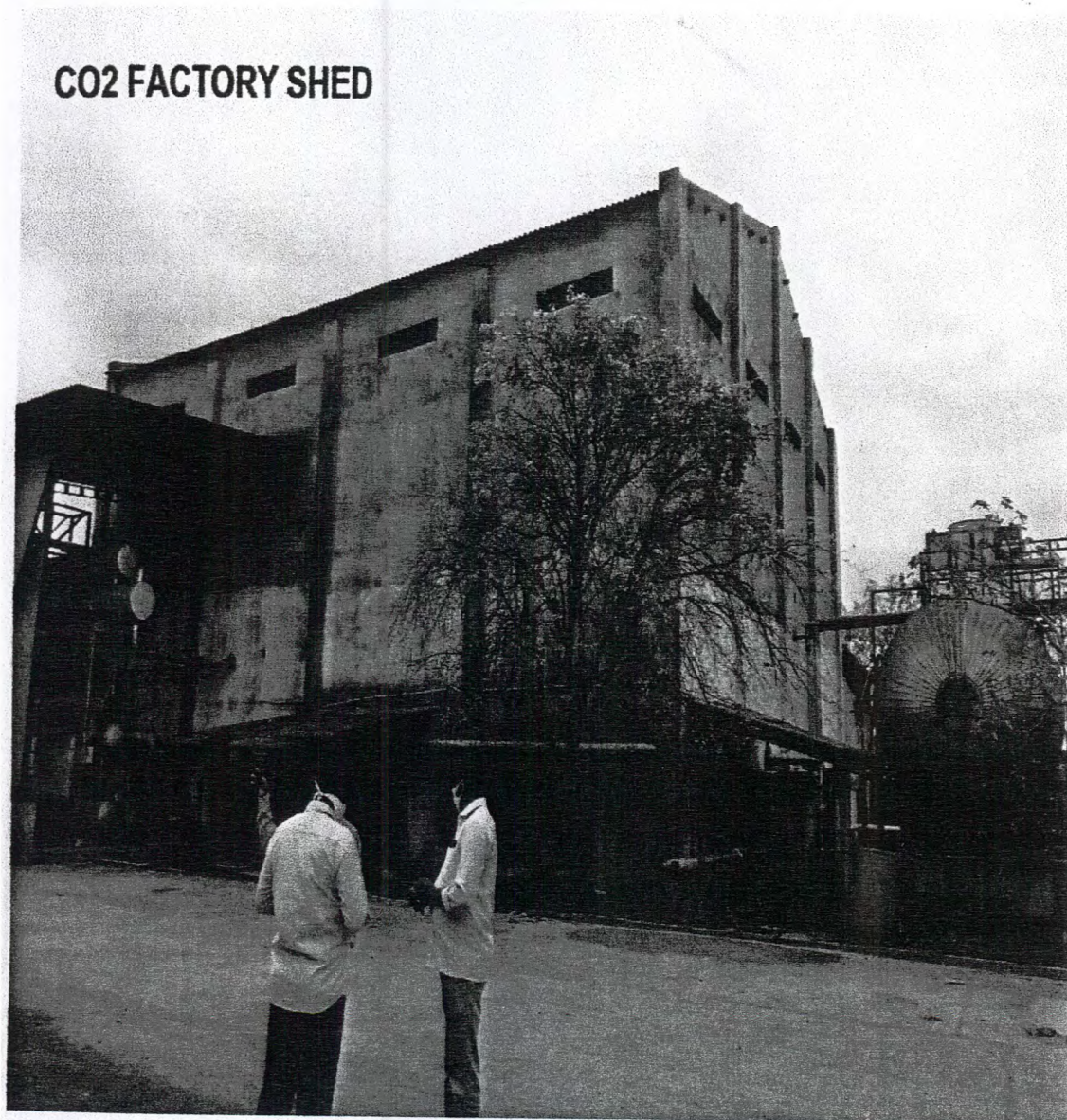
K SOMASEKHARA REDDY
GENERAL MANAGER
DIC :: KURNOOL &
Chairman of the Committee

Sl.No.	Member	Signature
1	Sri G. Ramakrishna Reddy Revenue Divisional Officer, N ANDYAL	<i>G. Reddy</i>
2	Smt. C. Venkata Narayanamma Zonal Manager, APIIC, Kurnool	<i>C. Venkata Narayanamma</i>
3	Sri V. Ramakrishna Reddy Deputy Chief Inspector of Factories, Kurnool	<i>V. Reddy</i> 30/7/2020
4	Sri V. Srinivasa Reddy District Fire Officer, Kurnool	<i>V. Srinivasa Reddy</i> 30/7/2020
5	Sri N. Seshagiri Rao Deputy Commissioner of Labour, Kurnool	<i>N. Seshagiri Rao</i> 30/7/2020
6	Sri B.Y. Muni Prasad Environmental Engineer, APPCB, Kurnool	<i>B.Y. Muni Prasad</i> 30/7/2020
7	Sri M. Chidananda Reddy Deputy Superintendent of Police, Nandyal	<i>M. Chidananda Reddy</i> 30/7/2020

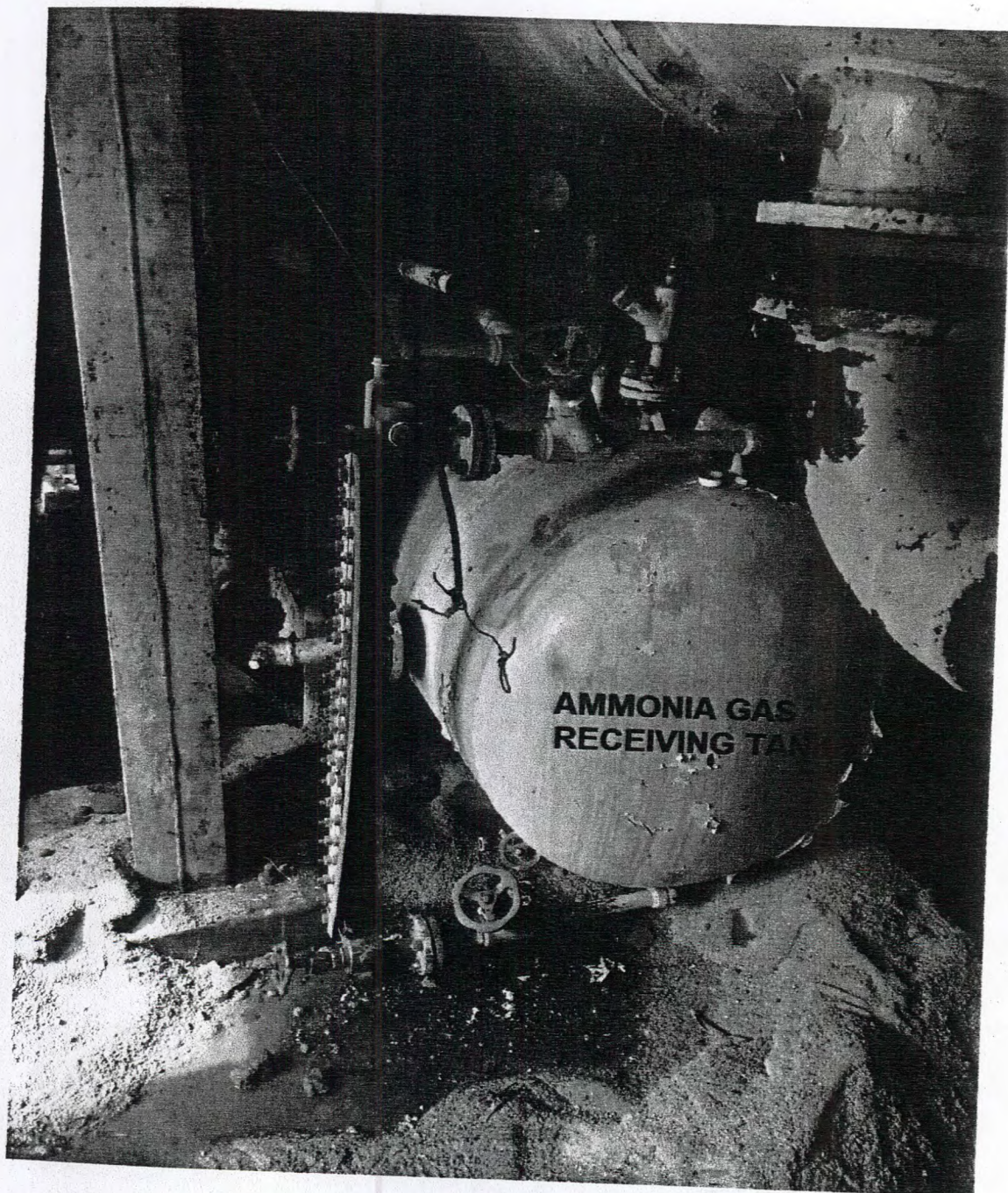
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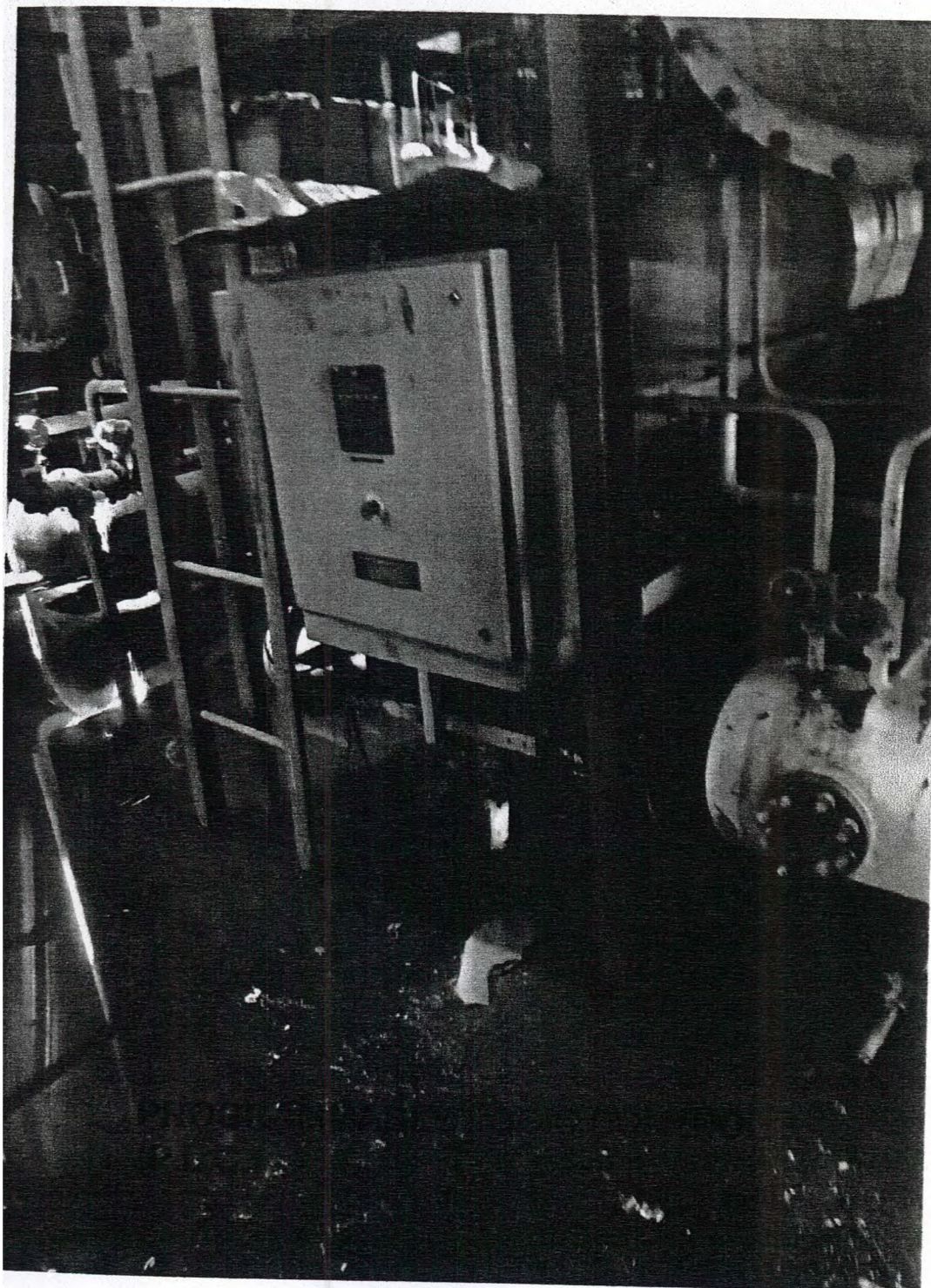
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CO2 FACTORY SHED

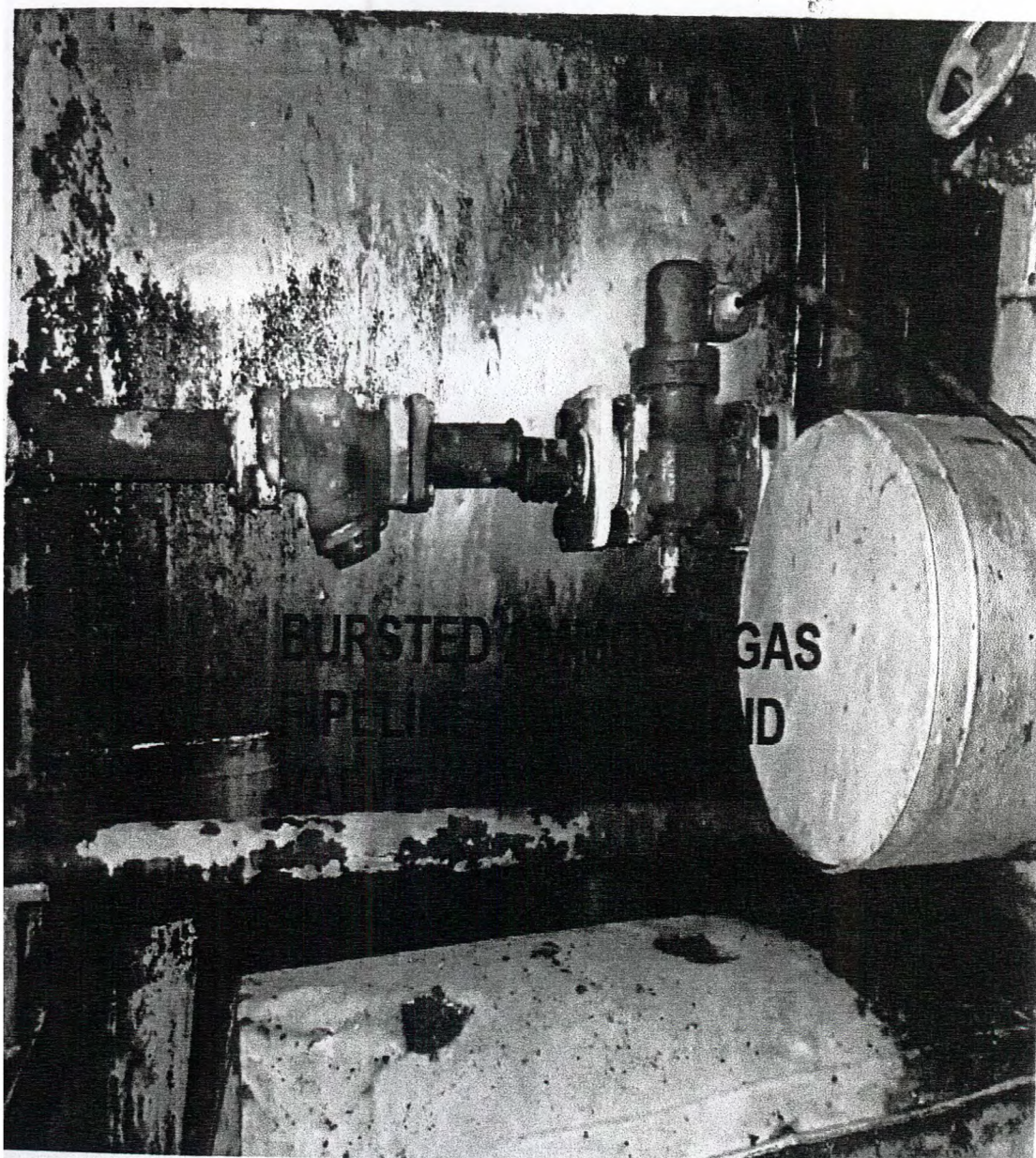
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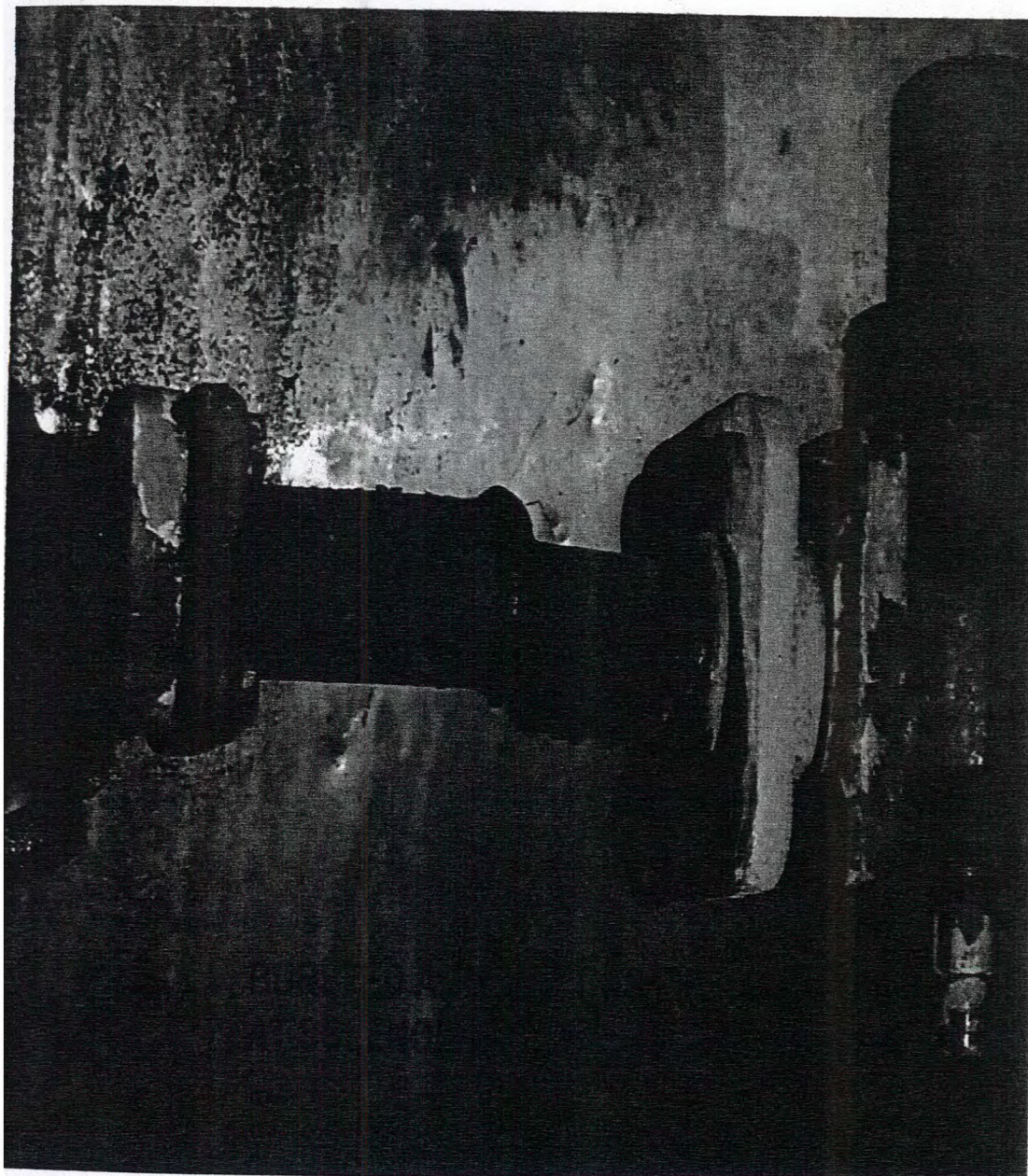
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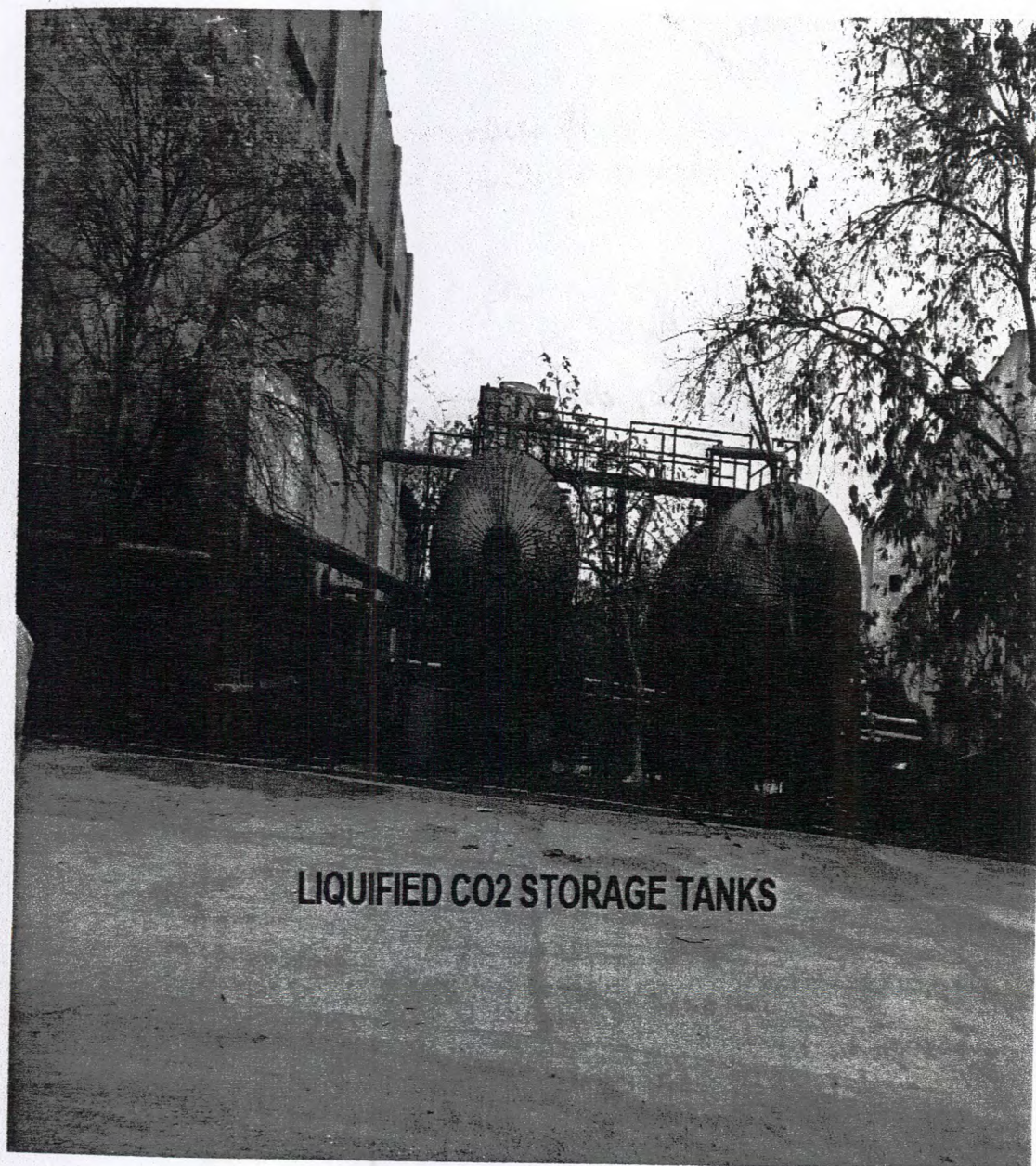
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LIQUIFIED CO2 STORAGE TANKS

Date - 27.7.2020
Udumalapuram
Industrial Estate.

TO,

Committee members of
Spy Agro industries regarding Ammonia Gas leakage.

మా గ్రూపు నందు Nanalyp Gas pvt. limited లో
Accident జరిగినది అని వాసుదేవ రెడ్డి manager maintenance
phone ద్వారా తెలియచెారు. నేను Fire Department వారికి తెలియచేయడం
నేను Co₂ plant కు చేరుకున్నాను. అప్పటికి Ammonia Gas leakage
అవుతున్నది Fire Department వారు వచ్చి Fire Engine start చేసి
Water spray చేశారు. నేనువచ్చి మా సిబ్బందిని ఎవరించుగా
Co₂ plant లోని Greenhouse లో పలకరించారు అని. మరియు
యంత్ర సిబ్బంది. K-Thippareddy, Thirumala, Ramu, Heri Rajanna.
బయటకు వచ్చారు అని తెలియ చెారు. సుమారు 12.40 ని. సమయమున
mechanic hall నుండి బయటకు తీసి Ammalapur Government
hospital కు తోలిన వెళ్ళారు. అక్కడ Doctor Greenhouse చేరవలసి
నిర్దేశించారు. శ్రీనివాసరావుకి చచ్చి పుణ్యం అవలసిన
అన్ని పరిశోధనలను చట్టబద్ధము జరిగింది. తరువాత అన్ని
భద్రత ప్రమాదములు, మరియు అనుమతులు గౌరవంగానే వ్యక్తి
తీసుకున్న తరువాతనే వ్యాధిని తీరిగి నమోదులను ఇవ్వమనదు
ఇలాంటి ప్రమాదములు జరుగకుండా అన్ని భద్రత ప్రమాదములు
పాటించగలమని తెలియచేయ చూస్తాను.

ఇట్లు
S. Sreedhar Reddy
Managing Director, Spy Agro industries Ltd
30-726, Spy Reddy hall
Brammalapuram, Nanalyp.
అధికారి నం. 9908229020

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Date - 10-07-2020
New Industries Expts
Udumula Puram,

The Community members of

Spy Agro industries namely on Ammonia gas
leakage.

Sir,

నామక గత 10 సం. నుండి Spy Agro వంతు instrumentation
manager గా పనిచేయ చున్నాను. నాను ఈ Group లోని ఇతర ప్రముఖ
వ్యక్తికి ఈవ నంబర్ల gas parallel limited మరియు Spy Agro industries
limited (Distillery) లో Ammonia Acetylation Equipments ను
వర్కవుట్ చేసాను. 27.06.2020 న ఉదయం 9:00 యరవదిగా
నాదారుల వచ్చారు. నాను దాని కి వచ్చిన యెండ్ల వై ప్రాంతం వర్కగారు
General manager Nonamly gas parallel limited phone చేసి
వం plant నందు Co₂ plant ను Reset చేయ చున్నాను అది చిప్పి
instrumentation గారు ను రమ్మనవలెబారు యెండ్ల నాను నా Team
గారెవరూ ఈవ Thirumala, Harin Engineer లో కలసి వచ్చి Co₂ plant
కు వచ్చాము ప్రాంతం వర్కగారు, P. Rami operator, madhusudhan Chari
Fitter, మరియు మిమ ముగ్గురారు కలసి Compressor parameters తనిచేయ
Check చేసుకొనమన్నారు. తరువాత ప్రాంతం వర్క గారు Ammonia గాసు
వెళ్ళి కినులోకి వెళ్ళినారు.

సుమారు ఉదయం 9:30 ని, నుండి 9:40 ని, plant
అంతయం పని చేయటం యెండు అంతయం గమనించు చుడగా వై ప్రాంతం వర్క
PLC (Programmable Logic Controller) వద్ద నిలబడి బానిని operate చేయచుడగా
ఒక సారిగా ముందులోనే welding చేసిన బుగము అనగా భూమి నుండి
4m లో ఎత్తులో వచ్చి Ammonia gas Value ఒక సారిగా వేల
వెళ్ళి కెళ్ళి వచ్చి Ammonia gas బయటకు వచ్చి plant యెత్తము
వ్యాపించినది యెండ్లని ఒక గమనించిన నాను Thirumala, Rami, Harin
ఒక సారిగా గాలిగ్రామి నుండి బయటకు పరకులు తీసినారు. కాని లోపల
PLC Adjust చేయచున్న వై ప్రాంతం వర్క గారు ఎత్తము గారెవరూ Harin
నందు ప్రాంతం వర్కగారు తరువాత నాను యెండ్లని H.R. Department కి
ప్రాంతం వర్క గారు గురుంచి తిరియ చేశారు. సుమారు 10 నామయమున
Fire Department వారు Fire Enginiers ను తీసుకొనివచ్చి

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Mechanics Hall లో water spray చేసారు తరువాత సుమారు 12-40 నిం
 సమయములో శ్రీ శ్రీనివాసరాజ్య నాథిని mechanics hall నుండి బయటకు
 తీసి Amrthalam లో ప్రభుల్ జి సహతుకి తీసుకు వెళ్ళారు. ఈ క్రమంలో
 వలన శ్రీనివాసరాజ్య నాథిని తప్ప ఎవరూ మరల ఎలాంటి ఇబ్బందులు లేకుండు
 బయట పడినారు తరువాత శ్రీ శ్రీనివాసరాజ్య నాథు చనిపోయినట్లు నా నమ్మకం లేనది

ప్రతి విషయములూ యు రుద్దము

ఇట్లు

లేదు ఎవ్వరూ.



K. Thippa Reddy
 Instrumentation (Manager)

S/o. Chandra Sekhara Reddy.

30-724-A5-1st floor

Tega Complex, Bommalakota Subram

Nampyl, kurnool dist.

contact no - 7013023867

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Date: 10/07/2020

To
The Comptroller manager of Spy Agro Industries Limited
omonia gas leakage.

Sir,
ನೀನು Spy Agro Industries (Ltd) Group ನೊಂದು ಸಂಬಂಧಿಸಿದ
Nandyal Gases pr (Hd) ಒಂದು ಫಿಟರ್ ಮತ್ತು Fitter ಗೆ ಹೆಚ್ಚಿನ ಸಂಬಂಧಿಸಿದ
ಪರಿಶೀಲಿಸುವುದು. ಮತ್ತು ಪ್ರತಿಬಂಧ ಈ ಫಿಟರ್‌ನು, ಯಂತ್ರವು ಮತ್ತು ಪರಿಶೀಲಿಸುವುದು
Co2 production ಮಾಡುವುದು. ನಂತರ ಪೆಟು P. Ravichandrudu (Fitter) ಈಗ
General Manager ಆಗಿದ್ದು K. Srinivasa ರು ಗರು Machine ನ problem
ಉಂಟಾಗಿದೆ ತಿಳಿಸಿದರು. ತರುವಾಯ ಮೇಯುವುದು ಕೆಲವು ಗಾತ್ರದ pipe line ನು
ಪರಿಶೀಲಿಸಿದಾಗ ಗಾತ್ರದ Receiver ನುಂಟು ಅನಿಲವು ಹೊರಕ್ಕೆ ಹೋಗಿ pipe line ನ
Solinnoid Value ನ problem ಉಂಟಾಗಿದೆ ಗಮನಿಸಿದರು. ತರುವಾಯ K. Srinivasa ರು
ಗರು Solinnoid Value ನಿ ಯಾಕೆ ಕೆಲವು Solinnoid Value ಮೇಯುವುದು ನನ್ನ,
P. Ravichandrudu ನಿ ಘೋಷಿಸಿದರು. ತರುವಾಯ K. Srinivasa ರು ಘೋಷಿಸಿದರು
ಗಾತ್ರದ Receiver ವ್ಯಕ್ತಿ Value ನಿ ಘೋಷಿಸಿದರು ನಾನು, Ravichandrudu
ವಿಷಯ ಕೆಲವು 4 ವೇಗದ ಅನಿಲ ವನ್ನಿ ಅಡ್ಡಲಾಗಿ ಹೋಗಿ ಹೋಗಿ, ಅಡ್ಡಲಾಗಿ
ಮತ್ತು ಹೋಗಿರು ಯಾರೂ ವನ್ನಿ ಪಕ್ಕ Solinnoid Value ನಿ ತಿಳಿಸುವುದು ಕೆಲವು
ಬಳಿ ಪ್ರತಿಬಂಧ Gas Cutter ಯಾಗಿ pipe line cut ಮಾಡಿ ತಿಳಿಸಿದ (ಪ್ರತಿಬಂಧ Flange
ನಿ P. Ravichandrudu open ಮಾಡಿ ತರುವಾಯ ವಿಷಯ ಕೆಲವು Solinnoid Value ನಿ
ಕ್ರಿಯೆ ತಿಳಿಸುವುದು ನಾನು. ಏನೂ ನಿಯಂತ್ರಣ ಗೆ 6:00 ಉ ನಿಯಮದ Instrument
Ingenueer Havi ಗರು ಕೆಲವು Solinnoid Value ನಿ ತಿಳಿಸಿದರು ಮತ್ತು ಮೇಯುವುದು
ತರುವಾಯ ನಾನು Ravi ಒನ್ನ ದಾಖಲೆ ಸಂಬಂಧಿಸಿದ, welding ಮತ್ತು fitting ಉಂಟು
ತರುವಾಯ ಮಾಡುವುದು. ತರುವಾಯ ಕೆಲವು ನಿಯಮದ ಕೆಲವು Solinnoid Value ನಿ
ಬಳಿಯ pipe ನಿ ಅಡ್ಡಲಾಗಿ ಹೋಗಿ ತಿಳಿಸಿದರು ಹೋಗಿ P. Ravi ಒನ್ನ ನಿಯಮದ ಹೋಗಿ
welding ಮಾಡಿ ಬಳಿಯಾದರು. ಈ ವನು ನಿಯಮದ ಮಾಡುವುದು ಹೋಗಿ. 5:00 Am
ನಿಯಮದ ಹೋಗಿ, (ಒಂದು 27/06/20) ತರುವಾಯ ಮೇಯುವುದು ಹೋಗಿ ಹೋಗಿ Co2

:: 27 ::

G.M. Sir గారి phone ద్వారా తెలుసుకొన్నాము. తెలుసుకొని మా G.M గారు ఉదయం
 9:00 Am Co₂ plant కు వచ్చి మాకు plant ను Restart చేద్దామని -
 చెప్పినారు. ఈ సమయంలో Instrumentation సిస్టమ్ లోని plant వద్దకు వచ్చినారు.
 తెలుసుకొని Srinivasa Rao గారు Co₂ plant కు సంబంధించిన ఒక్కొక్క Equipment
 Start చేసుకుంటు, మరియు Each Equipment ను పరిశీలించుచున్నప్పుడు ఒకరిగా
 ఒక్కొక్కరిగా Computer ను ON చేసి PLC వద్ద G.M Sir గారు parameters
 ను పరిశీలించుచున్నారు. ఆ సమయంలో నేను ఒక side లోని Co₂ storage tank
 ను పరిశీలించుకుంటు వెళ్ళి వస్తున్నాను. సుమారు 9:30 - 9:40 Am సమయంలో
 Machine hall లో ఒక్కోసారిగా ఒకే సమయంలో పెద్ద శబ్దం వచ్చి దాని-
 తో పాటు ఒకటి కంటే ఎక్కువ ఘోషం గమనించాను. ఒకే సమయంలో కెంపురెడ్డి
 సార్, కె.మల, వారి నానామూ, రవి రెడ్డి, ఒక్కోసారిగా Machine hall నుంచి
 బయటకు వెళ్ళారు. ~~వచ్చారు.~~ వచ్చారు. మా G.M. Sir గారు మాత్రం చాలా
 ఘోషం వచ్చినాను. ఆయనను కనీసం గానీ మేము (ప్రయత్నం చేసి వచ్చాము. 15 నిల
 తెలుసుకొని Fire Department వాళ్ళు వచ్చి Machine hall నుంచి Water Spray
 చేసినారు. సుమారు 12:40 Pm ల ప్రాంతంలో Fire - Department వాళ్ళు మా
 G.M. Sir ను Machine hall నుండి కనీసం వచ్చి Amblemane లో (ప్రభుత్వ) -
 Hospital వద్ద తెలుసుకొన్నారు. ఆరోగ్య Doctor గారు K. Srinivasa Rao గారిని
 ముక్తి చెందారని నిర్ధారించారు. ప్రయోగశాలలోని యంత్రాలు, ఆవిరి యంత్రం
 లన్నింటా నా సూత్రాన్నిగా (ప్రతి) పరిశీలించారు.

శుభం
 కె.మధుసూధనాచారి
 (K.MADHUSUDHANACHARI)
 K.M.S. Achary
 9866737764

:: 28 ::

Date: 10.07.2020
New Industrial estate
Udumalpuram.

To
The Committee members of SPY Agro Industries limited ammonia gas leakage.

Sr,

నేను గాని 10 నెలల నుండి SPY Agro Industries limited నుండి
 Instrument Supervisorగా పనిచేస్తున్నాను. 27.06.2020న ఉదయం 9.00 గంటల
 అధికారిక దుర్భేదన ఉంది. ఈ Manager గారు Thippareddy గారి
 CO2 plants పని నిర్వహణ చేస్తున్నారు. Thippareddy గారు, హరిన్, రవి,
 అండ్ నాకును సహజంగా, ప్రధానంగా Ammonia గ్యాస్ పైపు నుండి వచ్చిన
 - నుండి. ఉదయం 9.30 నుండి ఉదయం 9.40 నిమిషం plant కోసం
 పనిచేస్తున్నాను, మేము అంతకు కనిపించినట్లుగా ఆపివేసి
 PLC వద్ద వద్ద వద్ద Open to చేయించారు, అంతకు ముందు
 welding చేసిన గ్యాస్ లైన్ లకు అంతకు 4 అంతకు ఎంతో Ammonia
 గ్యాస్ లైన్ అంతకు వద్ద వచ్చినట్లుగా Ammonia గ్యాస్ వచ్చినట్లుగా
 plant కోసం, అంతకు వద్ద వచ్చినట్లుగా Thippareddy గారు, రవి, హరిన్
 main entrance వద్ద వచ్చినట్లుగా వచ్చినట్లుగా. ప్రధానంగా
 machine hall లో వచ్చినట్లుగా, అంతకు Thippareddy గారు HR
 Department వద్ద వచ్చినట్లుగా వచ్చినట్లుగా. వచ్చినట్లుగా 10 గంట
 వచ్చినట్లుగా Fire Department వచ్చినట్లుగా వచ్చినట్లుగా
 Machine Hall లో వచ్చినట్లుగా వచ్చినట్లుగా వచ్చినట్లుగా
 వచ్చినట్లుగా వచ్చినట్లుగా వచ్చినట్లుగా వచ్చినట్లుగా
 వచ్చినట్లుగా వచ్చినట్లుగా వచ్చినట్లుగా వచ్చినట్లుగా
 వచ్చినట్లుగా వచ్చినట్లుగా వచ్చినట్లుగా వచ్చినట్లుగా
 వచ్చినట్లుగా వచ్చినట్లుగా వచ్చినట్లుగా వచ్చినట్లుగా

అండ్
 అండ్
 -
 E. TIRUMALA
 Instrument Supervisor.
 9/0 Mahipala Ras.
 26-201 C
 Thane puram
 Nandyal.



**ANDHRA PRADESH POLLUTION CONTROL BOARD
ZONAL LABORATORY : KURNOOL**

Shankar Shopping Complex, 1st Floor, Krishna Nagar Main Road, Kurnool

Accredited by NABL as per ISO/IEC: 17025:2005



Certificate No.TC-7305

Y. ATCHUTA RAMAYYA
Senior Environmental Scientist (FAC)

ULR-TC730519000000586 F

FORMAT No.APPCB/ZL/KNL/FM/59

AMMONIA MONITORING ANALYSIS REPORT

Report No.KNL2006156

Name and address of the sampling site : In and around of M/s SPY Agro Industries Ltd., APIIC, New Industrial Estate, Udumulapuram (V), Nandyala (M), Kurnool Dist.

Sampling location :

KNL2006156(a) - Ammonia monitored near security gate of M/s S.P.Y Agro Industries Limited, (Bottling division)

KNL2006156(b) - Ammonia monitored near the accident area of CO₂ recovery plant

KNL2006156(c) - Ammonia monitored near the workers quarters towards North-East from the accident area

KNL2006156(d)- Ammonia monitored near the road towards south side from the accident area.

Purpose of sampling : To know the impact of accident of ammonia gas leakage happened on 27/06/2020

Sample collected by : SES(FAC), Junior Scientific Officer, Zonal Lab, Kurnool

Sampling Date : 27/06/2020

Sample Submit date : 27/06/2020

Sample analysed on : 28/06/2020

Date of Issue of report : 28/06/2020

Sl. No	Sample Code	Concentration of ammonia (µg/m ³) measured around 2.10 p.m on 27th day of June, 2020
1.	KNL2006156(a)	610.61
2.	KNL2006156(b)	607.14
3.	KNL2006156(c)	520.40
4.	KNL2006156(d)	364.28

Remarks:

1. Results are related to samples as received.
2. Monitoring was carried out with PID Gas Detector, Make: Ion Science, Model: PhoCheck Tiger.
3. During the monitoring period, predominant wind direction was observed towards North-West direction.

(Signature)

SENIOR ENVIRONMENTAL SCIENTIST (FAC)

To
The Joint Chief Environmental Engineer,
APPCB, Zonal Office, Kurnool

Copy to the Environmental Engineer, APPCB, Regional Office, Kurnool for information.

++ END ++



**ANDHRA PRADESH POLLUTION CONTROL BOARD
ZONAL LABORATORY : KURNOOL**

Shankar Shopping Complex, 1st Floor, Krishna Nagar Main Road, Kurnool

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Certificate No.TC-7305

Y. ATCHUTA RAMAYYA
Senior Environmental Scientist (FAC)

ULR-TC730519000000586 F

FORMAT No.APPCB/ZL/KNL/FM/59

AMBIENT AIR QUALITY MONITORING ANALYSIS REPORT

Report No.KNL2006156-A to 156-L

Name and address of the sampling site : In and around of M/s SPY Agro Industries Ltd., APIIC, New Industrial Estate, Udumulapuram (V), Nandyala (M), Kurnool Dist.

Sampling location :

- KNL2006156-A - AAQ Monitoring conducted near security gate of bottling unit at a distance of 300mts
 KNL2006156-B - AAQ Monitoring conducted near bottling shed (150mtrs)
 KNL2006156-C - AAQ Monitoring conducted near CO₂ storage tanker (20mtrs)
 KNL2006156-D - AAQ Monitoring conducted near accident spot (10mtrs)
 KNL2006156-E - AAQ Monitoring conducted near odisa people / worker (30mtrs)
 KNL2006156-F - AAQ Monitoring conducted SPY worker housing colony (under construction – No habitation (1.5KM) North direction
 KNL2006156-G - AAQ Monitoring conducted near Katasani Rami Reddy lay out (2Kms) North direction.
 KNL2006156-H - AAQ Monitoring conducted near Y.S.R colony (3.5Km) North direction
 KNL2006156-I - AAQ Monitoring conducted near Auto nagar (0.5 Km) – south side
 KNL2006156-J - AAQ Monitoring conducted near Hyundai showroom (1Km) – south side
 KNL2006156-K - AAQ Monitoring conducted near venkateswarapuram (0.5 Km) – East direction
 KNL2006156-L - AAQ Monitoring conducted near Kundu river bridge (1.5 Km) – East direction

Purpose of sampling : To know the impact of accident of ammonia gas leakage happened on 27/06/2020

Sample collected by : SES(FAC), Junior Scientific Officer, Zonal Lab, Kurnool

Sampling Date : 27/06/2020

Sample Submit date : 27/06/2020

Sample analysed on : 28/06/2020

Date of Issue of report : 28/06/2020

Sl. No	Sample Code	Concentration of Ammonia in $\mu\text{g}/\text{m}^3$			
		27.06.2020 (4.10pm to 6.00 pm)	27.06.2020 (9.00pm to 11.00 pm)	28.06.2020 (7.30am to 9.00 am)	28.06.2020 (11.30am to 1.00 pm)
Date and time :		27.06.2020 (4.10pm to 6.00 pm)	27.06.2020 (9.00pm to 11.00 pm)	28.06.2020 (7.30am to 9.00 am)	28.06.2020 (11.30am to 1.00 pm)
NAAQM Standard: (for 24 hours)		400 $\mu\text{g}/\text{m}^3$			
1.	KNL2006156-A	508.16	138.77	138.77	69.38
2.	KNL2006156-B	69.38	69.38	69.38	BDL
3.	KNL2006156-C	69.38	69.38	69.38	BDL
4.	KNL2006156-D	485.71	208.16	69.38	69.38
5.	KNL2006156-E	277.55	69.38	BDL	BDL
6.	KNL2006156-F	555.10	277.55	138.77	138.77
7.	KNL2006156-G	484.71	277.55	138.77	69.38
8.	KNL2006156-H	208.16	138.77	69.38	BDL
9.	KNL2006156-I	138.77	138.77	69.38	BDL
10.	KNL2006156-J	138.77	138.77	BDL	BDL
11.	KNL2006156-K	208.16	138.77	BDL	BDL
12.	KNL2006156-L	138.77	138.77	BDL	BDL

Remarks:

- Results are related to samples as received.
- Monitoring was carried out with PID Gas Detector, Make: Ion Science, Model: PhoCheck Tiger.
- During the monitoring period, predominant wind direction was observed towards North-West direction.

(Signature)

SENIOR ENVIRONMENTAL SCIENTIST (FAC)

To
The Joint Chief Environmental Engineer,
APPCB, Zonal Office, Kurnool.

Copy to the Environmental Engineer, APPCB, Regional Office, Kurnool for information.



**ANDHRA PRADESH POLLUTION CONTROL BOARD
ZONAL LABORATORY : KURNOOL**

Shankar Shopping Complex, 1st Floor, Krishna Nagar Main Road, Kurnool

Accredited by NABL as per ISO/IEC: 17025:2005



Certificate No.TC-7305

Y. ATCHUTA RAMAYYA
Senior Environmental Scientist (FAC)

ULR-TC730519000000587 F

FORMAT No.APPCB/ZL/KNL/FM/59

AMBIENT AIR QUALITY MONITORING ANALYSIS REPORT

Sample Reg. No. : Report No.KNL2006157

Name and address of the sampling site : M/s SPY Agro Industries Ltd., APIIC, New Industrial Estate, Udumulapuram (V), Nandyala (M), Kurnool Dist.

Sampling location : AAQ Monitoring conducted near security main gate of bottling unit

Purpose of sampling : To know the impact of accident of ammonia gas leakage happened on 27/06/2020

Sample collected by : SES(FAC), Junior Scientific Officer, Zonal Lab, Kurnool

Sampling Date : 27/06/2020 to 28/06/2020

Sample Submit date : 28/06/2020

Sample analysed on : 28/06/2020

Date of Issue of report : 28/06/2020

Sl. No.	Parameter	Shift	Concentration in $\mu\text{g}/\text{m}^3$	Day average concentration in $\mu\text{g}/\text{m}^3$	Standard as per NAAQM (24 Hrs.) in $\mu\text{g}/\text{m}^3$	Test method
1.	Ammonia (as NH_3)	I-A	510.4	291.2	400	Indophenol Blue method
		I-B	464.0			
		II-A	417.6			
		II-B	227.9			
		III-A	70.5			
		III-B	56.8			
2.	Sulphur dioxide (as SO_2)	I-A	4.2	4.3	80	IS 5182 (Part 2): 2001 (Reaffirmed 2017) & CPCB Manual Improved West & Gaeke Method
		I-B	4.6			
		II-A	4.4			
		II-B	4.2			
		III-A	4.2			
		III-B	4.0			
3.	Nitrogen dioxide (as NO_2)	I-A	28.6	26.5	80	IS 5182 (Part 6): 2006 (Reaffirmed 2017) & CPCB Manual Jacob, MB & Hochheiser (Na-Arsenite)
		I-B	30.2			
		II-A	28.7			
		II-B	26.4			
		III-A	24.6			
		III-B	20.8			
4.	Particulate Matte (as PM_{10})	I	82	50.3	100	IS:5182 (Part-23) 2006 (Reaffirmed 2017)
		II	26			
		III	43			

Remarks:

- Results are related to samples as received.
- The concentrations of PM_{10} , SO_2 & NO_2 are within the National Ambient Air Quality standards.


SENIOR ENVIRONMENTAL SCIENTIST (FAC)

To
The Joint Chief Environmental Engineer,
APPCB, Zonal Office, Kurnool

Copy to the Environmental Engineer, APPCB, Regional Office, Kurnool for information.



ANDHRA PRADESH POLLUTION CONTROL BOARD
ZONAL OFFICE: KURNOOL

1st Floor, Shankar Shopping Complex, Krishna Nagar Main Road
Phones : 233619

Lr.No. APPCB/ZO-KNL/MAH/2020

Dt: 02.06.2020

Sub: APPCB – ZO- KNL –Compliance with the provisions of Storage and import of Hazardous Chemicals Rules, 1989 and The Chemical Accidents (Emergency Planning, Preparedness and Response) Rules, 1996 – Instructions – Issued- Reg.

Ref: 1. Directions issued by the CPCB vide order dt. 08.05.2020
2. List of industries communicated by director of industries, A.P., Dt. 09.05.2020
3. B.O. Circular No. 11/APPCB/CFE/RO-ZO/HO/2010, dt.13.05.2020
4. T.O.Lr.No.APPCB/ZO-KNL/HWA/2020, dt. 22.05.2020

With reference to the 1st cited above, CPCB has issued circular with regard to the Strict safety precautions to be taken before resuming operation of units involved in manufacture, storage and import of hazardous chemicals and the industries shall comply with stipulated provisions of the Manufacture, Storage and Import of Hazardous Chemical Rules, 1989 and The Chemical Accidents (Emergency Planning, Preparedness and Response) Rules, 1996 without fail and in turn, the Member Secretary, APPCB issued circular duly communicating the circular issued by CPCB.

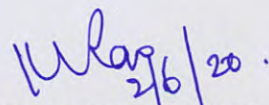
You are here by directed to ensure the compliance of the following during operation of industry as circulated by CPCB.

- i. A proper safety and hazard audit should be undertaken by all the units before resuming operations. The industries shall follow the Rules stipulated that manufacture, store or import hazardous chemicals while resuming their operations after COVID-19 lockdown, only after they have taken adequate and necessary steps to prevent the occurrence of any chemical leakage / accident
- ii. The industry shall ensure the pollution control equipment connectivity of OCEMS with CPCB /SPCB servers, effluent treatment plants including safety equipment and its machineries shall be kept in good operable condition before resuming operation in present COVID-19 situation.
- iii. The industry shall ensure all the units take utmost care in handling hazardous chemicals by using trained manpower
- iv. The industry shall closely monitor the situation and ensure that environmental norms are not violated by any unit.
- v. The industry shall ensure safety of the workers and residents in the vicinity.

In addition to the above, you are hereby informed to furnish the safety measures, off site / onsite emergency plans, disaster management plan and risk analysis report carried by the industry.

Keeping in view of the CPCB circular and Board circular you are once again informed to keep a close watch on the maintenance of safety measures with due emphasis on the awareness of the workers with regard to the safety measures and protocol to be maintained.

A detailed write up on the Hazardous chemicals, storage & handling and the safety measures adopted has to be submitted along with the above mentioned reports with photographic evidence within 10 days from the date of receipt of this letter.


JOINT CHIEF ENVIRONMENTAL ENGINEER
ZONAL OFFICE, KURNOOL

To
M/s SPY Agro Industries Ltd.,
Sy.No.446 to 449, APIIC, New Industrial Estate,
Udumulapuram, Nandyal (M), Kurnool district – 518502.



ANDHRA PRADESH POLLUTION CONTROL BOARD

REGIONAL OFFICE, KURNOOL

1st Floor, Shankar Shopping Complex, Krishna Nagar Main Road, Kurnool – 518 002

B Y Muni Prasad
Environmental Engineer

Tele : 08518- 236912

Email : roknl-ee1@appcb.gov.in

NOTICE NO:KNL-205/PCB/RO/KRNL/Notice-2020-82.

Dated.12.06.2020

SHOWCAUSE - NOTICE

Sub: APPCB – R.O – Kurnool – M/s S.P.Y. Agro Industries Ltd., APIIC, New Industrial Estate, Udumulapuram (V), Nandyal (M), Kurnool District – Complaint received from Assistant Editor (Political affairs), The Times of India, Amaravathi through Whatsapp regarding odour nuisance from M/s S.P.Y. Agro Industries Ltd Nandyal (M), Kurnool District – Orders of Member Secretary – **Show cause Notice** - Issued - Reg.

Ref:-

1. APPCB, Regional office, Kurnool, Notice dated.04.07.2018.
2. APPCB Consent Order No. APPCB/KNL/KNL/17872/ HO/CFO/2016, dt: 03.03.2020.
3. Complaint from Assistant Editor (Political affairs), The Times of India, Amaravathi by this office on 10.06.2020
4. Orders of the Member Secretary, APPCB, Vijayawada on 10.06.2020.
5. Inspection of the industry and surrounding area by PCB officials on 11.06.2020.

* * * * *

WHEREAS, you are operating the industry in the name of M/s S.P.Y. Agro Industries Ltd., APIIC, New Industrial Estate, Udumulapuram (V), Nandyal (M), Kurnool District and is a grain based distillery manufacturing Spirit- 134 KLD (or) Extra Neutral Alcohol (ENA) – 125 KLD & operating Co-Generation Power Plant.

WHEREAS, vide reference 1st cited above, the Regional office, Kurnool has issued a Noticed to your industry based on the complaint received from Sri Bondala Hemendra, 25th ward, Nandyal, Kurnool District through Meekosam (1100 Grievances) with regard to odour nuisance from your industry with a direction to take immediate measures for rectification of dryers and also show cause as to why legal action shall not be initiated against your industry under section 31 (A) of the Air (Prevention and Control of Pollution) Act, 1987 and its amendments thereof for causing Air pollution in the surrounding area, In reply you have informed that industry was taken measures to arrest the odour nuisance during drying of wet cake coming from decanter, but still complaints are receiving from your industry for causing odour nuisance in the surrounding areas this implies you have not taken adequate measures for controlling odour nuisance.

WHEREAS, the Board vide reference 2nd cited issued Consent order to your industry duly stipulating a special condition that **“there shall not be any odour problem and ground water pollution in the surrounding villages due to distillery project”, but the same was not complied by your industry.**

WHEREAS the Board vide reference 3rd cited has received complaint from Assistant Editor (Political affairs), The Times of India, Amaravathi through Whatsapp

regarding odour nuisance from M/s S.P.Y. Agro Industries Ltd., APIIC, New Industrial Estate, Udumulapuram (V), Nandyal (M), Kurnool District stating that odour nuisance from your industry is causing health problems to the residents of the Nandyal town such as vomiting, head ache, nausea due to high level of smell & air pollution and requested to take necessary action for controlling the odour nuisance.

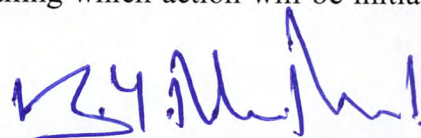
WHEREAS the Board Officials inspected your industry and the surrounding area on 11.06.2020 and observed the following:

1. The industry was established over an extent of 43 Acres with a project cost of about Rs.289.10 Crores and is surrounded by **East:** Private Vacant land followed by Agricultural lands., **West:** Agricultural lands, **North:** Proposed residential plots developed by Ganesh Nagar and Maruthi Nagar Development, and **South:** M/s Nandi Plasticisers and other industrial activities.
2. The industry is manufacturing the spirit- 134 KLD (or) Extra Neutral Alcohol (ENA) – 125 KL, the main raw materials are grain flour @ 60% starch content (Maize, Sorghum, Bajra and Rice) – 339 TPD, Enzymes – 0.5 TPD & Bio Mass (Rice husk) – 120 TPD. The industry is generating spent wash from the process and it will be taken into the decanter so as to get the wet cake (120MTPD) and it will be sent for cattle feed. After decanter, the effluent(thin slop) will be taken into bio-digester. The outlet of bio digester is connected to secondary ETP consisting of pre-aeration, pre-clarifier, aeration tank-2NOs., clarifier - 2Nos.
3. After treatment in ETP, the treated waste water is mixed with the other effluents from utilities and further treated in RO systems of capacity 1100 & 450 m³/day. The RO permeate is recycled in to the process and the RO rejects evaporated in the Multiple Effective Evaporator (MEE) of capacity – 100 KLD. The MEE condensate is utilized for cooling tower makeup and the concentrate from the MEE is disposed in spray dryer of capacity – 45 m³/day.
4. **During inspection, it was observed that, the control equipment i.e., scrubber attached to the driers is inadequate to control emissions generated from drier.**
5. Whereas, the industry representative informed that due to mechanical problem (FD Fan shaft break down) and labour problem for feeding the wet cake into the hopper of the drier, the industry has stored huge quantities of wet cake in the premises. The plant was made shutdown on 6th & 7th of this month to avoid further generation of wet cake and to rectify the mechanical problem. After rectification of the problem the total quantity of wet cake was fed into drier and the dried material bagged and kept in the drier room for disposal.
6. As per the CFO order dated.03.03.2020, the industry has to store the ash in closed shed only and utilize total quantity of ash for manufacture of Bricks, the industry is storing huge quantities of coal ash adjacent to the boiler there by causing air pollution to the surroundings during wind blows.
7. As per the Consent order, the Rain water shall not be allowed to mix with either trade or domestic effluents and shall maintain storm water drains properly. Whereas, the industry is

not maintain the storm water drains properly and allowing the rain water to mix with trade effluents, runoff water from coal ash area and domestic water, lot of stagnation of coloured water in the storm water drains, on the roads and around the ETP units thereby causing ground water pollution. Also, the effluent treatment plant is in very bad shape and in dilapidated condition.

8. As per the Consent order, the industry was directed to provide dyke wall at the process and ETP area for collection of spillages. Whereas, the industry has not provided dyke walls at the process area and ETP area, the spillages were overflowed into drains and lot of stagnation observed on the roads and formed cess pools in several areas.
9. **At present, the industry is generating about 120 to 130 Tons of wet cake per day whereas the industry is having a drier of capacity 50 Tons/day** only which is inadequate to dry the wet cake on daily basis. It is observed that the industry is utilizing the driers of capacity – 100 TPD existing in their sister concern unit i.e., M/s.Nandi Grain Derivatives (P) Ltd., which is not having valid consents of the Board.
10. From the above, it is evident the industry is operating the driers without adequate scrubbing capacity **thereby lot of emissions were dispersed into the surrounding areas i.e., Bommalasatram and Kranti nagar and caused lot of inconvenience to the residents of Nandyal Town and also** causing health problems to the residents of the Nandyal town such as vomiting, head ache, nausea due to high level of smell & air pollution.

Hence, you are hereby directed to show cause as to why legal action shall not be initiated against your industry under section 33 (A), 44 of Water (Prevention and Control of Pollution) Act, 1974 and under section 31 (A), 37 of the Air (Prevention and Control of Pollution) Act, 1987 and Amendments thereof, for violation of CFO order conditions and thereby causing odour nuisance and ground water pollution in the surrounding area. You are also directed to furnish the reply **within 5 days** from the date of receipt of this notice, failing which action will be initiated against your industry under above said acts.



ENVIRONMENTAL ENGINEER

To
M/s S.P.Y. Agro Industries Ltd.,
APIIC, New Industrial Estate,
Udumulpuram (V), Nandyal (M), Kurnool District.

OFFICE OF THE DEPUTY CHIEF INSPECTOR OF FACTORIES, KURNOOL.

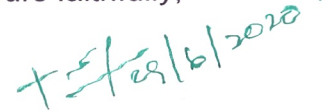
No.R.101055/2020-1/SpecialDt.29-06-2020**PROHIBITORY ORDERS****FACTORIES ACT, 1948 AND A.P. FACTORIES RULES, 1950 AND THE
GOVERNMENT NOTIFICATION ISSUED THEREON.**

Sir,

Upon a recent inspection of your factory on 27-06-2020 and 28-06-2020 by Deputy Chief Inspector of Factories, Kurnool, it was found to the extent indicated below that certain provisions of the Act and Rules were not being carried out.

The orders below are issued or repeated from previous orders, without prejudice to any action that this office may take for non-compliance with the provisions of the Act and Rules thereunder.

Yours faithfully,

Deputy Chief Inspector of
Factories, Kurnool.

To

Sri S. Sreedhar Reddy,
S/o Sri S. Lakshmi Reddy,
Occupier-cum-Manager,
Nandyala Gases Private Limited,
New Industrial Estate,
Udumalpuram (vg), Nandyal (M), Kurnool District.

Copy submitted to the Director of Factories, A.P., Vijayawada.

Copy submitted to the District Collector, Kurnool.

Copy submitted to the Superintendent of Police, Kurnool.

Copy to the Inspector of Factories, Kurnool.

Copy to the Revenue Divisional Officer, Nandyal.

Copy to the Deputy Superintendent of Police, Nandyal.

(P.T.O.)

1. Section 40(2):

On 27-06-2020 at about 09-40 a.m. a leakage of ammonia vapours occurred in your factory.

In fact, on 27-06-2020 at about 09-00 a.m. Sri K. Srinivasa Rao, General, Sri K. Thippa Reddy, Manager, Sri G. Tirumala, Supervisor, Sri P. Ravi, Fitter/operator and Sri K. Madhusudhana Achary, Fitter attended to the duty in carbon dioxide (CO₂) plant and started regular production. At about 9.40 A.M, Sri K. Srinivasa Rao, 47 years, General Manager adjusting the parameters of each equipment at Programmable Logic Control (PLC) unit. At the same time the Ammonia pipe line where the welding was carried out on 26-06-2020 night was bursted due to high pressure ammonia vapours are passing in it and huge amount of Ammonia vapours leaked and spread over in to the atmosphere of the machinery hall. As a result, Sri K. Srinivasa Rao, General Manager who inhaled more ammonia vapours fell unconscious and died.

Due to leakage of Ammonia vapours in the CO₂ plant, the pipe line of ammonia is badly damaged and also the material which was used for ammonia pipe line i.e. mild steel material is not suitable and permissible for ammonia handling and the structure of the machinery sheds, plant and machinery etc. were damaged. And also, the layout of the plant and machinery is congested to work safely. Hence there is an imminent danger to human life of the persons working in the plant and nearby.

Therefore, as per the powers conferred on me under Section 40(2) of the Factories Act, 1948, the usage of Carbon Dioxide (CO₂) plant is hereby prohibited with immediate effect.

Further usage of the said buildings/sheds, plant and machinery, storage tanks etc. and carrying out manufacturing process in the factory is hereby **PROHIBITED** until –

- 1) The buildings/sheds, plant and machinery, storage tanks etc. are properly repaired/replaced and are thoroughly examined by an external person or organization, not connected with the factory and possessing suitable experience and expertise in the process safety management and a report / certificate certifying that the usage of said plant & machinery, storage tanks, etc. are safe to carry out manufacturing process is sent to this office.
- 2) A certificate of structural stability issued by a competent person certifying the safety of the buildings / sheds and other structures for carrying out the manufacturing process is sent to this office.
- 3) Appropriate firefighting equipment / fire hydrant system are installed and a No Objection Certificate / Clearance / Approval obtained from the competent authorities, viz. A.P. Disaster Response and Fire Service Department is sent to this office.

- 4) Approval shall be taken for in built safety arrangements and safety devices, fire detection and ammonia gas leak monitoring system.
- 5) Drawings with the details of process, storage of raw material and products, safe limits of various controls, safe method of work, material handling, emergency handling procedures, means of escape shall be got approved by the Director of Factories, A.P., Vijayawada.
- 6) Safety Audit shall be done by external third party for safety operation of plant and machinery.
- 7) Licence shall be obtained from the Petroleum and Explosives Safety Organization for ammonia tank installation and taking into use.
- 8) Evacuation of the left-over ammonia from the ammonia receiver and ammonia pipe line to be done under the supervision of knowledgeable experienced persons and with the necessary safety precautions and prior intimation to their office.

The prohibitory orders issued shall be in force until they are revoked.



Order No.52/APPCB/UH-II/TF/KNL/2020-

Date: 13.07.2020.

STOP PRODUCTION ORDER

Sub: APPCB – UH-II – TF - M/s S.P.Y. Agro Industries Ltd., APIIC, Industrial Estate, Udumulapuram (V), Nandyal (M), Kurnool District – Non-compliance of CFO conditions - Accident occurred in the industry on 27.06.2020 at around 9.30 AM – **Stop Production Order** - Issued - Reg.

Ref:

1. Consent Order No.APPCB/KNL/17872/HO/2015-2105, Dt.13.03.2015.
2. Order No. 52/APPCB/UH-II/TF/KNL/2016, dt.26.04.2016.
3. Order No. 52/APPCB/UH-II/TF/KNL/2016, dt.22.08.2016
4. The auto renewal dated. 26.04.2018 has extended for period of one year Seven Months i.e., up to 31.10.2019.
5. Consent Order No.APPCB/KNL/17872/HO/2015-2105, dt.03.03.2020 valid upto 31.10.2021.
6. An accident occurred in the industry on 27.06.2020 at around 9.30 AM.
7. The officials of ZO, Kurnool inspected the industry on 27.06.2020.

* * *

WHEREAS you are operating a Grain based distillery unit in the name & style of M/s S.P.Y. Agro Industries Ltd., located at APIIC, New Industrial Estate, Udumulapuram (V), Nandyal (M), Kurnool District and engaged in manufacturing of Total spirit- 134 KLD (or) Extra Neutral Alcohol (ENA) – 125 KLD and operating the co-generation power plant of capacity – 6.5 MW.

WHEREAS vide reference 1st cited, the industry was issued with CFO & HWA of the Board vide order dated. 13.03.2015 with a validity up to 31.03.2017 for manufacturing Total spirit-134 KLD (or) Extra Neutral Alcohol (ENA) – 125 KLD. Subsequently, the industry was also issued with CFO & HWA order of the Board vide order dated.01.10.2016 with validity upto 31.03.2017 for co-generation power plant – 6.5 MW.

WHEREAS vide reference 2nd and 3rd cited, the Board issued certain directions to the industry dt. 26.04.2016 and 22.08.2016.

WHEREAS vide reference 4th cited, the Board vide order dated. 26.04.2018 has extended the validity of CFO & HWA orders dated.13.03.2015 & 01.10.2016 for further period of one year Seven Months i.e., up to 31.10.2019.

WHEREAS vide reference 5th cited, the industry has obtained the CFO vide order dt 03.03.2020 valid upto 31.10.2021 for manufacturing Total Spirit - 134 KLD (or) Extra Neutral Alcohol (ENA) – 125 KLD and co-generation power plant – 6.5 MW.

WHEREAS as per the instructions of the District Collector, Kurnool District, the team of officials consists of GM DIC, Kurnool, Deputy Chief Inspector of Factories, Kurnool & EE, APPCB, RO, Kurnool inspected the major accident Hazard factory i.e., M/s S.P.Y. Agro Industries Ltd., APIIC, New Industrial Estate, Udumulapuram (V), Nandyal (M), Kurnool District on 08.05.2020 and observed that the factory management had not provided required safety systems in the factory, in this connection, the Deputy Chief inspector of Factories had issued a notice on 13.05.2020 for non compliance of Factories Act 1948 and A.P Factories Rules 1950.

WHEREAS the Board has received a complaint dt. 10.06.2020 regarding odour nuisance caused by the distillery operations.

WHEREAS the Board Officials inspected industry and the surrounding area on 11.06.2020 and observed the following:

- a. The industry is manufacturing the spirit- 134 KLD (or) Extra Neutral Alcohol (ENA) – 125 KL, the main raw materials are grain flour @ 60% starch content (Maize, Sorghum, Bajra and Rice) – 339 TPD, Enzymes – 0.5 TPD & Bio Mass (Rice husk) – 120 TPD. The industry is generating spent wash from the process and it will be taken into the decanter so as to get the wet cake (120MTPD) and it will be sent for cattle

feed. After decanter, the effluent(thin slop) will be taken into bio-digester. The outlet of bio digester is connected to secondary ETP consisting of pre-aeration, pre-clarifier, aeration tank-2Nos., clarifier - 2Nos.

- b. After treatment in ETP, the treated waste water is mixed with the other effluents from utilities and further treated in RO systems of capacity 1100 & 450 m³/day. The RO permeate is recycled in to the process and the RO rejects evaporated in the Multiple Effective Evaporator (MEE) of capacity – 100 KLD. The MEE condensate is utilized for cooling tower makeup and the concentrate from the MEE is disposed in spray dryer of capacity – 45 m³/day.
- c. During inspection, it was observed that, the control equipment i.e., scrubber attached to the driers is inadequate to control emissions generated from drier.
- d. Whereas, the industry representative informed that due to mechanical problem (FD Fan shaft break down) and labour problem for feeding the wet cake into the hopper of the drier, the industry has stored huge quantities of wet cake in the premises. The plant was made shutdown on 6th & 7th of this month to avoid further generation of wet cake and to rectify the mechanical problem. After rectification of the problem the total quantity of wet cake was fed into drier and the dried material bagged and kept in the drier room for disposal.
- e. As per the CFO order dated.03.03.2020, the industry has to store the ash in closed shed only and utilize total quantity of ash for manufacture of Bricks whereas, the industry is storing huge quantities of coal ash adjacent to the boiler thereby causing air pollution to the surroundings during wind blows.
- f. As per the Consent order, the Rain water shall not be allowed to mix with either trade or domestic effluents and shall maintain storm water drains properly. Whereas, the industry is not maintain the storm water drains properly and allowing the rain water to mix with trade effluents, runoff water from coal ash area and domestic water, lot of stagnation of coloured water in the storm water drains, on the roads and around the ETP units thereby causing ground water contamination. Also, the effluent treatment plant is in very bad shape and in dilapidated condition.
- g. As per the Consent order, the industry was directed to provide dyke wall at the process and ETP area for collection of spillages. Whereas, the industry has not provided dyke walls at the process area and ETP area, the spillages were overflowed into drains and lot of stagnation observed on the roads and formed cess pools in several areas.
- h. At present, the industry is generating about 120 to 130 Tons of wet cake per day whereas the industry is having a drier of capacity 50 Tons/day only which is inadequate to dry the wet cake on daily basis. It is observed that the industry is utilizing the driers of capacity – 100 TPD existing in their sister concern unit i.e., M/s. Nandi Grain Derivatives (P) Ltd., which is not having valid consents of the Board.

WHEREAS the Regional office, Kurnool has issued a show cause notice on 12.06.2020, to the industry for the lapses observed.

WHEREAS vide reference 6th cited, an accident occurred in M/s S.P.Y. Agro Industries Ltd., on 27.06.2020 at around 9.30 AM viz., ammonia gas leakage due to built up of the pressure in the Ammonia piping and pipe line got bursted and one person was deceased on the spot and three became ill when ammonia gas leaked.

WHEREAS vide reference 7th cited, the officials of GM DIC, Kurnool, Deputy Chief Inspector of Factories, Kurnool & JCEE, APPCB, EE, RO, Kurnool rushed to the spot at 11.30 AM and during the inspection, Sri Thippa Reddy & Sri Chand Basha representatives of the industry were present. The observations are as follows:

1. The ammonia gas leaked accident took place on 27.06.2020 at about 9.30 AM to 9.45 AM. The representatives of the industry have informed that the accident took place with maintenance of pipelines, and repair work was undertaken Friday night. When factory workers tested the system on Saturday morning, there was a pressure buildup in the Ammonia piping and it exploded.
2. Further, the Board officials of Zonal laboratory, Kurnool carried out monitoring of Ambient Air Quality and Ammonia in the surrounding area of the industry. The values recorded by APPCB officials is tabulated below (The predominant wind directions is towards North – West):

Sl. No.	Location distance from accident spot (Time 4.10 PM to 6.00 PM)	Ammonia in $\mu\text{g}/\text{m}^3$	Standard NH3 $\mu\text{g}/\text{m}^3$
1	Near Security gate of bottling unit at a distance of 300 mtrs	508.16	400
2	Near bottling shed (150 mtrs)	69.38	400
3	Near CO2 storage tanker (20 mtrs)	69.38	400
4	Near accident spot (10 mtrs)	485.71	400
5	Near Odisha people/Worker (30 mtrs)	277.55	400
6	SPY worker housing colony (Under construction – No habitation (1.5 KM) North direction	555.10	400
7	Near Katasani Rami Reddy Lay out (2 Kms) North direction	485.71	400
8	Near YSR Colony (3.5 KM) North direction	208.16	400
9	Auto nagar (0.5 KM) – South Side	138.77	400
10	Near Hyundai Showroom (1 Km) South side	138.77	400
11	Near Venkateswarapuram (0.5 KM) East direction	208.16	400
12	Near Kundu River Bridge (1.5 Km) East Direction	138.77	400

Note: An Ambient Air Quality Monitoring station is established near accident spot to measure Ammonia SO₂, No₂ & PM₁₀ and this station will be operated for 24 Hours.

3. As per the results of the monitoring on 27.06.2020, the ammonia levels recorded high at four places i.e., i) Near Security gate of bottling unit at a distance of 300 mtrs, ii) Near accident spot (10 mtrs), iii) SPY worker housing colony (Under construction – No habitation (1.5 KM) North direction, iv) Near Katasani Rami Reddy Lay out (2 Kms) North direction.

In view of non-compliance of CFO conditions and after careful consideration of material facts of the case, the Board hereby issues **STOP PRODUCTION ORDER** under Sec.33 (A) of Water (Prevention and Control of Pollution) Amendment Act, 1988 and under Sec.31(A) of Air (Prevention & Control of Pollution) Amendment Act, 1987 for non-compliance of Board directions and consent conditions.

You are hereby directed to note that, should you violate this order and operate the unit closure order will be issued to your unit under Sec.33 (A) of Water (Prevention and Control of Pollution) Amendment Act, 1988, and under Section 31 (A) of Air (Prevention & Control of Pollution) Amendment Act, 1987, in the interest of Public Health and Environment and you will be also liable for prosecution in the Court of Judicial Magistrate First Class under Sec.41 (2) of Water (Prevention and Control of Pollution) Amendment Act, 1988 and under Sec.37 of Air (Prevention and Control of Pollution) Amendment Act, 1987, the punishment for which includes imprisonment for a term which shall not be less than one year six months and which may be extended to six years and with fine.

This Order comes into effect from today i.e., 13.07.2020.

**Sd/-
CHAIRMAN,
APPCB.**

To
M/s S.P.Y. Agro Industries Ltd.,
APIIC, New Industrial Estate,
Udumulapuram (V), Nandyal (M),
Kurnool District.

Copy to:

1. The Joint Chief Environmental Engineer, Zonal Office, Kurnool for information and necessary action.
2. The Environmental Engineer, Regional Office, Kurnool for information and shall report compliance within 24 hours and is directed to obtain safety audit report from Inspector of Factories, Kurnool.

// T.C.F.B.O. //

**JOINT CHIEF ENVIRONMENTAL ENGINEER
UH-II**



S.P.Y. Agro Industries Limited

CIN No.: U01100TG2005PLC045887

To
The Joint Chief, Environmental Engineer,
A.P. Pollution Control Board,
Zonal Office
KURNOOL .

DT: 20.10.2020

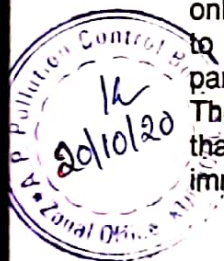
Dear Sir,

**Sub: Stop Production order issued on 13.07.2020 to M/s SPY Agro Industries Ltd.
– Request for revocation of stop production orders – Reg.**

Ref: Stop production orders dt 13-7-2020.

I submit the following few lines for your kind consideration and explanation for the operation for the last two months following the Ammonia leakage at S.P.Y Agro Industries on 27th June 2020 and issuance of stoppage orders on 13th July 2020 by A.P. Pollution Control Board.

1. Firstly we would like to bring to your attention our immediate compliance to the orders, ceasing all production on 14th July 2020. On 19th July 2020, we were forced to restart distillation as the in-process wash had started putrifying, with volatile acids building to 1000++ ppm, if not processed, this would have created a problem with disposal. So, we ran the plant for 3 days between 19th of July and 22nd July after the accident took place 27-6-2020.. We then once again complied with the order shutting the unit .
2. On the 29th of July, we once again faced issue with inprocess liquids in the fermenter and biodigester culture. The 10 lakhliters of the wash in the fermenter needed to be processed and the biodigester needed effluent circulation as the biomethanation time is 10-15 days (28th July –5th August). Similarly we needed to run the aeration plant to control the COD and BOD in the effluent. The company was also putting into operation the scrubber mandated by the PCB on the wet caking drying plant. The plant was running well below full installed capacity. Unfortunately, the boiler while being run to support the captive powerplant, the only power source for the unit, experienced a failure of an internal tube which led to hot water being sprayed outside the metal casing. A nearby employee in the panic caused by the failure ran into the stream of hot water and suffered burns. Though he was promptly taken to the hospital, the COVID-19 situation meant that he was not attended to it and he passed away. The plant was then immediately stopped after all effluent fluids were drained.



Regd. Office : D.No. 8-3-833, Plot No. 188, 1st Floor, Phase - II, Kamalapuri Colony, Hyderabad - 500 073. T.S. INDIA
E-mail: spyagroindustries@gmail.com

Works : New Industrial Estate, Sy. No. 446 to 449, APIIC, Udumalpur, Nandyal, Kurnool Dt.-518 502. A.P. INDIA
Phone: +91 8514 222084, Fax: 08514-222082, E-mail: spyagro_nandigroup@yahoo.com

3. On 30th August 2020, we have requested the Chief Inspector of Factories to issue a temporary revocation to process a further 40 lakh litres of wash. The department requested us to complete a safety audit and furnish details regarding the precautions taken to avoid a similar incident. We then submitted the same and started operation on 10thSeptember up to 18thSeptember 2020.

It is humbly submit that the Deputy chief inspector of Factories has issue revocation order on 05.10.2020 copy is enclosed for your kind information where as we have also applied for fire department for NOC which is under process and will be issued within 10 days, also we would like to inform you that we have submitted commitment letter which is enclosed for your kind information .

In view of the above reasons, we request the Member Secretary, A.P. Pollution Control Board not to consider these operations as violations and to consider our efforts in good faith to comply with your guidelines. All the tasks indicated by the board to further make our plant cleaner and greener would be followed from time to time. Hence, we request you to issue revocation orders of the stoppage to allow power plant and distillery operations of the unit keeping in view the welfare of the employees and their families and local economy and indirect dependents.

Thanking You sir,
Yours Faithfully,
For S.P.Y Agro Industries Limited.,


Director.

- Copy to: 1) Honourable National Green Tribunal committee member, CPCB,
Bangalore
2) The Environmental Engineer, APPCB- Regional Office, KURNOOL