

**BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL  
SOUTHERN ZONE BENCH AT CHENNAI**

**OA No. 279 of 2024**

**In**

**OA No. 1097 of 2024 (PB)**

**IN THE MATTER OF:**

**NEWS ITEM TITLED 17 KILLED 20 INJURED IN REACTOR BLAST AT  
PHARMA COMPANY IN ANDHRA PRADESH S ANAKAPALLI APPEARING  
IN THE HINDU DATED 22 08 2024**

..... APPLICANT

**VERSUS**

**CENTRAL POLLUTION CONTROL BOARD THROUGH ITS MEMBER  
SECRETARY AND OTHERS**

..... RESPONDENTS

**REPORT FILED BY APPCB 2<sup>ND</sup> RESPONDENT**

DATE: 29.10.2024



**M/s MADHURI DONTI REDDY**

**ADVOCATE**

**STANDING COUNSEL FOR GOVERNMENT OF ANDHRA PRADESH**

**A.P. POLLUTION CONTROL BOARD**

#26, S2, Royal Castle, Gill Nagar Extension, Choolaimedu, Chennai – 600 094.

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BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL PRINCIPAL BENCH,  
NEW DELHI IN CONNECTION WITH

Original Application No. 1097/2024 filed before the National Green  
Tribunal Principal Bench, New Delhi

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It is certified that all the documents contained in the above annexure are true  
copies.

Place: Visakhapatnam  
Dt:28.09.2024

  
Environmental Engineer  
APPCB, Regional Office  
Visakhapatnam  
Environmental Engineer  
A.P. Pollution Control Board  
Regional Office, Visakhapatnam

**Report in compliance with the Hon'ble NGT, Principal Bench, Delhi vide Order dated 22.08.2024 in Original Application No. 1097 of 2024(PB) on the News Item titled "17 killed 20 injured in reactor blast at pharma company in Andhra Pradesh's Anakapalli" published in The Hindu News Paper dated 22.08.2024.**

It is to submit that the National Green Tribunal, New Delhi is registered *suo-motu case* based on the News Item titled "17 killed 20 injured in reactor blast at pharma company in Andhra Pradesh's Anakapalli" published in The Hindu News Paper dated 22.08.2024. The matter pertains to the death of 17 workers and injuries caused to 20 others due to the eruption of a major fire reportedly after a reactor blast at Escientia pharmaceutical company, Anakapalli, Visakhapatnam.

The Hon'ble NGT, Delhi in its order dated 22.08.2024 in Original Application No. 1097/2024(PB), stated that

*"1. This original application is registered suo motu on the basis of the news item titled "17 killed 20 injured in reactor blast at pharma company in Andhra Pradesh's Anakapalli" appearing in 'The Hindu' dated 22.08.2024.*

*2. The news item relates to the death of 17 workers and injuries caused to 20 others due to the eruption of a major fire reportedly after a reactor blast in Escientia Advanced Science Private Ltd. in the Special Economic Zone at Atchutapuram in Anakapalli of Andhra Pradesh. As per the article, the company manufactures intermediate chemicals and pharmaceutical ingredients. The article alleges that the death toll is likely to go up as bodies of several workers were feared trapped under the rubble of the slab of the first floor of the four-storey building. Furthermore, the impact of the blast was so strong that the severed body parts of some workers were thrown to some distance on the company premises. Thick flames and smoke engulfed the area. Spread across 40 acres, Escientia Advanced Sciences Private Limited was set up at Atchutapuram SEZ in 2019 with a budget of around ₹200 crore. The company manufactures Active Pharmaceutical Ingredients (API). The news item highlights that as many as 381 workers have been working in*

*two shifts in the company. The accident occurred around 2.15 p.m., during shift change. It is claimed that such accidents have been occurring frequently, and yet no measures have been taken. Moreover, the news item alleges that repeated accidents had been occurring due to alleged negligence and apathy of the managements. It had been several years since a safety audit was conducted.*

*3. The Tribunal has passed orders in order dated 01.06.2020 in OA No. 73/2020, order dated 31.08.2021 in OA No. 79/2021, order dated 21.09.2022 in OA 284/2022 with OA 45/2022 (SZ), order dated 18.01.2023 in OA 448/2022 and order dated 28.02.2023 in OA No. 111/2023 in cases relating to industrial accidents forming Committees to find out the cause of accidents and take remedial actions and further directing payment of compensation to the victims. In the present case, it is required to be ascertained if the unit was complying with environmental norms and if compensation to the victims/family member of victims has been paid.*

*4. The news item raises substantial issue relating to compliance of the environmental norms.*

*5. Power of the Tribunal to take up the matter suo-motu has been recognized by the Hon'ble Supreme Court in the matter of "Municipal Corporation of Greater Mumbai vs. Ankita Sinha & Ors." reported in 2021 SCC Online SC 897.*

*6. Hence, we implead the following as respondents in the matter:*

*(1). Central Pollution Control Board, Through its Member Secretary, Parivesh Bhawan, East Arjun Nagar, Delhi-110032.*

*(2). Andhra Pradesh Pollution Control Board, Through its Member Secretary, Dr. YSR Paryavaran Bhawan, APIIC Colony Road, Gurunanak Colony, Vijaywada-520007.*

*(3). Ministry of Environment, Forest and Climate Change, Through its Regional Office, Regional Office (SEZ), Ist and IInd Floor, Handloom Export Promotion Council, 34, Cathedral Garden Road, Nungambakkam, Chennai – 34.*

*(4). District Magistrate, Anakapalli, Collector's Office, Anakapalli.*

*(5). Director, Directorate of Industrial Safety and Health, Andhra Pradesh.*

*7. Issue notice to the above respondents for filing their response/reply by way of affidavit before the Southern Zonal Bench of the Tribunal at least one week before the next date of hearing. If any of the respondents directly files the reply without routing it through his advocate then the said respondent will remain virtually present to assist the Tribunal.*

*8. Since the matter falls within the jurisdiction of Southern Zonal Bench of the Tribunal, therefore, the OA is transferred to the Southern Zonal Bench, Chennai for appropriate further action. Let the original record of the OA be transferred to Southern Zonal Bench, Chennai.*

*9. List before Southern Zonal Bench at Chennai on 30.09.2024."*

Copy of the Hon'ble NGT, New Delhi Order dated 22.08.2024 is submitted as **Annexure-I.**

In compliance to the Hon'ble NGT Order dated 22.08.2024, the following is submitted:

1. M/s. Escientia Advanced Sciences Private Limited has established in total area of 40 acres at Plot No.11, 11 A, 12 & 12 A, APIIC, APSEZ, Atchuthapuram.
2. The industry has obtained CTO(CPM) vide order dated 25.05.2024 to manufacture bulk drugs with a maximum production capacity of 2600 Kg/Day. Copy of the CTO(CPM) Order dated 25.05.2024 is herewith submitted as **Annexure-II.**
3. An accident took place at about 02:15 PM on 21.08.2024 in M/s. Escientia Advanced Sciences Pvt., Ltd., Plot No.11, 11 A, 12 & 12 A, APSEZ, Atchutapuram & Rambilli (M), Anakapalli District.
4. The APPCB Regional Office, Visakhapatnam Officials inspected the industry on 21.08.2024 and submitted preliminary report. Copy of the preliminary report dated 22.08.2024 is herewith submitted as **Annexure-III.**

5. APPCB has carried out monitoring from 21.08.2024 to 22.08.2024 and collected samples from the contaminated firefighting water at front side of the production block & back side of the production block. The monitoring results are as follows:

**I. VOC Monitoring data:**

S.No	Location	VOC Values Rang in ppm							
		3:00 PM	4:00 PM	5:00 PM	6:00 PM	7:00 PM	8:00 PM	9:00 PM	
1	Security Back Gate (East side)	BDL	BDL	0.1- 0.2	BDL	BDL	BDL	BDL	
2	Security Main gate (North side)	0.3-0.6	0.4-0.5	0.4-0.5	0.3-0.4	0.3-0.4	0.2-0.4	0.1-0.2	
3	Drum storage area(West side)	0.1-0.2	0.1-0.0	0.1-0.2	BDL	BDL	BDL	BDL	
4	Laurus Unit-2 Road(South side)	BDL	BDL	BDL	BDL	BDL	BDL	BDL	
5	Near Production Block	0.3-0.8	0.4-0.6	0.3-0.6	0.2-0.4	0.2-0.3	0.1-0.2	0.1-0.2	
Note: BDL – Below detectable Limit									

**II. Samples of Contaminated Firefighting Water**

S. No.	Parameter	Sample of contaminated firefighting water at front side of the production block	Sample of contaminated firefighting water at back side of the production block
1.	pH	6.36	9.04
2.	Total Suspended Solids	127 mg/lit	118 mg/lit
3.	Total Dissolved Solids	1428 mg/lit	1352 mg/lit
4.	Chemicals Oxygen Demand	336 mg/lit	320 mg/lit

6. A detailed report was submitted on 23.08.2024 for taking further necessary action. Copy of the APPCB report dated 23.08.2024 is herewith submitted as **Annexure-IV**.

7. It was observed that from the above the maximum VOC concentration was found 0.8 ppm near production block during monitoring at 03.00 PM. The VOC were also monitored outside the factory premises and the VOC concentrations are found in the range of 0.3 ppm to 0.8 ppm.

8. The industry drained out the waste water generated from firefighting into a unlined sump, which is potential to cause contamination of ground water.
9. The operational status of the industry is not suitable to continue further operations of the industry and Potential to cause pollution problems into surrounding environment.
10. The APPCB, Vijayawada has issued stop production order to the industry on 23.08.2024 to stop further discharges of air and water pollutants into surrounding environment, since operational status of your industry is not suitable to continue further operations and potential to cause pollution problems. Copy of the stop production order dated 23.08.2024 is herewith submitted as **Annexure-V**.
11. The Collector & District Magistrate, Anakapalli District vide proceeding dated 27.08.2024 constituted a committee to examine the safe disposal of the solvents in the premises and post corrective measures and directed to submit the report. The Joint Committee inspected on 27.08.2024 and the APPCB has submitted report to the Collector & District Magistrate on 28.08.2024. Copy of the report dated 28.08.2024 is herewith submitted as **Annexure-VI**.
12. The Collector & District Magistrate, Anakapalli District vide letter dated 03.09.2024 addressed a letter to the District Roads & Buildings Officer, Anakapalli, Deputy chief Inspector of Factories, Visakhapatnam Assistant Director, DIC, Anakapalli, District Disaster Response & Fire Officer, Anakapalli, Deputy Chief Inspector of Boilers, Anakapalli, District Drug Control Officer, Anakapalli, Assistant Environmental Engineer, APPCB, Electrical Inspector, Visakhapatnam, EE, APEPDCL, Anakapalli, District In-charge, Labour Dept., Anakapalli to specific recommendations by the Joint Committee for shifting of the solvents and other materials from the damaged building in M/s. Escientia Advanced Sciences (P) Ltd. Copy of the Collector & District Magistrate, Anakapalli District letter dated 03.09.2024 is herewith submitted as **Annexure-VII**.
13. The APPCB has submitted report to the Collector & District Magistrate, Anakapalli District on 06.09.2024. Copy of the report dated 06.09.2024 is herewith submitted as **Annexure-VIII**.

14. The Joint Committee submitted report on 06.09.2024 to the Collector & District Magistrate, Anakapalli District. Copy of the Joint Committee report dated 06.09.2024 is herewith submitted as **Annexure-IX**.
15. Based on the Joint Committee report, the Collector & District Magistrate, Anakapalli District issued orders vide proceedings dated 11.09.2024 to M/s. Escientia Advanced Sciences Private Limited to shift all the solvents and other materials from the production block under the supervision of the Joint Committee members within one week as per the SOPs and undertaking submitted by the management of M/s. Escientia Advanced Sciences Private Limited., APSEZ, Atchuthapuram. Copy of the proceedings dated 11.09.2024 is herewith submitted as **Annexure-X**.
16. As per the Inspection of Factories Department report dated: 12.09.2024, the management of M/s. Escientia Advanced Sciences Private Limited has paid the amount of one crore to each for 17 deceased workers, for injured workers 50 lakhs to 21 workers and 25 lakhs to 18 workers on 23.08.2024. Copy of the Inspection of Factories Department report dated: 12.09.2024, is herewith submitted as **Annexure-XI**.
17. The industries & Commerce (P&I) Department, Govt. of AP vide G.O MS No. 51 dated 13.09.2024 constituted of High Level Committee to suggest measures for increasing the industrial safety in the State of Andhra Pradesh. The High-Level Committee consists of the following members  
Copy of the G.O MS No. 51 dated 13.09.2024 is herewith submitted as **Annexure-XII**:

1.	Smt. Vasudha Mishra, IAS (Retd).	Chairperson
2.	Special Chief Secretary, Environment, Forest, Science & Technology Department	Member
3.	Principal Secretary, Home Department	Member
4.	Secretary, Labour Factories Boilers & Insurance Medical Services Department	Member
5.	Secretary, Industry and Commerce Department	Member
6.	Development Commissioner, VSEZ, Government of India	Member
7.	Director General, Fire services	Member
8.	Member Secretary, Andhra Pradesh Pollution Control Board	Member
9.	Director of Boilers	Member
10.	Director of Industries	Member
11.	Vice-Chairman & Managing Director, APIIC	Member
12.	Director of Factories	Convener

18. The committee visit the accident site on 26.09.2024 and conducted review meeting with industries & stake holder departments on 27.09.2024 at Visakhapatnam. The committee will submit report within the three(3) months.

Submitted.

**Place: Visakhapatnam**  
**Dt. 28.09.2024**

  
**Environmental Engineer,**  
**APPCB, Regional Office,**  
**Visakhapatnam**  
**Environmental Engineer**  
**A.P. Pollution Control Board**  
**Regional Office, Visakhapatnam**

Item No. 18

Court No. 1

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

Original Application No. 1097/2024

News Item titled "17 killed 20 injured in reactor blast at pharma company in Andhra Pradesh's Anakapalli" appearing in The Hindu dated 22.08.2024

Date of hearing: 22.08.2024

**CORAM: HON'BLE MR. JUSTICE PRAKASH SHRIVASTAVA, CHAIRPERSON  
HON'BLE MR. JUSTICE ARUN KUMAR TYAGI, JUDICIAL MEMBER  
HON'BLE DR. A. SENTHIL VEL, EXPERT MEMBER**

**ORDER**

1. This original application is registered *suo motu* on the basis of the news item titled "17 killed 20 injured in reactor blast at pharma company in Andhra Pradesh's Anakapalli" appearing in 'The Hindu' dated 22.08.2024.

2. The news item relates to the death of 17 workers and injuries caused to 20 others due to the eruption of a major fire reportedly after a reactor blast in Escientia Advanced Science Private Ltd. in the Special Economic Zone at Atchutapuram in Anakapalli of Andhra Pradesh. As per the article, the company manufactures intermediate chemicals and pharmaceutical ingredients. The article alleges that the death toll is likely to go up as bodies of several workers were feared trapped under the rubble of the slab of the first floor of the four-storey building. Furthermore, the impact of the blast was so strong that the severed body parts of some workers were thrown to some distance on the company premises. Thick flames and smoke engulfed the area. Spread across 40 acres, Escientia Advanced Sciences Private Limited was set up at Atchutapuram SEZ in 2019 with a budget of around ₹200 crore. The

company manufactures Active Pharmaceutical Ingredients (API). The news item highlights that as many as 381 workers have been working in two shifts in the company. The accident occurred around 2.15 p.m., during shift change. It is claimed that such accidents have been occurring frequently, and yet no measures have been taken. Moreover, the news item alleges that repeated accidents had been occurring due to alleged negligence and apathy of the managements. It had been several years since a safety audit was conducted.

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4. The news item raises substantial issue relating to compliance of the environmental norms.

5. Power of the Tribunal to take up the matter *suo-motu* has been recognized by the Hon'ble Supreme Court in the matter of "*Municipal Corporation of Greater Mumbai vs. Ankita Sinha & Ors.*" reported in 2021 SCC Online SC 897.

6. Hence, we implead the following as respondents in the matter:

- (1). Central Pollution Control Board, Through its Member Secretary, Parivesh Bhawan, East Arjun Nagar, Delhi-110032.
  - (2). Andhra Pradesh Pollution Control Board, Through its Member Secretary, Dr. YSR Paryavaran Bhawan, APIIC Colony Road, Gurunanak Colony, Vijaywada-520007.
  - (3). Ministry of Environment, Forest and Climate Change, Through its Regional Office, Regional Office (SEZ), Ist and IInd Floor, Handloom Export Promotion Council, 34, Cathedral Garden Road, Nungambakkam, Chennai – 34.
  - (4). District Magistrate, Anakapalli, Collector's Office, Anakapalli.
  - (5). Director, Directorate of Industrial Safety and Health, Andhra Pradesh.
7. Issue notice to the above respondents for filing their response/reply by way of affidavit before the Southern Zonal Bench of the Tribunal at least one week before the next date of hearing. If any of the respondents directly files the reply without routing it through his advocate then the said respondent will remain virtually present to assist the Tribunal.
8. Since the matter falls within the jurisdiction of Southern Zonal Bench of the Tribunal, therefore, the OA is transferred to the Southern Zonal Bench, Chennai for appropriate further action. Let the original record of the OA be transferred to Southern Zonal Bench, Chennai.
9. List before Southern Zonal Bench at Chennai on 30.09.2024.

Prakash Shrivastava, CP

Arun Kumar Tyagi, JM

Dr. A. Senthil Vel, EM

August 22, 2024  
Original Application No. 1097/2024  
dv



**ANDHRA PRADESH POLLUTION CONTROL BOARD**  
**Dr. YSR Paryavaran Bhavan, APIIC Colony Road,**  
**Gurunanak Colony, Autonagar, Vijayawada- 520007**  
**Phone. No.0866-2463200, Website : <https://pcb.ap.gov.in/>**



**RED CATEGORY**  
**CONSENT TO OPERATE & HAZARDOUS WASTE AUTHORIZATION ORDER**

**Consent Order No: APPCB/VSP/VSP/418/HO/CTO/2024**

**Date: 25/05/2024**

CONSENT is hereby granted for Operation under section 25/26 of the Water (Prevention & Control of Pollution) Act, 1974 and under section 21/22 of Air (Prevention & Control of Pollution) Act 1981 and amendments thereof and Authorization under Rule 6 of the Hazardous & Other Wastes (Management and Transboundary, Movement) Rules, 2016 and the rules and orders made there under (hereinafter referred to as 'the Acts', 'the Rules') to:

**M/s. Escientia Advanced Sciences Pvt., Ltd., (Change of Product Mix)**  
**Plot No.11, 11 A, 12 & 12 A, APSEZ,**  
**Atchutapuram & Rambilli (M),**  
**Anakapalli District**  
**Email: Kiran.reddy.pendri@gmail.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. Outlets for discharge of effluents:**

Outlet No.	Outlet Description	Max Daily Discharge KLD	Point of Disposal
1.	HTDS & HCOD Effluents Process -87.84 KLD + Washings -10.0 KLD Scrubber water – 15.0 KLD	112.84	The industry shall send the pre-treated effluent to MEE of CETP, Atchutapuram through APEMC for treatment.
2.	LTDS DM & Water plant rejects – 10.0 KLD + Boiler blow down – 7.0 KLD + Cooling tower blow down – 18.0 KLD	35.0	The industry shall send the pre-treated effluent to CETP, Atchutapuram through APEMC for final treatment and disposal.
3.	Domestic	13.0	The over flow from the septic tank shall be sent to the CETP, Atchutapuram along with LTDS effluent through APEMC.
	<b>Total</b>	<b>160.84 KLD</b>	

**ii. Emissions from chimneys:**

Chimney No.	Description of Chimney	Quantity of Emissions at peak flow
1.	Attached to 3.5 TPH Oil fired Boiler	---
2.	Attached to 2.0 TPH Oil fired Boiler	---

	(standby)	
3.	Attached to 2 X 1500 KVA DG Set	---
4.	Process Emissions	---

iii. **Hazardous Waste Authorization (Form – II) [See Rule 6 (2)]:**

M/s. Escientia Advanced Sciences Pvt., Ltd., Plot No.11, 11 A, 12 & 12 A, APSEZ, Atchutapuram & Rambilli (M), Anakapalli District is hereby granted an authorization to operate a facility for collection, reception, storage, treatment, transport and disposal of Hazardous Wastes namely:

• **Hazardous Wastes with Disposal Option:**

S. No	Name of the Hazardous waste	Stream	Quantity	Disposal Option
1.	Process organic residue	28.1 of Schedule-I	2778.9 Kg/day	Shall be routed through APEMC to preprocessors / cement industries for co-processing / TSDF.
2.	Spent carbon	28.3 of Schedule-I	178.9 Kg/day	
3.	Process inorganic residue	28.1 of Schedule-I	891.10 Kg/day	Shall be routed through APEMC to TSDF for secured land filling.
4.	ETP Sludge	35.3 of Schedule-I	10 Kg/day	
5.	Spent Mixed Solvents (colored)	28.6 of Schedule-I	10 KLD	Shall be routed through M/s. APEMC so as to send to pre-processors / Cement industries for co-processing (as utilizable waste).
6.	Filtration bags	33.1 of Schedule-I	500 Kgs/Month	

• **Hazardous Wastes with Recycle Option:**

S. No	Name of the Hazardous waste	Stream	Quantity	Disposal Option
1.	Discarded containers/ barrels/liners contaminated with hazardous wastes or chemicals	33.1 of Schedule-I	500 nos/month	Shall be routed through APEMC to TSDF for detoxification and disposal (or) After complete detoxification, to authorized agencies/ recyclers.
2.	Waste / used spent oil	5.1 of Schedule-I	6 KL/Annunum	Shall be disposed to authorized recyclers through APEMC.
3.	Spent solvents	28.6 of Schedule-I	97.85 KL/day	Shall be recovered within the premises in their SRS unit/ disposed to authorized SRS units through APEMC.
4.	Spent catalyst	28.2 of Schedule-I	176.9 Kg/day	Shall be return to suppliers.

5.	Mixed solvents	28.6 of Schedule-I	10.87 KL/day	Shall be disposed to authorized SRS units / Cement industries for co- processing through APEMC.
6.	Thermo coal waste	33.2 of Schedule-I	100 kgs/month	Shall be routed through M/s. APEMC, so as to send to TSDF, Parawada for incineration. (as Incinerable waste) .
7.	Pharma dust from clean rooms, Pharma rooms, AHUs, and floor Sweeping	33.2 of Schedule-I	100 kgs/month	
8.	Discarded resins	33.2 of Schedule-I	2000 Kgs/month	
9.	Insulation waste a) Nitrile Rubber	33.2 of Schedule-I	500 kgs/month	
10.	Discarded personal protective equipment ( General waste)	33.2 of Schedule-I	100 kgs/day	
11.	Off specification & discarded products / raw materials/ intermediates / lab chemicals	28.4 of Schedule-I	250 kgs/day	
12.	HEPA filters / oil filters / paint tins	33.2 of Schedule-I	100 kgs/day	Shall be routed through M/s. APEMCL so as to send to (as Landfill waste).
13.	Insulation waste - Glass wool	33.2 of Schedule-I	500 kgs/month	
14.	Laboratory vials	--	100 kgs/month	
15.	Spill contaminant Waste	33.2 of Schedule-I	5 kg/day	
16.	container liners	33.1 of Schedule-I	2000 kgs/month	Shall be routed through M/s. APEMC so as to dispose to outside agencies after detoxification.
17.	Empty glass bottles	--	500 Nos/month	
18.	Used Lead Acid Batteries	17.4 of Schedule-1	50 Nos/month	Shall be returned to dealers on buy back policy / authorized recyclers through APEMC as per Battery Waste Management Rules, 2022.

This consent order is valid for manufacture the following products along with quantities indicated only:

S.No.	Name of the Products	Quantity in Kg/day	No of Stages	Starting raw material	Quantity (Kg/day)
1.	Darunavir Ethanolate	300	4	DNV – II – intermediate	372.4
2.	Donepezil Hydrochloride	300	2	5,6 Dimethoxy-1-inadanone	261.7
3.	Febuxostat	300	2	Ethyl-2-(3-cyano-4-isobutoxyphenyl)-4-methyl-5-thiazolecarboxylate	463.8
4.	Fexofenadine Hydrochloride	300	6	2-([4-(4-chloro-1-oxobutyl)phenyl]-2-methylpropanoic acid (BW-08)	361.6
5.	Glipizide	300	4	5-methyl-2-pyrazine carboxylic acid (5-MPCA)	262.5
6.	Lanzoprazole	300	4	2-Chloro-3-methyl-4-(2,2,2-trifluoroethoxy) Pyridine HCl	461.7
7.	Levetiracetam	400	2	(2S)-2-aminobutanamide HCL	412
8.	Rimegepant sulphate	210.0	4	(2S)-2-amino-3,3- dimethyl butanoic acid	65.7
9.	Zavegepant Hydrochloride	90.0	2	1-Benzyl Piperidine-4-Carbaldehyde Adduct	94.50
10.	R & D/Custom Synthesis Products	100			
	<b>Total</b>	<b>2600</b>			

#### By-Products:

Sl. No.	Products	By product	Quantity in Kg/day
			Phase I
1.	Rimegepant Sulphate	Triethylamine HCl*	312.6
2.	Glipizide	Triethylamine HCl*	141.0
		<b>Total</b>	<b>453.6</b>

\* The industry shall reuse the Tri-ethyl-amine HCl within the industry.

The industry shall submit disposal (sale) details of the above by-products every month to the Regional Office, Visakhapatnam & Zonal Office, Visakhapatnam. In case the by-products cannot be sold in the market due to any reasons and same shall be treated as waste and disposed as per the norms.

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 to operate & Hazardous Waste Authorization shall be valid for a period ending with the **31<sup>st</sup> day of December, 2028.**

**B SREEDHAR IAS, MS(BS), O/o MEMBER SECRETARY-APPCB**

**To**

**M/s. Escientia Advanced Sciences Pvt., Ltd.,  
Plot No.11, 11 A, 12 & 12 A, APSEZ,  
Atchutapuram & Rambilli (M),  
Anakapalli District.  
Email: Kiran.reddy.pendri@gmail.com**

**Copy to:**

1. The JCEE, Zonal Office, **Visakhapatnam** for information and necessary action.
2. The EE, Regional Office, **Visakhapatnam** 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. 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.
4. The industry shall ensure that there shall not be any change in the process technology, source & composition of raw materials and scope of working without prior approval from the Board.
5. 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.
6. The applicant should make applications through Online for renewal of Consent (under Water and Air Acts) and Authorization under HWM Rules 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 & HW Authorization of the Board.
7. 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.

9. The industry shall be liable to pay Environmental Compensation / Other Environmental Taxes, if any environmental damage caused to the surroundings, as fixed by the Collector & District Magistrate or any other competent authority as per the Rules in vogue.
10. The industry may explore the possibility of tapping the solar energy for their energy requirements.
11. The industry should educate the workers and nearby public of possible accidents and remedial measures.

**SCHEDULE-B**

**The issue of CTO&HWA (CPM) to the industry was placed in the Consent Management Committee meeting held on 16.05.2024. The industry shall comply with the following conditions.**

1. The industry shall provide vent condensers to solvent storage tanks, by 30.06.2024.
2. The industry shall provide hood with scrubber on the top of the effluent storage tanks by, 31.07.2024.
3. The industry shall reuse the Tri-ethyl-amine HCl within the industry.
4. The industry shall not produce prohibited drugs in the R&D unit.

**Water Pollution:**

5. The source of water is **APIIC Supply**. 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 (KLD)
1.	Process	82.38
2.	Washings	10.0
3.	Scrubber	15.0
4.	Boiler Feed	45.0
5.	DM Plant / Softener rejects	10.0
6.	Cooling tower	145
7.	Domestic	15.0
8.	Gardening	13.0
	<b>Total</b>	<b>335.38</b>

Separate meters with necessary pipe-line shall be provided for assessing the quantity of water used for each of the purposes mentioned above.

6. The LTDS effluents sent to CETP, shall not contain constituents in excess of the tolerance limits mentioned below, as per their MoU:

Outlet	Parameters	Concentration in mg/l
2	pH	6.50 – 8.50
	Temperature °C	< 45 <sup>0</sup> C
	TDS	12,000 mg/l

TSS	600 mg/l
BOD	3,000 mg/l
COD	8,000 mg/l
Oil and Grease	20 mg/l
Chromium Hexavalent (as Cr <sup>+6</sup> )	2 mg/l
Chromium (total) as Cr	2 mg/l
Ammonical Nitrogen (as N)	30 mg/l
Cynide (as CN)	0.20 mg/l
Lead (as Pb)	1 mg/l
Nickel (as Ni)	3 mg/l
Zinc (as Zn)	15 mg/l
Arsenic (as As)	0.20 mg/l
Mercury (as Hg)	0.01 mg/l

**\*The industry shall segregate the HTDS and LTDS effluent streams and the effluents which are not meeting the above standards shall be treated as HTDS effluents and shall be sent CETP of AETL for evaporation.**

7. The industry shall maintain Electro Magnetic flow meters with totalisers for water consumption, effluent generation mentioned in this Order.
8. The industry shall maintain HDPE tanks / tank in tank in the effluent collection tank (both locations at block and common collection point). Free space shall be maintained around the HDPE tanks / Tank in Tank to observe leakages if any.
9. The industry shall maintain proper manifest system for effluent transported to CETP and maintain the records and submit the details of quantity of High TDS and Low TDS effluents sent to CETP of AETL every month to the RO, Visakhapatnam.
10. The industry shall properly operate and maintain online real time monitoring system along with web camera facilities and shall ensure that it is connected to APPCB / CPCB websites as per CPCB directions dt. 05.02.2014 / 02.03.2015.
11. Effluents shall not be discharged on land or any water bodies or aquifers or outside under any circumstances.
12. Floor washings shall be admitted into effluent collection system only and shall not be allowed to find their way into storm water drains or open areas. All pipe valves, sewers, drains shall be leak proof.
13. The LTDS and HTDS effluents shall be stored in above ground level collection tanks separately. The industry shall provide hoods over the effluent storage tanks, and the vents shall be connected to scrubbers.
14. The industry shall provide containers detoxification facility. Container & Container liners shall be detoxified at the specified covered platform with dyke walls and the wash wastewater shall be routed to low TDS collection tank after characterization.
15. The industry shall provide tank in tank system for effluent collection at production blocks. Free board shall be maintained in the tanks to prevent spillages.
16. Storm water shall not be allowed to mix with scrubber water and / or floor washings. Storm water shall be channelized through separate drains passing through a HDPE lined pit having capacity of 10 minutes (hourly average) of rainfall.
17. The industry shall maintain rainwater runoff tank with pump for collection and storage of first flush contaminated storm water and the same shall be sent to CETP for further treatment.
18. The industry shall maintain dry condition outside drains in non-rainy season.

**Air Pollution:**

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

Chimney No.	Parameter	Emission Standards (mg/Nm <sup>3</sup> )
1 & 2	Particulate matter	100
4	HCl	35
	NH <sub>3</sub>	30
	Sulphuric acid mist	50
	Chlorine	15
Tank farm vents	HCl	35
	NH <sub>3</sub>	30
	Chlorine	15
	Benzene	5
	Toluene	100
	Acetonitrile	1000
	Dichloromethane	200
	Xylene	100
Acetone	2000	

20.The industry shall comply with ambient air quality standards of PM10(Particulate Matter size less than 10mm) - 100 mg/ m3; PM2.5(Particulate Matter size less than 2.5mm) -60 mg/ m3; SO2 - 80 mg/ m3; NOx - 80 mg/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).

21.The industry shall provide a sampling port with removable dummy of not less than 15cm diameter in the stack at a distance of 8 times the diameter of the stack from the nearest constraint such as bends etc. A platform with suitable ladder shall be provided below 1 meter of sampling port to accommodate three persons with instruments. A 15AMP 250 V plug point shall be provided on the platform.

22.The industry shall comply with emission limits for DG sets of capacity upto 800 KW as per the Notification G.S.R.804 (E), dated 03.11.2022 under the Environment (Protection) Act Rules. In case of DG sets of capacity 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.

23.The industry shall comply with the noise limits for DG sets (upto 1000 KVA) as per G.S.R.520 (E), dated 01.07.2003 and G.S.R.448(E), dated 12.07.2004 under the Environment (Protection) Act Rules.

24.The industry shall properly operate the multi stage scrubbers for scrubbing of process emissions. The industry shall maintain pH meters for scrubbers and connect to APPCB website. Scrubbed liquid shall be recycled as far as possible and finally sent to CETP for further treatment.

25.The industry shall ensure that online pH measuring facility with auto recording system is connected to the scrubbers.

26. The industry shall implement adequate measures to control all fugitive emissions from the plant.
27. The industry shall send the used / spent solvents to the recyclers (or) process them at their own solvent recovery facility within the premises.
28. The evaporation losses in solvents shall be controlled by taking the following measures:
  - i. Chilled brine circulation to effectively reduce the solvent losses into the atmosphere.
  - ii. Transfer of solvents by using pumps and closed conveyance instead of manual handling.
  - iii. Closed centrifuges are used due to which solvent losses are reduced drastically.
  - iv. The reactor vents connected with primary & secondary condensers to catch the solvent vapours.
  - v. All the solvent storage tanks are connected with vent condensers to prevent solvent vapours.
29. The industry shall not use odour causing substances such as Mercaptan or cause odour nuisance in the surroundings.
30. The industry shall maintain VOC meter with auto recording facility and same connected to APPCB website.

**General:**

31. The industry shall not manufacture new products and not exceed the consented capacity without CTE/CTO of the Board.
32. The effluent discharged and emissions shall comply with the tolerance limits mentioned in MoEF notification dated 09.07.2009 prescribed for Pharmaceutical (Manufacturing and Formulation) industry and G.S.R. 541(E) dt. 06.08.2021 for Bulk Drug and Formulation (Pharmaceutical).
33. The drums containing chemicals / solvents shall be stored under a roof on elevated platform with a provision to collect leakages / spillages in the collection pit.
34. The industry shall store hazardous waste in closed sheds with dyke wall leachate collection sump.
35. The industry shall not dispose any non-hazardous waste outside the industry premises. The industry shall dispose other non-hazardous wastes as per the disposal option specified below:

S. No	Name of the Non-Hazardous waste	Quantity	Method of Disposal
1.	E – waste	2000 Kg/year	Authorized collection centers / recyclers / dismantler / disposal facility.
2.	Used tube lights	100 nos/month	
3.	Paper, cotton waste & packing material i.e., wood, carton, ropes etc.,	2TPM	Sale to outside agencies / recyclers.
4.	Ply wood boxes, tins	2TPM	
5.	Coal Ash	---	TSDf to use as stabilizing agent / Brick manufacturers.

36. The industry shall provide hood on the top of the effluent storage tanks and vent connected to scrubber.
37. The following rules and regulations notified by the MoEF& CC, GoI shall be implemented.
- Hazardous waste and other wastes (Management and Transboundary Movement) Rules, 2016.
  - Manufacture, Storage and Import of Hazardous Chemicals Rules, 1989.
  - Fly Ash Notification, 2016.
  - Batteries (Management & Handling) Rules, 2010.
  - E-Waste (Management) Rules, 2016.
  - Construction and Demolition waste Management Rules, 2016.
  - Bio-medical Waste Management Rules, 2016
38. The industry shall maintain the following records and the same shall be made available to the inspecting officers of the Board:
- Daily production details.
  - Quantity of Effluents generated, treated, recycled/reused and disposed to CETP.
  - Log Books for pollution control systems.
  - Characteristics of effluents and emissions.
  - Hazardous/non-hazardous solid waste generated and disposed.
  - Inspection book.
  - Manifest copies of effluents / hazardous waste.
39. The industry shall maintain good housekeeping within the plant premises.
40. The industry shall comply with the SoP issued by CPCB for Solvent Recovery units dated 22.03.2021. The total cumulative losses of solvents shall not be more than 5% of the solvent on annual basis from storage inventory.
41. Green belt of adequate width and density shall be maintained along the boundary of the industry with minimum area of 22% of total area.
42. The industry shall comply with SoPs issued by CPCB time to time for all the wastes.
43. The industry shall maintain valid PLI policy which includes Environmental Relief Fund (ERF) and submit copy to RO, Visakhapatnam on yearly base.
44. The industry shall comply with the Regulation of Persistent Organic Pollutants Rules, 2018 notified by the MOEF&CC Notification vide G.S.R. 207 (E) dated 30.05.2018. As per the notification, the following 7 chemicals are prohibited to manufacturer, trade, use, import and export:
45. The industry shall comply with the Regulation of Persistent Organic Pollutants Rules, 2018 notified by the MOEF&CC Notification vide G.S.R. 207 (E) dated 30.05.2018. As per the notification, the following 7 chemicals are prohibited to manufacturer, trade, use, import and export:
- Chlordecone,
  - Hexabromobiphenyl,
  - Hexabromodiphenyl ether and heptabromodiphenyl ether (commercial octa-BDE),
  - Tetrabromodiphenyl ether and pentabromodiphenyl ether (commercial penta-BDE),
  - Pentachlorobenzene,
  - Hexabromocyclododecane and
  - Hexachlorobutadine.
46. The industry shall submit the information regarding usage of Ozone Depleting Substance once in six months to the Board.

47. The industry shall maintain digital display boards at publicly visible places at the main gate indicating the products manufactured Vs permitted quantities, treated effluent concentrations Vs discharge standards, stack emission & AAQ concentrations Vs standards, hazardous waste generation, disposed, stock Vs permitted quantities and validity of CTO; and exhibit the CTO order at a prominent place in the factory premises, as per Hon'ble Supreme Court order.
48. The industry shall submit Half yearly compliance reports to all the stipulated conditions in Environmental Clearance (EC), Consent to Establishment (CTE) and Consent to Operation (CTO) 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 MoEF&CC recognized and National Accreditation Board for Laboratory Testing (NABL) accredited third party.
49. The conditions stipulated are without prejudice to the rights and contentions of this Board in any Hon'ble Court of Law.
50. Any other directions / circulars / notices / guidelines issued by CPCB, MoEF&CC and APPCB shall be followed from time to time.
51. The industry shall comply with the conditions stipulated in the CTE order dated 23.04.2024.
52. The Board reserves its right to modify above conditions or stipulate any further conditions and to take action including revoke of this order in the interest of protection of public health and environment.

**Special conditions:**

52. The industry shall not to use Furnace Oil as fuel for the Boilers, shall be used LSD/HSD.
53. The industry shall operate with valid NOC issued by the Andhra Pradesh State Disaster Response and Fire Service Dept., (APSDRFSD) at concerned Regional Office, APPCB.
54. The industry shall operate with valid PESO permission.
55. The industry shall comply with the technical suggestions at Chapter No. 7.3 & 7.4 for Hazardous Chemical handling industries by High Power Committee (HPC) of Govt. of Andhra Pradesh. The HPC report is available at [www.ap.gov.in](http://www.ap.gov.in).
56. The industry shall prepare a safety report and carry out an independent safety audit report of the respective industrial activities including chemical storages / isolated storages by an expert not associated with such industrial activity as required under Rule 10 of MSIHC Rules, 1989 and get it approved by the Factories Dept., and submit the compliance along with copy of the safety report, safety audit report and safety certificate at concerned Regional Office, APPCB.
57. The industry shall extend training to the working personnel for the prevention of accidents and necessary antidotes to ensure safety, as per the MSIHC Rules, 1989.
58. The industry shall carryout calibration of safety equipment and leak detection systems at regular intervals and shall certify the same with the Factories Department. That certified copy shall be submitted to the APPCB, Regional Office.
59. The industry shall install fluorescent Wind Vane at the highest point in the industry premises.
60. The industry shall submit Risk analysis and risk assessment covering worst scenario clearly describing impact within the industry premises and outside the industry premises and emergency response system.
61. The industry shall submit the copy of the safety audit report and On-Site / Off Site

Emergency Plans as applicable after being certified by the Factories Department to the APPCB, Regional Office from time to time, if the storage quantity of hazardous chemicals is equal to or, in excess of the threshold quantities specified in schedule 2 & 3 of MSIHC Rules, 1989.

**SCHEDULE – C**

***[See rule 6(2)]***

**[CONDITIONS OF AUTHORIZATION FOR OCCUPIER OR OPERATOR  
HANDLING HAZARDOUS WASTES]**

1. The authorized person shall comply with the provisions of the Environment (Protection) Act, 1986, and the rules made there under.
2. The authorization or its renewal shall be produced for inspection at the request of an officer authorized by the State Pollution Control Board.
3. The person authorized shall not rent, lend, sell, transfer or otherwise transport the Hazardous and other wastes except what is permitted through this authorization.
4. Any unauthorized change in personnel, equipment or working conditions as mentioned in the application by the person authorized shall constitute a breach of his authorization.
5. The person authorized shall implement Emergency Response Procedure (ERP) for which this authorization 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 authorized 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 authorized person to take prior permission of the State Pollution Control Board to close down the facility.
8. An application for the renewal of an authorization shall be made as laid down under these Rules.
9. 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.
10. Annual return shall be filed by June 30th for the period ensuring 31st March of the year.
11. The authorized person shall not store hazardous waste for more than 90 days as per the Hazardous & Other Wastes (Management and Transboundary Movement) Rules, 2016.
12. The authorized person 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 buy back basis.
13. The authorized person 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.
14. The authorized person shall maintain proper records for Hazardous & other wastes stated in Authorization 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 6 (5) of the Hazardous & Other Wastes (Management & Transboundary Movement) Rules, 2016

and amendments thereof by June 30th for the period ensuring 31st March of the year.  
15.The authorized person shall submit the condition wise compliance report of the conditions stipulated in Schedule A, B &C of this Order on half yearly basis to Board office and concerned Regional office.

**B SREEDHAR IAS, MS(BS), O/o MEMBER SECRETARY-APPCB**

**To**  
**M/s. Escientia Advanced Sciences Pvt., Ltd.,**  
**Plot No.11, 11 A, 12 & 12 A, APSEZ,**  
**Atchutapuram & Rambilli (M),**  
**Anakapalli District**  
**Email:** Kiran.reddy.pendri@gmail.com



**ANDHRA PRADESH POLLUTION CONTROL BOARD**  
**REGIONAL OFFICE, VISAKHAPATNAM**

*D.No.39-33-20/4/1, Madhavadhara Vuda Colony, Visakhapatnam - 530018*

*Phone: 0891 -2755356*

**Lr. No.1917/APPCCB/RO-VSP/2024-**

**Date:22.08.2024**

**To**  
**The Member Secretary,**  
**A.P. Pollution Control Board,**  
**Vijayawada.**

**Sir,**

Sub: APPCB, RO, VSP – Accident occurred in M/s. Escientia Advanced Sciences Pvt., Ltd., Plot No.11, 11 A, 12 & 12 A, APSEZ, Atchutapuram & Rambilli (M), Anakapalli District– Preliminary report submitted – Reg.

Ref: 1. Consent Order No: APPCB/VSP/VSP/418/HO/CTO/2024 dated: 25.05.2024 which is valid up to 31.12.2028.  
 2. Incident occurred on 21.08.2024 at 02:15 PM.

\*\*\*

It is submitted that an accident took place at about 02:15 PM on 21.08.2024 in M/s. Escientia Advanced Sciences Pvt., Ltd., Plot No.11, 11 A, 12 & 12 A, APSEZ, Atchutapuram & Rambilli (M), Anakapalli District in production block.

The Regional Office Officials have rushed to the spot immediately after getting the information about the accident and reached the spot at 03:00PM. The PCB has started monitoring of VOCs in 4 directions continuously to ascertain the process emissions dispersion from the accident site and scientific staff was deputed to monitor the volatile organic compound round the clock.

The industry is having one production block with Suit – 1, 2, 3 divisions for manufacturing, QA, QC and Process Development lab. The Process development Lab is established in ground floor. Upon the preliminary enquiry, it came to know that Methyl Tertiary Butyl Ether (Highly volatile compound) was leaked from Suit 1 – 1<sup>st</sup> floor due to flange leak and fall on south technical area electrical panel and lead to explosion.

Immediately firefighting was taken up by neighboring industries i.e., M/s Laurus Laboratories, M/s Pidilite Industries, M/s Cohance Life Sciences, M/s Asian Paints, Abhijeet Ferro Tech, APSDRS, NDRM Team with their firefighting equipment to control the fire. Subsequently, the fire was stopped around 3.30 PM. However, lot of smoke was

emanated from the block till 07.00 PM. It was observed that the fire was confined to the industry only and there is no spread of fire into the surroundings. During the incident, initially 17 persons were deceased and 15 injured persons were shifted to the Hospital for treatment.

The Board officials carried out VOC monitoring outside the accident site with handy VOC meter from 03:00 PM and the VOCs concentration is found 0.8 ppm. The VOCs were also monitored outside the factory premises and the VOC concentrations are varying from 0.3 ppm to 0.8 ppm which does not have any major impact on the human health in the surrounding areas.

**VOC Monitoring data on 21.08.2024**

S.No	LOCATION	VOC Values Rang in ppm							
		3:00 PM	4:00 PM	5:00 PM	6:00 PM	7:00 PM	8:00 PM	9:00 PM	10.30 PM to 2.0 AM
1.	Security Back Gate (East side)	BDL	BDL	0.1-0.2	BDL	BDL	BDL	BDL	BDL
2.	Security Main gate (North side)	0.3-0.6	0.4-0.5	0.4-0.5	0.3-0.4	0.3-0.4	0.2-0.4	0.1-0.2	0.1 - 0.2
3.	Drum storage area(West side)	0.1-0.2	0.1-0.0	0.1-0.2	BDL	BDL	BDL	BDL	BDL
4.	Laurus Unit-2 Road(South side)	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
5.	Near Production Block	0.3-0.8	0.4-0.6	0.3-0.6	0.2-0.4	0.2-0.3	0.1-0.2	0.1-0.2	0.1 – 0.3

**Note: BDL – Below detectable Limit (<0.1 ppm)**

The cause of the incident and reasons for the failure of the safety systems are being investigated by the Factories Department, who is prescribed authority.

Photographs showing the status of the incident are herewith submitted as annexure.

Submitted for favour of information and taking necessary action.

Yours faithfully,  
PAIDI VENKATA MUKUNDA RAO  
MUKUNDA RAO  
**ENVIRONMENTAL ENGINEER**

Digitally signed by PAIDI  
VENKATA MUKUNDA RAO  
Date: 2024.08.22 07:33:35  
+05'30'

Copy to the Joint Chief Environmental Engineer, A.P. Pollution Control Board, Zonal Office, Visakhapatnam for favour of information and taking necessary action.

Copy to the Joint Chief Environmental Engineer (UH-II), A.P. Pollution Control Board, Board Office, Vijayawada for favour of information and taking necessary action.

**Photographs showing the status of the incident**













**ANDHRA PRADESH POLLUTION CONTROL BOARD**  
**REGIONAL OFFICE, VISAKHAPATNAM**  
*D.No.39-33-20/4/1, Madhavadhara Vuda Colony, Visakhapatnam - 530018*  
*Phone: 0891 -2755356*

**Lr. No.1917/APPCB/RO-VSP/2024-**

**Date:23.08.2024**

**To**  
**The Member Secretary,**  
**A.P. Pollution Control Board,**  
**Vijayawada.**

**Sir,**

Sub: APPCB, RO, VSP – Accident occurred in M/s. Escientia Advanced Sciences Pvt. Ltd., Plot No.11, 11 A, 12 & 12 A, APSEZ, Atchutapuram & Rambilli (M), Anakapalli District– Inspection report submitted – Reg.

- Ref: 1. Consent Order No: APPCB/VSP/VSP/418/HO/CTO/2024 dated: 25.05.2024 which is valid up to 31.12.2028.  
 2. Incident occurred on 21.08.2024 at 02:15 PM.  
 3. T.O. preliminary report dated 22.08.2024.

\*\*\*

It is submitted that an accident took place at about 02:15 PM on 21.08.2024 in M/s. Escientia Advanced Sciences Pvt., Ltd., Plot No.11, 11 A, 12 & 12 A, APSEZ, Atchutapuram & Rambilli (M), Anakapalli District in production block.

The Regional Office vide 3<sup>rd</sup> ref cited, submitted the preliminary report on 22.08.2024. Further, the unit was inspected by Chief Environmental Engineer along with Joint Chief Environmental Engineer, ZO, VSP, Senior Environmental Engineer, ZO, VSP, Senior Environmental Engineer EAC Head office, Senior Environmental Scientist, ZO, Lab and Environmental Engineer, RO, VSP on 22.08.2024.

In continuation to the preliminary report, it is to submit that the following observations were made :

1. During the firefighting operations the industry has used 150 KL of water and 1 KL of foam for control fire. The industry is not having proper storm water drain to collect the waste water generated from firefighting operations.
2. The wastewater from the firefighting operations finds its way into the ground due to leakages found in the storm water drain.

3. Samples of contaminated firefighting water at front side of the production block and back side of the production block were collected. The analysis report is herewith enclosed. The monitoring details are as follows:

S. No.	Parameter	Sample of contaminated firefighting water at front side of the production block	Sample of contaminated firefighting water at back side of the production block
1.	pH	6.36	9.04
2.	Total Suspended Solids	127 mg/lit	118 mg/lit
3.	Total Dissolved Solids	1428 mg/lit	1352 mg/lit
4.	Chemicals Oxygen Demand	336 mg/lit	320 mg/lit

4. As per the analysis report it was found that COD values exceeding the norms.
5. With the above COD values, the soil in which the firefighting seepage is occurring got contaminated. Hence the industry shall lift the contaminated soil.
6. There is no proper collection of firefighting wastewater system to send it to CETP for proper treatment and disposal. The industry has failed to collect the firefighting wastewater properly and it has taken its way to storm water drain and ultimately got percolated into the ground.
7. The TVOCs monitoring was carried from 21.08.2024 3.0 PM to 22.08.2024 12.30 PM within & outside the industry premises. The concentrations were varying between BDL to 0.8 ppm within the premises and BDL to 0.4 ppm outside the premises.
8. It was informed that huge smoke was emanated during the accident. However at the time of inspection burning of cables smell was observed.
9. The debris and leftover mass in nearly 10 reactors and other wastes generated due to the fire accident are yet to be cleared. The industry shall ascertain the quantity of hazardous waste generated and the same has to be lifted to TSDF for safe disposal after getting clearance from Factories Department.

10. The operational status of the industry is non-conducive to continue further operation of the industry till the safe disposal of contaminated soil, debris present in the accident block and also susceptible to discharge air and water pollutants into surrounding environment in the present circumstances.

In view of the above the industry may be reviewed in the EAC committee meeting and issued stop production orders as the production block was severely damaged and the operational status of the industry is non-conducive to continue.

Submitted for favour of information and taking necessary action.

Yours faithfully,

PAIDI VENKATA  
MUKUNDA  
RAO

Digitally signed by PAIDI  
VENKATA MUKUNDA RAO  
Date: 2024.08.23 16:11:27  
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**ENVIRONMENTAL ENGINEER**

Copy to the Joint Chief Environmental Engineer, A.P. Pollution Control Board, Zonal Office, Visakhapatnam for favour of information and taking necessary action.

Copy to the Joint Chief Environmental Engineer (UH-II), A.P. Pollution Control Board, Board Office, Vijayawada for favour of information and taking necessary action.



ANDHRA PRADESH POLLUTION CONTROL BOARD  
ZONAL LABORATORY :: VISAKHAPATNAM  
39-33-20/4/1, Madhavadhara VUDA Colony,  
Visakhapatnam - 530018. Ph : 0891 - 2719380/481



Form No: APPCB/ZL/VSP/CI.7.8/FM38A

Report No: VSP202408453 & 454

Date: 23<sup>rd</sup> day of August, 2024

ANALYSIS REPORT

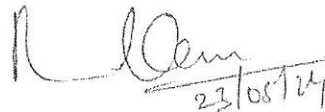
Sample No. : VSP202408453 & 454  
Sample Location/Address : M/s Escientia Advanced Sciences Pvt. Ltd.,  
Plot No.11,11A,12 & 12A, APSEZ,  
Atchutapuram & Rambilli (M), Anaparthi District.  
Sample Source : VSP202408453: Contaminated fire fighting water sample  
collected at front side of the Production Block  
VSP202408454: Contaminated fire fighting water sample  
collected at back side of the Production Block  
Sample collected on : 21.08.2024  
Sample received on : 22.08.2024  
Sample collected by : Environmental Engineer, Regional Office, Visakhapatnam  
Report issued on : 23.08.2024

It is to certify that the aforementioned samples were analyzed from 21.08.2024 to 23.08.2024 and declare the analysis results as follows:

S. No.	Parameter	Sample codes & Analysis Results		Test Method
		453	454	
1.	pH @ 25°C	6.36	9.04	APHA(24 <sup>th</sup> Edition,2023)4500-H+B
2.	Total Suspended Solids (at 105°C)	127	118	APHA (24 <sup>th</sup> Edition,2023) 2540- D
3.	Total Dissolved Solids (at 180°C)	1428	1352	APHA(24 <sup>th</sup> Edition,2023) 2540- C
4.	Chemical Oxygen Demand	336	320	APHA(24 <sup>th</sup> Edition, 2023) 5220- B

Note: -1. All values are expressed in mg/l except pH  
2. Results are related to sample as received and tested

Authorized Signatory

  
23/08/24

STATE BOARD ANALYST  
Senior Environmental Scientist  
Zonal Laboratory, Visakhapatnam.

"END OF THE REPORT"

Page 1 of 1



**ANDHRA PRADESH POLLUTION CONTROL BOARD**  
 Dr. YSR Paryavaran Bhavan, APIIC Colony Road,  
 Gurunanak Colony, Autonagar, Vijayawada- 520007  
 Phone. No.0866-2463200, Website : <https://pcb.ap.gov.in/>



**Order No.852/APPCB/HO/ECS/VSP/2024-**

**Date:23/08/2024.**

**STOP PRODUCTON ORDER**

**Sub:** APPCB – HO - ECS - **M/s. Escientia Advanced Sciences Pvt., Ltd.**, Plot No.11, 11 A, 12 & 12 A, APSEZ, Atchutapuram & Rambilli (M), Anakapalli District – Fire accident took place on 21.08.2024 – Causing pollution problems – **Stop Production Order - Issued - Reg.**

**Ref:**

1. Consent Order No: APPCB/VSP/VSP/418/HO/CTO/2024 dt. 25.05.2024.
2. Fire accident took place on 21.08.2024 at 02:15 PM at M/s. Escientia Advanced Sciences Pvt., Ltd., APSEZ, Atchutapuram & Rambilli (M), Anakapalli District.
3. Monitoring of Air and Water quality by the Board officials on 21.08.2024 at the industry premises.
4. RO, Visakhapatnam preliminary report dt: 22.08.2024.

\* \* \*

**WHEREAS** you are operating a industry in the name & style of M/s. Escientia Advanced Sciences Pvt., Ltd., located at Plot No.11, 11 A, 12 & 12 A, APSEZ, Atchutapuram & Rambilli (M), Anakapalli District and engaged in manufacturing of bulk drug and intermediates.

**WHEREAS** the Board vide ref. 1<sup>st</sup> cited issued CTO & HWA to your industry vide order dt. 25.05.2024 valid up to 31.12.2028, subjected to compliance to the conditions.

**WHEREAS** it was reported vide ref. 2<sup>nd</sup> cited, that fire accident took place at about 02:15 PM on 21.08.2024 in the premises of M/s. Escientia Advanced Sciences Pvt., Ltd., located at Plot No.11, 11 A, 12 & 12 A, APSEZ, Atchutapuram & Rambilli (M), Anakapalli District in production block.

**WHEREAS** the Board Officials inspected your industry and monitored Air and Water quality in the surroundings due to the fire accident at the industry and reported the following –

1. The industry is having one production block with Suit – 1, 2, 3 divisions for manufacturing, QA, QC and Process Development lab.
2. The Process development Lab is established in ground floor.
3. Upon the preliminary enquiry, it came to knew that Methyl Tertiary Butyl Ether (MTBE) was leaked from Suit 1 at 1st floor and drained into technical area, electrical panel section and lead to explosion.
4. Immediately firefighting was taken up by neighboring industries i.e., M/s Laurus Laboratories, M/s Pidilite Industries, M/s Cohance Life Sciences, M/s Asian Paints, Abhijeet Ferro Tech, APSDRS, NDRM Team with their firefighting equipment to control the fire. The fire was stopped around 3.30 PM
5. Lot of smoke was emanated from the block till 07.00 PM.
6. During the incident, initially 17 persons were deceased and 15 injured persons were shifted to the Hospital for treatment.
7. The Board officials started monitoring of VOCs in 4 directions continuously to ascertain the dispersion of process emissions from the accident site to monitor the volatile organic compound.

8. Undertaken VOC monitoring outside the accident site with handy VOC meter from 03:00 PM and the monitored values are as follows -

VOC Monitoring data on 21.08.2024

S. No	LOCATION Time	Range of VOC Values monitored (in ppm)							
		3:00 PM	4:00 PM	5:00PM	6:00 PM	7:00 PM	8:00 PM	9:00 PM	10.30 PM to 2.0 AM
1.	Security Back Gate (East side)	BDL	BDL	0.1-0.2	BDL	BDL	BDL	BDL	BDL
2.	Security Main gate (North side)	0.3-0.6	0.4-0.5	0.4-0.5	0.3-0.4	0.3-0.4	0.2-0.4	0.1-0.2	0.1 - 0.2
3.	Drum storage area(West side)	0.1-0.2	0.1-0.2	0.1-0.2	BDL	BDL	BDL	BDL	BDL
4.	Laurus Unit- 2 Road(South side)	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
5.	Near Production Block	0.3-0.8	0.4-0.6	0.3-0.6	0.2-0.4	0.2-0.3	0.1-0.2	0.1-0.2	0.1 – 0.3

Note: BDL – Below detectable Limit (<0.1 ppm)

9. It was observed that the maximum VOC concentration was found 0.8 ppm near production block during monitoring at 03.00 PM. The VOC were also monitored outside the factory premises and the VOC concentrations are found in the range of 0.3 ppm to 0.8 ppm.

10. Further, it was observed that the industry drained out the waste water generated from firefighting into a unlined sump, which is potential to cause contamination of ground water.

11. During the monitoring, samples of contaminated firefighting water at front side of the production block and back side of the production block were collected. The monitoring details are as follows –

S.No.	Parameter	Sample of contaminated firefighting water at front side of the production block	Sample of contaminated firefighting water at back side of the production block
1.	pH	6.36	9.04
2.	Total Suspended Solids	127 mg/lit	118 mg/lit
3.	Total Dissolved Solids	1428 mg/lit	1352 mg/lit
4.	Chemicals Oxygen Demand	336 mg/lit	320 mg/lit

12. From the above, it is observed that the incident of fire accident resulted in discharge of air and water pollutants into the surroundings.

13. The debris and leftover mass in the reactors and other wastes generated due to the fire accident are yet to be cleared and disposed safely as per norms.

14. The operational status of the industry is not suitable to continue further operations of the industry and Potential to cause pollution problems into surrounding environment.

**WHEREAS** the Board is under the obligation to stop further discharges of air and water pollutants into surrounding environment, since operational status of your industry is not suitable to continue further operations and potential to cause pollution problems.

In view of the above, the Board with the powers vested under section 32 of the Water (Prevention & Control of Pollution) Act, 1974 and section 23 (2) of the Air (Prevention & Control of Pollution) Act, 1981 and amendments thereof, hereby issues **STOP PRODUCTION ORDER** to M/s. Escientia Advanced Sciences Pvt., Ltd., located at APSEZ, Atchutapuram & Rambilli (M), Anakapalli District to immediately stop further operation of the industry in the interest of safeguarding public health and environment protection.

You are hereby directed to note that, should you violate this order and operate the unit, you will be 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, besides imposing Environmental Compensation.

***This Order comes into effect from today i.e., 23/08/2024.***

**B Sreedhar Ias  
MEMBER SECRETARY**

**To  
The Occupier,  
M/s. Escientia Advanced Sciences Pvt., Ltd.,  
Plot No.11, 11 A, 12 & 12 A, APSEZ,  
Atchutapuram & Rambilli (M),  
Anakapalli District.**

**Copy to:**

1. The Collector & District Magistrate, Anakapalli District for information.
2. The CEE, APPCB, Head Office for information.
3. The JCEE, ZO, Visakhapatnam for information and necessary action.
4. The EE, RO, Visakhapatnam for information and necessary action.

**ANDHRA PRADESH POLLUTION CONTROL BOARD**  
**REGIONAL OFFICE, VISAKHAPATNAM**

*D.No.39-33-20/4/1, Madhavadhara Vuda Colony, Visakhapatnam - 530018*

---

**Lr. No.1917/APPCB/RO-VSP/2024-**

**Date:28.08.2024**

**To**  
**The Collector & District Magistrate,**  
**Anakapalli District.**

**Madam,**

**Sub:** APPCB, RO, VSP – Incident occurred in M/s. Escientia Advanced Sciences Pvt., Ltd., Plot No.11, 11 A, 12 & 12 A, APSEZ, Atchutapuram & Rambilli (M), Anakapalli District on 21.08.2024 – Report submitted – Reg.

**Ref:** 1. Consent Order No: APPCB/VSP/VSP/418/HO/CTO/2024 dated: 25.05.2024.  
2. Incident occurred on 21.08.2024.  
3. T.O. preliminary report dated 22.08.2024.  
4. T.O.Lr. No.1917/APPCB/RO-VSP/2024 dated:23.08.2024.  
5. Proceedings of the Collector & District Magistrate, Anakapalli District Rc.No.1101/2024/Magl.cl, dated 27.08.2024.  
6. Inspection of APPCB Officials on 27.08.2024.

\*\*\*

It is to submit that an incident took place at about 02:15 PM on 21.08.2024 in M/s. Escientia Advanced Sciences Pvt., Ltd., Plot No.11, 11 A, 12 & 12 A, APSEZ, Atchutapuram & Rambilli (M), Anakapalli District. The industry has obtained CTO of the Board vide order dated 25.05.2024 to manufacture bulk drugs with a maximum production capacity of 2600 Kg/Day which is valid up to 31.12.2028. Copy of the CTO Order dated 25.05.2024 is herewith submitted as **Annexure-I**.

The APPCB Regional Office, Visakhapatnam Officials inspected the industry on 21.08.2024 and submitted preliminary report to the Head Office on 22.08.2024. Copy of the preliminary report dated 22.08.2024 is herewith submitted as **Annexure-II**. Further, the unit was again inspected by Chief Environmental Engineer along with Joint Chief Environmental Engineer, ZO, VSP, Senior Environmental Engineer(SEE), ZO, VSP, Senior Environmental Engineer EAC Head office, Senior Environmental Scientist, ZO, Lab and Environmental Engineer, RO, VSP on 22.08.2024 and submitted report to the Head Office, Vijayawada on 23.08.2024 for taking further necessary action. Copy of the report dated 23.08.2024 is herewith submitted as **Annexure-III**.

The APPCB, Vijayawada has issued stop production order to the industry on 23.08.2024 to stop further discharges of air and water pollutants into surrounding environment, since operational status of your industry is not suitable to continue further operations and potential to cause pollution problems. Copy of the stop production order dated 23.08.2024 is herewith submitted as **Annexure-IV**.

The Collector & District Magistrate, Anakapalli District vide proceeding dated 27.08.2024 constituted the committee to examine the safe disposal of the solvents in the premises and post corrective measures and directed to submit the report by 28.08.2024.

As per the proceedings of the Collector & District Magistrate, the APPCB officials inspected the industry on 27.08.2024 along with other concerned officials. During the inspection the following are observed:

1. HDPE drums containing solvents, effluents were observed near to the reactors which are in damaged condition and some more drums exit inside the production block.
2. The debris and leftover mass in the reactors and other contaminated wastes generated due to the fire accident were observed.
3. About 50 KL HTDS of wastewater generated during firefighting is yet to dispose.
4. At the time of inspection, the representative of the industry informed that they will determine the quantity of solid waste generated during the accident and mentioned that they would evaluate the remaining solvents and chemicals to see if they could be reused in the future.

**During the inspection, the industry was informed to strictly comply with the following:**

1. The industry has to strictly follow the safety operating procedure during disposal, handling & transportation of hazardous waste to TSDF and shall submit the details along with manifest copies to APPCB.
2. The industry shall submit the quantity of solvents, chemicals, contaminated solid waste generated and instructed to dispose to TSDF duly following safety measures during disposal and transportation of hazardous waste.
3. The industry shall dispose the effluent generated during firefighting to CETP of AETL for further treatment and safe disposal and the quantity of effluent disposed shall submit to APPCB along with manifests.
4. The industry shall take all precautionary measures to avoid air & water contamination to the surroundings.
5. The industry shall follow the directions issued by the other statutory bodies.

Submitted for favour of information and taking necessary action.

Yours faithfully,  
PAIDI VENKATA MUKUNDA RAO  
MUKUNDA RAO  
ENVIRONMENTAL ENGINEER

Digitally signed by PAIDI VENKATA MUKUNDA RAO  
Date: 2024.08.28 16:18:58 +05'30'

Rc.No.1101/2024/Magl.C1, dt: 03 .09.2024.

Collector's Office,  
Anakapalli.

From  
Smt. Vijaya Krishnan, I.A.S.,  
Collector & District Magistrate,  
Anakapalli.

To  
District Roads & buildings Officer,  
Anakapalli.

Dy.Chief Inspector of factories,  
Vizianagaram.

General Manager, DIC, Anakapalli.

District Disaster Response & Fire Officer,  
Anakapalli.

Dy.Chief Inspector of Boilers, Anakapalli.

District Drug Control Officer, Anakapalli.

Executive Engineer & Nodal Officer,  
APEPDCL, Anakapalli.

Environmental Engineer, Regional Office,  
AP Pollution Control Board,  
Visakhapatnam.

District In-Charge, Labour Department,  
Anakapalli.

Dy.Chief Electrical Inspector,  
Visakhapatnam.

Sir/Madam,

Sub:- Industries – Anakapalli District – Committee to examine safe disposal of the Solvents in the premises and post corrective measures – Committee was formed with concerned officials – Joint Comprehensive report submitted – Authorized Signatory for M/s.Escientia Advanced Sciences Pvt.Ltd., has submitted SOP and Undertaking for shifting of the solvents and other material from the damaged building – Specific recommendations called for – Reg.

Ref:- 1.Detailed Enquiry Report submitted by the Committee on 30.08.2024.  
2.Undertaking given by the Authorized Signatory for M/s.Escientia Advanced Sciences Private Limited, Plot Nos.11, 11A, 12 & 12A, APSEZ, Atchutapuram, Anakapalli district.  
3.Standard Operating Procedure (SOP) of M/s Escientia Advanced Sciences Private Limited, Plot Nos.11, 11A, 12 & 12A, APSEZ, Atchutapuram, Anakapalli district.  
4.Letter addressed to the Dy.Chief Inspector of factories, Vizianagaram from the Authorized Signatory, M/s. Escientia Advanced Sciences Private Limited, Plot Nos.11, 11A, 12 & 12A, APSEZ, Atchutapuram, Anakapalli district.  
5. Note orders of the Collector & District Magistrate, Anakapalli, dtd:03.09.2024.

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Your attention is invited to the references cited.

It is to inform that in the ref.2<sup>nd</sup> & 3<sup>rd</sup> cited, M/s Escientia Advanced Sciences Pvt.Ltd. has given their Undertaking and SOP for shifting of the Solvents and other materials from the production block of the unit.

In this connection, it is requested to go through the Undertaking and SOPs submitted by the Unit and submit specific recommendations jointly for shifting of Solvents and other materials from the Production Block of the said Unit. Copy of Undertaking along with SOP submitted by the Unit is herewith enclosed.

Encl: As above

Yours faithfully

*B. Jayaram*  
3/9/2024

District Revenue Officer  
For Collector &  
District Magistrate  
Anakapalli

*de*  
03/9/24

*3/9*  
supdt magl.

**ANDHRA PRADESH POLLUTION CONTROL BOARD**  
**REGIONAL OFFICE, VISAKHAPATNAM**

*D.No.39-33-20/4/1, Madhavadhara Vuda Colony, Visakhapatnam – 530018*

**Lr. No.1917/APPCB/RO-VSP/2024-**

**Date:06.09.2024**

**To**  
**The Collector & District Magistrate,**  
**Anakapalli District.**

**Madam,**

**Sub:** APPCB, RO, VSP – Incident occurred in M/s. Escientia Advanced Sciences Pvt., Ltd., Plot No.11, 11 A, 12 & 12 A, APSEZ, Atchutapuram & Rambilli (M), Anakapalli District on 21.08.2024 – Report submitted – Reg.

**Ref:** 1. Consent Order No: APPCB/VSP/VSP/418/HO/CTO/2024 dated: 25.05.2024.  
 2. Incident occurred on 21.08.2024.  
 3. T.O. preliminary report dated 22.08.2024.  
 4. T.O.Lr. No.1917/APPCB/RO-VSP/2024 dated:23.08.2024.  
 5. Proceedings of the Collector & District Magistrate, Anakapalli District Rc.No.1101/2024/Magl.cl, dated 27.08.2024.  
 6. Inspection of APPCB Officials on 04.09.2024 & 05.09.2024.

\*\*\*

It is to submit that the Collector & District Magistrate, Anakapalli District vide proceeding dated 27.08.2024 constituted a committee to examine the safe disposal of the solvents in the premises and post corrective measures and directed to submit the report by 28.08.2024. The Joint Committee inspected on 27.08.2024 and submitted the report duly recommending the following:

1. The industry has to strictly follow the safety operating procedure during disposal, handling & transportation of hazardous waste to TSDF and shall submit the details along with manifest copies to APPCB.
2. The industry shall submit the quantity of solvents, chemicals, contaminated solid waste generated and instructed to dispose to TSDF duly following safety measures during disposal and transportation of hazardous waste.
3. The industry shall dispose the effluent generated during firefighting to CETP of AETL for further treatment and safe disposal and the quantity of effluent disposed shall submit to APPCB along with manifests.
4. The industry shall take all precautionary measures to avoid air & water contamination to the surroundings.
5. The industry shall follow the directions issued by the other statutory bodies.

Now, the industry was again inspected on 04.09.2024 & 05.09.2024 and observed that the following:

1. The industry has quantified the product mass exists in the reactors.
2. As per the details, 7 reactors are having product mass and which is to be shifted into drums so as to dispose the same to TSDF for further treatment.

3. Solvent drums stored in various floors are to be shifted to common area duly indicating separate code system so as to dispose the same to TSDF for further treatment and scientific disposal.
4. The industry has collected wastewater generated during firefighting into LTDS collection tank and yet to dispose to the CETP for further treatment & disposal.

**In view of the above, the industry may be directed to commence the clearance works duly complying with the following:**

1. The industry has to strictly follow the safety operating procedure during disposal, handling & transportation of hazardous waste to TSDF.
2. The industry shall store the drums in separate area on concrete platform with dedicated coding before disposal to TSDF.
3. The industry shall dispose the quantity of product mass, solvents, chemicals, contaminated solid waste generated to TSDF through APEMCL.
4. The industry shall dispose the contaminated wastewater stored in effluent tanks to the CETP, AETL for further treatment.

Submitted for favour of information and taking necessary action.

Yours faithfully,

PAIDI VENKATA  
MUKUNDA RAO

Digitally signed by PAIDI  
VENKATA MUKUNDA RAO  
Date: 2024.09.06 13:05:47 +05'30'

**ENVIRONMENTAL ENGINEER**

**SPECIFIC RECOMMENDATIONS BY THE JOINT COMMITTEE FOR SHIFTING OF THE SOLVENTS AND OTHER MATERIALS FROM THE DAMAGED BUILDING IN M/S. ESCIENTIA ADVANCED SCIENCIES (P) LTD, APSEZ, ATCHUTAPURAM (M) ANAKAPALLI DISTRICT.**

As per the instructions of The Collector & District Magistrate, Anakapalli vide Rc.No.1101/2024/Magl.C1, dt: 03-09-2024 the following committee members inspected the M/s Escientia advanced sciences Private Limited ,Plot No 11,11A 12 ,12A APSEZ ,Atchutapuram, Anakapalli on 05-09-2024.

1. Executive Engineer , District Roads & Buildings Officer, Anakapalli:
2. Deputy Chief Inspector of Factories, Visakhapatnam.
3. Assistant Director, DIC, Anakapalli,
4. District Disaster Response & Fire Officer, Anakapalli.
5. Deputy chief Inspector of Boilers, Anakapalli.
6. District Drug Control Officer, Anakapalli.
7. Asst. Environmental Engineer, APPCB, Visakhapatnam
8. Electrical Inspector, Visakhapatnam.
9. EE, APEPDCL, Anakapalli.
10. District In-charge, Labour Dept., Anakapalli

**Observations from EE, Roads & Buildings: -**

The unit ready with all equipment for shifting of solvents and material from 2<sup>nd</sup> & 3<sup>rd</sup> floors, at present no scope to enter into ground floor to assess strength of structure in depth by conducting non-destructive tests by an NABL accredited laboratory under close supervision of an expert or a senior professor from a recognized university.

**Observations of Dy. Chief Inspector of Factories :**

- 1). SOPs for the following activities have been prepared by the management
  - i) Handling of hazardous, toxic and flammable substances
  - ii) Safe unloading, storage and disposal FCP 3 reaction mass from reactor
  - iii) Safe unloading, storage and disposal RGP reaction mass from reactor
  - iv) Safe unloading, storage and disposal SPH2 reaction mass from reactor
  - v) Safe unloading, storage and disposal RGP 2 reaction mass from reactor
  - vi) Procedure for MTBE unloading from vacuum receiver
  - vii) Operation and cleaning of vacuum tray dryer (material unloading from VTD covered in this SOP)
  - viii) Operation and cleaning of top discharge centrifuge (material unloading from Centrifuge covered in this SOP)
  - ix) Debris removal from API building
- 2). MSDS's for the following materials have been prepared by the management
  - i) Methyl Tert-butyl Ether (MTBE) ; ii) SPH2 Reaction mass ; iii) RGP2 Reaction mass
  - iv) FCP3 Reaction mass ; v) RGP Reaction mass

- 3). Running batch details sheet prepared by covering the below listed points by the management
  - i) Product, stage and batch number ; ii) Condition during incident ; iii) Total volume, solvent names and quantity details ; iv) Action plan ; v) State of material
4. Equipment available for the shifting of the material
  - i) MS Cage with safety belts is made available ; ii) Hired crane is available outside the factory;
  - iii) Trained and experienced employees are readily available ; iv) Supervisory higher authorities are available ; v) PPE like safety shoe, helmet, respiratory masks, SCBA, fire retarded suits are available; vi) Spill mopping kits, mobile eye wash unit, fire extinguishers ; vii) Static dissipation measures like earth rods, wrist bands are provided
5. The management is advised to ensure the provision of all the safety precautions during the shifting of the material from the production block.

**Observations from Andhra Pradesh State Disaster Response and Fire Services Department:-**

The management ready with all equipment for shifting of material from production block and Fire department will arrange Fire Tender with Crew Standby at the above premises during the shifting of materials.

**Observations from the Boiler Department: -**

Both the Boilers and its connected Steam Pipe line is not effected due to the above accident. For this accident Boilers are no way connected.

**Observations from Drug Inspector: -**

The firm has completed all necessary arrangements and procedures for shifting of the solvents and materials from production block.

**Observations from EE, APEPDCL:**

Power supply restored other than production block on 05-09-2024.

**Observations of EE, A.P.Pollution Control Board:**

Now, the industry was again inspected on 04.09.2024 & 05.09.2024 and observed that the following:

1. The industry has quantified the product mass exists in the reactors.
2. As per the details, 7 reactors are having product mass and which is to be shifted into drums so as to dispose the same to TSDF for further treatment.
3. Solvent drums stored in various floors are to be shifted to common area duly indicating separate code system so as to dispose the same to TSDF for further treatment and scientific disposal.
4. The industry has collected wastewater generated during firefighting into LTDS collection tank and yet to dispose to the CETP for further treatment & disposal.

In view of the above, the industry may be directed to commence the clearance works duly complying with the following:

1. The industry has to strictly follow the safety operating procedure during disposal, handling & transportation of hazardous waste to TSDF.
2. The industry shall store the drums in separate area on concrete platform with dedicated coding before disposal to TSDF.
3. The industry shall dispose the quantity of product mass, solvents, chemicals, contaminated solid waste generated to TSDF through APEMCL.
4. The industry shall dispose the contaminated wastewater stored in effluent tanks to the CETP, AETL for further treatment.


**Observations from Labour Department: -**


No remarks on SOP for shifting of materials from Labour Department.


**Observations of Dy. Chief Electrical Inspector:**


The management of firm completed all the necessary arrangements and procedures as per the SOP issued by the Electrical inspector for shifting of the solvents and materials from the production block.


The committee opined that the management of firm completed all the necessary arrangements for shifting of solvents and materials from the production block.


  
Executive Engineer,  
R&B, Anakapalli.


  
Deputy Chief Inspector of Factories,  
Visakhapatnam.


  
General Manager DIC,  
Anakapalli.


  
District Fire Officer,  
Anakapalli.

  
Inspector of Boilers,  
Anakapalli.

  
District Drug Control Officer,  
Anakapalli.

  
Executive Engineer & Nodal Officer, APEPDCL  
Anakapalli.

  
Environmental Engineer, APPCB  
Visakhapatnam

  
District In-charge Labour Dept.  
Anakapalli.

  
Dy. Chief Electrical Inspector,  
Visakhapatnam

Rc.No.1101/2024/Magl.C1, dt: .09.2024.

Collector's Office,  
Anakapalli.

**PROCEEDINGS OF THE COLLECTOR & DISTRICT MAGISTRATE,  
ANAKAPALLI.**

**PRESENT: SMT. VIJAYA KRISHNAN, I.A.S.**

\*\*\*

Sub:- Industries – Anakapalli District –Committee to examine safe disposal of the Solvents in the premises and post corrective measures – Committee is formed with concerned officials – Committee has submitted their recommendations – Orders – Issued.

Read:- 1.Rc.No.01/Camp/VSP/dtd:24.08.2024 of the Director General, A.P.Fire Services, Vijayawada.  
2.This office Progs.Rc.No.1101/2024/Magl.C1, dtd:24.08.2024.  
3. This office Progs.Rc.No.1101/2024/Magl.C1, dtd:27.08.2024.  
4.Undertaking given by the Management of M/s Escientia Advanced Sciences Pvt.Ltd., APSEZ, Atchutapuram., dt:02.09.2024.  
5.This Office Lr.Rc.No.447/2024/SA-1, dt:02.09.2024.  
6. Comprehensive report of the Joint Committee, dtd:06.09.2024.

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**ORDER:**

Whereas, as per the orders issued in the ref.1<sup>st</sup> read above, a committee has been formed to examine the safe disposal of solvents in M/s Escientia Advanced Sciences Private Limited Company premises, AP SEZ, Atchutapuram in Anakapalli District and necessary post corrective measures.

The committee has been directed to conduct joint inspection at M/s Escientia Advanced Sciences Private Limited Company premises, AP SEZ, Atchutapuram in Anakapalli District and verify the safety aspects and submit detailed comprehensive report alongwith their remarks/recommendations.

In this connection, in the reference 6<sup>th</sup> read above, the Committee after post inspection has reported that the firm has completed all the necessary arrangements for shifting of solvents and materials from the production block.

In pursuance of the request of the firm and as per the recommendations of the Joint Committee, permission is hereby accorded to shift all the solvents and other materials from the production block under the supervision of the Joint Committee members within one week from today as per the SOPs and Undertaking submitted by the management of M/s. Escientia Advanced Sciences Private Limited, APSEZ, Atchutapuram.

  
Collector & District Magistrate  
Anakapalli

To  
The Management of M/s. Escientia Advanced Sciences Private Limited, APSEZ,  
Atchutapuram.

10/9  
2024

**Detailed enquiry report in to the Fatal accident &Fire  
incident occurred in M/S Escientia Advanced Sciences  
Private Limited, Plot No: 11,11A,12 & 12 , APSEZ ,  
Atchutapuram, AnakapalliDt, on 21-08- 2024 at about  
02:20PM.**

Endt NO:A/388310/2024, dt: 12-09-2024

**PART-I: Abstract**

Type of Accident		Explosion
Nature of Accident		Fire
Date & Time of Accident		On 21-08-2024 in General Shift at about 2:20 PM
Source of Information	Telephonic	Telephonic call from the management of Atchyuta Laboratories Pvt Ltd., Atchutapuram at about 03:05 PM on 21-08-2024.
	Media	--
	Form No. 18	Received in this office on 24-08-2024
	Complaint	--
Name & Address of the factory		M/S Escientia Advanced Sciences Pvt Ltd., Plot no: 11,11A,12 & 12 , APSEZ , Atchutapuram, AnakapalliDt
Manufacturing Process		Bulk Drug Intermediates ,
Name of the Occupier		Sri Kiran Reddy Pendri, Age 36 Years, S/o Sri. P. Yadagiri Reddy
Name of the Manager		Sri Uppalapati. AppalaNarasimhaRaju, Age 52 years, S/o Sri Uppalapati .SatyanarayanaRaju
Deceased & Injured		No:1
	Name	List enclosed separately Total 17 deceased workers and 39 injured workers.
	Designation	
	Age	
	Employment	
	Wage	
	Native of	
ESI		
Date of Investigation		on 21-08-2024 by Joint Chief Inspector of Factories, Visakhapatnam along with Deputy Chief Inspector of Factories, Vizianagaram & Inspector of Factories,

		Visakhapatnam-II and continued further enquiry by Joint Chief Inspector of Factories, Visakhapatnam along with Deputy Chief Inspector of Factories, Vizianagaram& Inspector of Factories, Visakhapatnam-II on 22-08-2024, and again by the Deputy Chief Inspector of Factories, Vizianagaram& Inspector of Factories, Visakhapatnam-II on 24-08-2024 at about 03:00 PM and continued further enquiry by JCIF VSP on 28-08-2024.	
Investigated By	Name	Sri. J.SivaSankara Reddy	Sri G.V.V.S.Narayana, Sri. P. ChinnaRao
	Designation	Joint Chief Inspector of Factories, Visakhapatnam	Deputy Chief Inspector of Factories, Vijayanagaram. & Inspector of Factories, Visakhapatnam-II Circle.
Statements recorded	Name	1) Sri KondalaNarayanaRao	
	Designation	Assistant Manager, PD	
	Name	2) Sri P.Jagadesh	
	Designation	Production Manager	
	Name	3) Sri K.ShanmukaRaju	
	Designation	Senior Executive	
Ameliorative Measures	ESI	--	
	Ex-gratia	--list enclosed--	
	Medical Exp	--	
	Job	--	
Causes of accident	Root Cause	Incident	<ol style="list-style-type: none"> <li>1. Failed to provide Rotometersto the receivers for to control (Regulate) nitrogen pressure.</li> <li>2. Failed to test the pipe lines carrying the Hazardous chemicals like MTBE solvent with the competent person approved by the Director of Factories, A.P, Vijayawada once in two years to find out the defects in the pipe lines and joints.</li> <li>3. Failed to examine all the parts of the equipment and machinery, failure which can rise to emergency shall be got identified and examined by competent person once in a</li> </ol>

			<p>month, a record shall be maintained.</p> <p>4. Failed to keep the electrical MCC panel board in a separate room which was installed on the ground floor just below the solvent transpiring pipe line joints.</p> <p>5. Failed to close the cable opening cut on the first floor after installation of the solvent transfer pipe lines and electric cables.</p> <p>6. Failed to follow preventive maintenance schedule of the pipe lines as per the SOP and also failed to adopt and appoint cross check mechanism with the senior officers in the factory.</p> <p>7. Failed to declare emergency and evacuate all the workers working in the entire production block immediately after noticing the leak of highly flammable solvent MTBE, to avoid human loss. ( 12 minutes time from 2.08 PM to 2.20 PM)</p> <p>8. Failed to provide detectors with alarms in all the floors of the production block for early detection of the solvent vapours.</p>				
		Injury	List Enclosed (Total 39 workers)				
		Supplementary, If any					
	Action Taken	Issued Prohibitory order and Show Cause Notice along with Inspection Orders to both the Occupier and Manager of the factory by the Deputy Chief Inspector of Factories, Vijayanagaram.					
	Enclosures (Copies Only)	Form no -18	✓	Photos	✓	FIR	✓
PM Report		--	Statements	✓	Sketch	--	
SCN		--	I.Os	--	P. Os	✓	

## PART-II

### 1) INFORMATION

I have received a telephonic call from the management of M/S Atchyuta Laboratories pvtLtd., Atchutapuram at about 03:05 PM on 21-08-2024 ,informing that a blast occurred in Escientia Advanced Sciences Pvt Ltd., Atchutapuram in which 15 workers were affected and are shifting to the hospitals. Immediately I have informed the same to the Deputy Chief Inspector of Factories, Vizianagaram, the Deputy Chief Inspector of Factories, Vizianagaram stated that they have already received message from Zonal Manager APIIC, Atchutapuram and are rushing to the factory along with Inspector of Factories, Visakhapatnam-II, both Deputy chief Inspector of Factories, Vizianagaram& Inspector of Factories, Visakhapatnam-II went to parawada for to attend a meeting in Parawadacalled by the Collector and District Magistrate Anakapalli District . The Deputy Chief Inspector of Factories, Vizianagaram& Inspector of Factories, Visakhapatnam-II reached to the spot at about 03:15 PM mean while they have contacted nearby factories for fire tenders as well as ambulance vans. After receiving the information I have rushed to the factory from Visakhapatnam and reached at 04.30 PM. When I reached to the spot, fire was controlled and a little bit smoke is emanating from the floors due to burning of electrical cables and other materials. The Fire department officials are extinguishing the fire, the other government departments like revenue, Police, Factories, PollutionControl Board, Industries, Labour, APIIC and drug departments are helping in emergency operations. The Collector and District Magistrate AnakapalliDistrict and Superintendent of Police AnakapalliDistrict have monitored the emergency operations from the time of incident to 5.30 AM on 22-08-2024.

### 2) ABOUT THE FACTORY

M/s. Escientia Advanced Sciences Private Limited, Plot No: 11,11A,12 & 12, APSEZ, Atchutapuram, AnakapalliDt, is an existing MAH-B category factory i.e. 2m(i) factory with R. No. 104374, the manufacturing process in the factory is manufacturing of Bulk Drug Intermediates. The license limits are 2438 HP electrical power and to employee maximum of 500 workers. Sri Kiran Reddy Pendri, age 36 Years, S/o P. Sri. Yadagiri Reddy is the Occupier of the factory (Cell number is 9849009666) and Sri Uppalapati. Appala NarasimhaRaju, Age 52 years, S/o Sri

Uppalapati. Satyanarayana Rajuis the manager of the factory (Cell number is 9849002336). The plans of the factory were approved vide Lr no: D.Dis No: A1/VSP-II/03/2018, dt: 02-01-2018 by the Director of Factories, A.P, Vijayawada and further revised plans were approved for installation of additional machinery and Construction of buildings by the Director of Factories, A.P, Vijayawada Vide Lr no: LAE05-11021(35)/24/2024-A SEC-DOF, dt:13-03-2024. This factory was registered under factories Act 1948 on 02-02-2018 by the then Deputy chief inspector of Factories Visakhapatnam and is working regularly up to the date of accident.

### 3) INCIDENT

In this factory there was only one production block consisting of 4 suits with 3 floors, in the 4<sup>th</sup> suit QA, QC, & Pilot plants are existing and in 1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup> floors in all suits reactors are installed. On 21-08-2024 in 2<sup>nd</sup> floor in suit-II while performing FCP-3 process, Methyl tert butyl Ether (MTBE) solvent is under distillation in reactor R 2220, which is of capacity 3KL, the distilled solvent is collecting in vacuum receiver VR-2220, under vacuum which is of capacity 0.5 KL. The receiver is located at the back side of the reactor (R-2220). The distilled solvent which was collecting from the receiver in second floor, and was pumping to the separate storage tank (MLST-340) which was located in the ground floor west side outside of the production block, which is of capacity 10 KL.

During transferring of the distillate from vacuum receiver to the storage tank through one and half inch SS pipe line by applying nitrogen pressure there was a leak of solvent (MTBE) was observed in the 1<sup>st</sup> floor technical area in suit-II, near the flange joint, the flange joint is 3 m away from the 1<sup>st</sup> floor (1<sup>st</sup> floor flooring to leakage flange height) adjoining south side wall of the production block. The leaked solvent which was leaking from the flange joint was fell on the 1<sup>st</sup> floor and on electrical panel board directly which was located on the ground floor, meanwhile MTBE solvent vapours are sucked into the entire air handling unit (AHU) duct system in first floor, and ground floor, the AHU was installed on the ground floor. When the leaked solvent fell on the electrical panel board either friction while falling solvent on the electrical panel board or due to heat on the electrical panel board, or due to static spark was generated and electrical panel board blasted with big sound, simultaneously the solvent vapours which was accumulated in the duct in the first floor and ground floor also caught the spark and exploded with big sound, due to

vapour cloud formed in the ducts in ground floor and in first floor, in this blast the brick walls were collapsed and the false ceiling was collapsed and fell down on the ground floor, due to this explosion some of the workers were trapped in the fire, brick walls , smoke, and 17 workers were died, and 39 workers were injured due to fire, broken of window glasses, smoke and breaking of brick walls and were admitted in different hospitals i.e., 1) Usha Prime Hospital, Anakapalli, 2) Pawan Sai Hospital, Vadlapudi, Visakhapatnam. 3) KIMS Icon Hospital, Sheela Nagar, Visakhapatnam. 4) Medicovert Hospital, Venkojipalem, Visakhapatnam, and 5) Arka hospital Gajuwaka, Visakhapatnam, and are undergoing treatment.

**Details of Deceased Workers:**

S. No	Employee Name	Date of Birth	Age	Fathers Name	Department	Designation	Qualification	Gross Salary	Date Of Joining in to service	ESIC Number	PF Number
1	RAMI REDDY NEELAPU	20-08-1975	49	Narasimha Reddy	R&D-(PD Lab)	Associate General Manager/ Associate Director	Ph.D.,	2,02,458	04-07-2018	NA	10003672528
2	PRASANTH HANSA	22-08-1990	34	Satyanarayana,	Production	Senior executive	B.Sc.,	39,819	05-11-2018	NA	1000159873924
3	NARAYANA RAO MAHANTI	25-06-1990	34	Satyam,	R&D-(PD Lab)	Assistant manager/ Team leader	M.Sc.,	62,023	28-08-2020	NA	100585664834
4	GANESH KUMAR KOPPARTI	20-08-1991	33	Satyanarayana	Production	Assistant manager/ Team leader	M.Sc.,	65,290	26-05-2021	NA	1001021628
5	HARIKA CHALLAPALLI	14-12-2002	21	Eswararao Late	R&D-(PD Lab)	Trainee Engineer	B.TECH.	19,033	04-09-2023	7011449272	101987640522
6	RAJASEKHAR PAIDI	7-08-2001	23	Dharamarao	Process Engineering	Trainee Process Engineer	B.TECH.	15,008	15-07-2024	NA	102067416466
7	SATISH MARISETTI	3-12-1993	30	Srinu	Production	Senior Executrive	B.Sc.,	68,227	24-07-2024	NA	100737265225
8	NAGABABU MONDI	20-02-1988	36	Satyanarayana	Production	Asst Manager	B.Sc.,	60,583	04-10-2023	NA	100780051691
9	NAGESWARA RAMACHANDRAR	2-12-1977	46	Satyam	Production	Assistant manager/ Team leader	M.Sc.,	65,290	26-05-2021	NA	100102162898
10	SANYASI NAIDU VEGI	1-01-1971	53	Pydithalli,	Engineer	HK Boy	8 <sup>th</sup> class	13,308	15-07-2019	7010704974	101509600623

11	CHINNARAOY ALLABILLI	3-10- 1990	33	Durgarao.	Engineer	painter	Inter	23,500	13-11-2018	701 049 347 4	101471 423308
12	PARDASARADI JAWADI	23-03- 1997	27	Koteswararao	Engineer	Fitter	ITI	23,000	21-09- 2022	NA	101180 967963
13	MOHAN DURGA PRASAD PUDI	29-08- 2005	19	Suryarao	PD Lab	HK boy	ITI	13,308	08-06-2024	701 158 867 2	102081 740295
14	ANANDA RAO BAMMIDI	1-02- 1988	36	B.Pothayya	Productio n	Asst Manager	B.Sc.,	64,369	21-10-2023	NA	100099 199636
15	SURENDRAM ARNI	24-12- 1987	36	Krishna Rao,	Productio n	Asst Manager/ Team leader	B.Sc.,	69,613	08-12-2016	NA	100629 058939
16	VENKATA SAI PUSARLA	5-07- 1997	27	P.M.V.Nagaapp alaSetti	Productio n	Senior Executive	B.VOC	41,376	07-10- 2020	NA	100643 072830
17	CHIRANJEEVIJ AVVADI	4-01- 2000	24	Satyanarayana,	Engineeri ng	Fitter	ITI	17,500	20-11- 2023	701 121 264 4	101621 573413

Sr.No	EmpNo	Name	Designation	Department	Injured Status	Hospital Name	Discharged on	ESIC/MEDICLAIM	ESIC Number	Shift	Contact Number	Compensation paid Rs in lakhs
1	E0269	GANGADHARTAM ARANA	Junior Chemist-Analytical	Quality Control	Injured	Pawan Sai-Vadlapudi	29-08-2024	ESIC	7010955761	AShift	9502080412	25,00,000
2	E0528	SASHIKANTHBANDI	Executive	Quality Control	Injured	Pawan Sai-Vadlapudi	26-08-2024	Medicclaim		BShift	8096765757	25,00,000
3	E0284	SAIKUMARGUDISA	Executive	Production	Injured	Pawan Sai-Vadlapudi	24-08-2024	Medicclaim		GEN	9491798690	25,00,000
4	E0014	JAGADEESH PONNADA	Manager/Group leader	Production	Injured	Pawan Sai-Vadlapudi	31-08-2024	Medicclaim		GEN	9849000682	50,00,000
5	E0109	SRINIVASARAO PANGA	Deputy Manager/ Sr Team leader	Production	Injured	Pawan Sai-Vadlapudi	31-08-2024	Medicclaim		GEN	9676619970	50,00,000
6	E0433	PRAKASH JAGARAPU	Executive	Production	Injured	Pawan Sai-Vadlapudi	24-08-2024	Medicclaim		GEN	8978864827	25,00,000
7	E0216	KASINAIDUJEEREDDI	Senior Executive	R&D-(PDLab)	Injured	Pawan Sai-Vadlapudi	28-08-2024	Medicclaim		AShift	7893366832	25,00,000
8	E0314	SANTHOSHGEDDA	Executive	R&D-(PDLab)	Injured	Pawan Sai-Vadlapudi	28-08-2024	Medicclaim		BShift	9912138425	50,00,000
9	E0166	SATYANARAYANAVARAPRASAD RAJUGANDRAJU	Senior Manager/ Sr Group leader	Quality Assurance	Injured	KIMSICON - Sheelanagar	26-08-2024	Medicclaim		GEN	9000392223	25,00,000
10	E0500	ARUNAKUMAR POTTASIRI	Manager	Quality Assurance	Injured	KIMSICON - Sheelanagar	26-08-2024	Medicclaim		GEN	7013407930	25,00,000
11	E0567	BABASRINIVAS ARMADANDU	Senior Executive	Production	Injured	KIMSICON - Sheelanagar	29-08-2024	Medicclaim		BShift	9979949428	50,00,000
12	E0037	JAGADEESWARARAO PASUPUREDDI	Deputy Manager/ Sr. Team leader	Production	Injured	Medicover-MVP	4-09-2024	Medicclaim		GEN	9441941325	50,00,000
13	IFS	BSivaVenkata Ratnam	HK Helper	Production	Injured	Medicover-MVP	28-08-2024	ESIC	7011180979	GEN	7893243166	50,00,000
14	E0570	RAMBABUKONDRU	Senior Executive	Production	Injured	Medicover-MVP	2-09-2024	Medicclaim		GEN	6302446064	50,00,000
15	Charan	KChandraSekhar	Utility Operator	ESD	Injured	Medicover-MVP	2-09-2024	ESIC	7011230721	GEN	9100038769	50,00,000
16	Charan	YMahesh Babu	ESD	ESD	Injured	Medicover-MVP	5-09-2024	ESIC	7010649893	BShift	9652487225	50,00,000
17	E0234	NARAYANARAO KONDALA	Asst. Manager/ Team Leader	R&D-(PDLab)	Injured	Medicover-MVP	29-08-2024	Medicclaim		GEN	7013688706	50,00,000
18	E0227	DEMUDUPIKKI	Senior Engineer	Engineering	Injured	Medicover-MVP	Undergoing treatment	Medicclaim		GEN	8978408511	50,00,000
19	IFS	NPYDIKALYAN	HK	PD Kalyan	Injured	Medicover-MVP	2-09-2024	ESIC	7011500657	GEN	9515027074	50,00,000
20	Kapston	BSuribabu	HK Boy	Production	Injured	Medicover-MVP	4-09-2024	ESIC	701123048	GEN	8106914564	50,00,000
21	E0364	KIRANSATYANARAYANA MANDAPATI	Senior Executive	Production	Injured	Medicover-MVP	2-09-2024	Medicclaim		BShift	8331995134	50,00,000
22	E0250	VVLAKSHMICHAITANYAGANDRETI	Senior Executive	Production	Injured	RKHospital - Ghajuwaka	28-08-2024	Medicclaim		BShift	9110728489	25,00,000
23	E0415	SHANMUKHARAO KELLA	Chemist	Quality Control	Injured	UshaPrime -Anakapalli	26-08-2024	ESIC	7010992048	AShift	9010891367	25,00,000
24	E0535	DHANNJAYABODALA	Trainee Chemist	Quality Control	Injured	UshaPrime -Anakapalli	26-08-2024	ESIC	7011538630	AShift	9550129249	25,00,000
25	E0487	SHANMUKHARAJUKANCHU	Senior Executive	Production	Injured	UshaPrime -Anakapalli	28-08-2024	Medicclaim		AShift	9491106009	25,00,000
26	E0464	BANGARINAIDUCHANDAKA	Executive	Production	Injured	UshaPrime -Anakapalli	24-08-2024	Medicclaim		BShift	9493436518	25,00,000
27	Kapston	ChApparao	HK Boy	Production	Injured	UshaPrime -Anakapalli	30-08-2024	ESIC	7010876274	GEN	8142445960	25,00,000
28	Kapston	GRajaroo	HK Boy	Production	Injured	UshaPrime -Anakapalli	27-08-2024	ESIC	7010928442	GEN	9573970487	50,00,000
29	IFS	NApparao	HK Helper	Production	Injured	UshaPrime -Anakapalli	28-08-2024	ESIC	7011180899	GEN	9666356254	25,00,000
30	IFS	JVardhan	HK Helper	Production	Injured	UshaPrime -Anakapalli	28-08-2024	ESIC	7011237576	GEN	9391518791	50,00,000
31	IFS	RSatyanarayana	HK Helper	Production	Injured	UshaPrime -Anakapalli	2-09-2024	ESIC	7010215802	GEN	9676506833	50,00,000

32	E0452	YAAMINISARAGA DAM	Trainee Chemist	R&D-(PDLab)	Injured	UshaPrime-Anakapalli	26-08-2024	ESIC	7011235705	GEN	7337209643	50,00,000
33	E0316	PARAMESWARRAOALLAKA	Executive	R&D-(PDLab)	Injured	UshaPrime-Anakapalli	28-08-2024	Medicclaim		BShift	9966559215	25,00,000
34	Kapston	RamMeaharBabu	HKHelper	Production	Injured	UshaPrime-Anakapalli	27-08-2024	ESIC	7010833473	GEN	8639221871	25,00,000
35	E0355	VAMSISARAGA DAM	Junior Chemist	Production	Injured	UshaPrime-Anakapalli	26-08-2024	ESIC	7011188828	BShift	9177804774	50,00,000
36	EBP	PrabathYadav	PRE	R&D-(HYD)	Injured	UshaPrime-Anakapalli	28-08-2024	Medicclaim		GEN	9701714673	50,00,000
37	CSF	DApparao	Security	Admin	Injured	UshaPrime-Anakapalli	28-08-2024	ESIC	6207879807	BShift	9959926360	25,00,000
38	SVEW	MNagabushanam	Painter	ESD	Injured	UshaPrime-Anakapalli	27-08-2024	ESIC	7010342907	GEN	9703553893	25,00,000
39	E0302	TEJESWARARAOYANDAVA	Senior Executive	Production	Injured	LVPPrasad EyeHospital	28-08-2024	Medicclaim		BShift	9440988544	50,00,000

The management has paid the above said amount for Deceased workers one crore to each , from the “ INDUS IND BANK , SARDAR VALLABHAI PATEL ROAD , BEGUMPETA , SECUNDERABAD- 500016 starting the check numbers from 121071 to 121087 , and for injured workers 50 lakhs to 21 workers and 25 lakhs to 18 workers ,the money is transferred through RTGS on 23-08-2024.

After knowing information myself, Deputy Chief Inspector of Factories, Vizianagaram& Inspector of Factories, Visakhapatnam-II has rushed to the factory, when we reached to the factory we came to know that only 04 workers were died and fifteen workers were injured and sent to the hospitals. Revenue department has got the Boom lift From M/S PidiliteAchyuthapuramand saved 13 workers who were struck on the third floor and were admitted in the hospital due to inhalation of heavy smoke.

<b>In this Fire incident the following Ambulance Vans were used</b>			
<b>S.No</b>	<b>Vehicle</b>	<b>Vehicle Number</b>	<b>Company name</b>
1	Ambulance	AP 39 VD 5531	Yokohmma
2	Ambulance	AP 39UT 8834	Rusel Décor
3	Ambulance	AP 39 TJ 1888	LarusLabs unit-II
4	Ambulance	AP 31 TH 0146	Laras Labs Unit-VI
5	Ambulance	AP 39 TM 1881	Saint Gobin
6	Ambulance	AP 39 Y 9501	Asian Paints
7	Ambulance	NA	Government 108
8	Ambulance	NA	Government 108
9	Ambulance	TS 07UF 8872	RAMKY
<b>In this Fire incident the following fire tenders were used</b>			
1	Fire tender	AP 39 BA 7796	Yokohamma
2	Fire tender	AP 31 TM 1814	Larus labs unti 4
3	Fire tender	AP 39 TF 5802	Asian Paints
4	Fire tender	AP 28TE 8936	Govt (Elamanchili)

5	Fire tender	AP 16 TH 2665	Govt ( pedagantyada)	
6	Fire tender	AP 31 TM 0299	APIIC	
7	Fire tender	AP31 TG 9218	NTPC Parwada	
8	Fire tender	GJW-27-14T-0006	Hetro-Nakkapalli	
9	Water tender	AP28TE8936	Yelamanchili	
10	Water tender	AP16TJ5794	Anakapalli	
11	Water Browser	AP07TH7491	Anakapalli	
12	MIST JEEP	AP28TE 8167	Anakapalli	
13	90 MtrsBranto Sky Lift	---	Visakhapatnam	
14	Foam tender	AP16TH2665	Pedagantyada	
15	Foam tender	AP31TE6035	Marripalem	
16	Water tender		Sabbavaram	
17	Multi Purpose Tender	AP31TM0299	APIIC SEZ,Atchutapuram	
18	Water tender	AP39UK5285	Ramky JNPC Lnkilapalem	
19	Water tender	---	IOCL Atchutapuram	
20	Water tender	AP39Y5802	Asian Paints Atchutapuram	
21	Water tender	---	LaurusUnitAtchutapuram	
22	Water tender	---	YokohomaAtchutapuram	
23	Vehicle		NDRF Team	
<b>In this Fire incident the following other Equipment's were used</b>				
1	Hydra-18T		From union	
2	Hydra-18T		From union	
3	Hydra-14 T		From union	
4	Hydra-14 T		From union	
5	Hydra-14 T		From union	
6	Bhoom lift		Pidilite	
7	Disater Management Rescue Vehicle		From Govt	
8	JCB		From union	
9	JCB		From union	
10	JCB		From union	
11	Bus	AP39P0033	NDRF	
12	Van	AP39P0022	NDRF	

After extinguishing the fire and stopping the smoke at about 06:30 PM on 21-08-2024 onwards the NDRF persons were started searching operation inside the plant and found nearly eight workers were trapped by falling the brick wall and false ceiling in the ground floor and also found some of the dead bodies nearby areas, and were shifted to (GGH) Government general hospital, Visakhapatnam for post-mortem. The last body was shifted at about 00:30 AM on 22-08-2024. The Director of factories AP Vijayawada visited the factory on 22-08-2024 at about 5.30 AM, and attended to the Hon'ble Chief Minister of Andhra Pradesh review meeting.

The Hon'ble Chief Minister of Andhra Pradesh Sri Nara Chandra Babu Naidu garu, has visited the factory on 22-08-2024 at about 02:30 PM and verified the accident spot. After verification convened a meeting with all the Government officials about the accident.

#### 4) INVESTIGATION

After conducting preliminary enquiry on 21-08-2024 and continued further enquiry by me along with Deputy Chief Inspector of Factories, Vizianagaram & Inspector of Factories, Visakhapatnam-II on 22-08-2024, and again by the Deputy Chief Inspector of Factories, Vizianagaram & Inspector of Factories, Visakhapatnam-II on 24-08-2024 at about 03:00 PM and continued further enquiry and also obtained photographs Sri P. ChinnaRao, Inspector of Factories, Visakhapatnam-II has visited Medcover hospital on 25-08-2024 at about 04:30 PM and obtained statement from Sri KondalaNarayanaRao, age: 36 years, S/o K. Ramu, Assistant Manager, who is working in PD ( process development) lab since last 4 years. On 26-08-2024 at about 09:00 AM myself and Sri G.V.V.S.Narayana, Deputy Chief Inspector of Factories, Vizianagaram went to MedcoverHospital, Venkojipalem, Visakhapatnam, KIMS Icon Hospital, Sheelanagar, Visakhapatnam and PawanSaiHospital, Vadlapudi, Visakhapatnam interacted with the deceased workers and enquired about the facts of the accidents. Sri P. ChinnaRao, Inspector of Factories, Visakhapatnam-II has visited PawanSaihospital, Vadlapudi, Visakhapatnam on 26-08-2024 at about 05:00 PM and obtained statement from Sri PonnadaJagadesh, Age:36 years, S/o Late Ramana Murthy, Production Manager who is working since last 7 years. Sri P. ChinnaRao, Inspector of Factories, Visakhapatnam-II, has visited Usha Prime hospital, Anakapalli on 27-08-2024 at about 10:00 AM and obtained statement from Sri Kanchu.SanmukaRaju, Age 35 years, S/o LateMangayya.

On 26-08-2024 at about 09:00 AM myself and Sri G.V.V.S.Narayana, Deputy Chief Inspector of Factories, Vizianagaram went to the Medcover Hospital, Venkojipalem,

Visakhapatnam and enquired with 1) Sri Siva VenkataRatnam, production department working in clean room as a casual labour, he did not sensed any smell but, suddenly heard big sound due to that he got very minor injuries to his body and he is going to discharge on 26 th.2) Sri K.NarayanaRao, Assistant Manager working in PD Lab, said that his reliever came at 02:10 PM they sensed some smell and while his reliever is going to stop AHU and he is waiting near steps he heard big sound to that he has received very minor injuries and he is going to relieve from the hospital on 26<sup>th</sup> after doctor's permission. We also enquired with SuriBabu, helper who came in general shift and KiranSatyanarayana, senior executive who came in 2<sup>nd</sup> shift also stated the same words. Rest of the other 3 workers are sleeping on their beds with minor injuries. Two more workers are undergoing treatment in ICU due to burns the nurse stated that she will not allow any person inside ICU as per the instructions of the doctors for to avoid infections.

After that at about 11:00 AM we went to KIMS Icon Hospital, Sheelanagar, Visakhapatnam and enquired with 1) Sri Prasad Raju, QA, he said that he has not sensed any smell due to split A/c arranged to their rooms, he stated that due to dense smoke they did not came down side to the ground floor as the stair case was damaged, they moved upside and stayed in 2<sup>nd</sup> floor and inhaled heavy smoke. Further he stated that he has not heard emergency siren but heard fire alarm activated due to fire.2) Sri Srinivasa Varma stated the he came in 2<sup>nd</sup> shift, he is working in production department, due to broken of clean room glasses some of the pieces fell on his eye and received eye injury, after wearing PPE like suit and while walking through the steps explosion occurred.3) Sri P. Arun Kumar, QA manager stated that he came in general shift and came back to the department after taking lunch at about 01:50 PM and attended to his normal work, he has not sensed any smell but heard big sound of explosion at about 2.15 PM.

After that at about 01:00 PM we went to PawanSai Hospital, Vadlapudi, Visakhapatnam and enquired with Sri P.Jagadesh, Production Manager, he came in general shift. After lunch he came back to his room at 02:00 PM and attending to his normal work in 2<sup>nd</sup> floor, suit-II, his subordinate and production in charge Sri J.Srinivas came and informed him that solvent is leaking on the 1<sup>st</sup> floor, he did not sensed any smell but as per the words of Sri J. Srinivas, they both went to 1<sup>st</sup> floor and observed the solvent leak. He said that he has observed the solvent leak on the floor but exactly he cannot say how much quantity of solvent leaked, but he heard that other workers who are standing their discussing that nearly 150 liters of solvent may be leaked, While making arrangements to arrest of solvent leak he heard big sound and tried to get down from the floor as the steps are damaged and due to dense smoke he went to 2<sup>nd</sup> floor. Sri Santosh working in PD Lab came to the 2<sup>nd</sup> shift and went to PD Lab at that time, he sensed some smell, due to opening of the PD lab door immediately he heard big sound, he is standing near the PD Lab and he got minor injuries. We also enquired

with Gangadhar working in QC and Sri Srinvas Rao, Deputy Manager Production in production department; they both stated the same words about the explosion.

Again on 28-08-2024 at about 10:30 AM I went to the factory and continued further enquiry during the course of our enquiry we enquired with 1) Sri U.A.N.Raju, age 52 years, S/o U. Satyanarayana Raju, Production head & Factory manager under factories act 1948, 2) Kondrathu Govind, age 36 years, S/o Thatha, Safety officer, 3) Sri Neelapu Ramana Reddy, age 38 years, S/o Nuka Raju, Manager Accounts & finance, and 4) Sri Sanjay Kumar Vaishnav, Age: 57 Years, S/o Dhayan Das Vaishnav unit head.

**The following points are revealed during enquiry:**

The Escientia factory Management decided to manufacture RGP (Remigepant Sulphate) bulk drug intermediate, for to complete RGP it requires total 8 stages. They are 1<sup>st</sup> stage FCP<sub>3</sub>, 2<sup>nd</sup> stage FCP<sub>4</sub>, 3<sup>rd</sup> Stage FCP, 4<sup>th</sup> Stage IPP<sub>2</sub>, 5<sup>th</sup> stage IPP, 6<sup>th</sup> stage RGP<sub>1</sub>, 7<sup>th</sup> stage RGP<sub>2</sub> and last stage i.e. 8<sup>th</sup> stage is RGP.

This factory was registered under factories Act 1948 on 02-02-2018 by the then Deputy chief inspector of factories Visakhapatnam, after registration and commencement of the production the management has prepared “ Emergency preparedness and Response Plan” in the year 2020 internally, and safety audit was conducted with “ Wisdom Safety” i.e. the industrial safety enhancement, Visakhapatnam in the year 2020. Prior to the registration of the factory the management has got prepared onsite emergency plan, Hazard Analysis and Risk Assessment with “ Proactioneering Consultants Safety”, Rajahmundry in the year 2017, recently in the year 2023 the management got prepared 3<sup>rd</sup> party safety Audit with “ Proactioneering Consultants Safety”, Rajahmundry.

The management has prepared HAZOP (Hazards and Operable) study internally for 11 products and submitted in the office of the Deputy Chief Inspector of Factories, Vizianagaram on 02-05-2024, but compliance report for recommendations made in the report are not submitted in the above said office so far.

For RGP (Remigepant Sulphate) out of 8 stages only 3 stages i.e. for 3<sup>rd</sup>, 5<sup>th</sup> & 8<sup>th</sup> stages has submitted HAZOP study on 02-05-2024, rest other 5 stages i.e., 1,2,4,6,7 has not submitted the HAZOP study to this department so far.

The Particular accident was occurred at the time of first stage i.e. FCP<sub>3</sub> for which the management has not submitted HAZOP ( Hazards operable ) study and did not included in the HARA(Hazard Analysis and Risk Assessment), Further it came to know that the management has not tested the pipe lines once in two years as per statutory which was already pointed out in the improvement notice issued on 25-03-2023, by the Deputy chief inspector of Factories Visakhapatnam.

**PD LAB AUTOCLAVE DETAILS**

<b>S.No</b>	<b>Name of the Equipment</b>	<b>ID No</b>	<b>Capacity</b>	<b>MOC</b>	<b>HP</b>
1	Autoclave	PDL/ACL-001	5 Liters	Stainless Steel	0.25 HP
2	Autoclave	PDL/ACL-001	0.5 Liter	Hastelloy	0.25 HP
3	Autoclave	PDL/ACL-001	1 Liter	Stainless Steel	0.25 HP
4	Autoclave	PDL/ACL-001	1 Liter	Stainless Steel	0.25 HP
5	Autoclave	PDL/ACL-001	1 Liter	Stainless Steel	0.25 HP

**Sequence of operations of FCP<sub>3</sub>:**

**Brief Manufacturing Process details of FCP3 up to Incident**

<b>Operation</b>	<b>Reactor number</b>	<b>Date</b>	<b>Time</b>		<b>Duration</b>
			<b>From (HH:MM)</b>	<b>To (HH:MM)</b>	
Charge 1400 L Dichloromethane into the reactor	R-3210	13.08.2024	12:00	14:25	02:25
Charge FCP1 into the reactor at 30±5 °C.		13.08.2024	14:25	15:00	00:35
Cool the mass and charge formic acid into the reactor at temperature -5 to 0 °C.		13.08.2024	15:00	23:00	08:00
Charge triethylamine into the reactor from feed vessel at temperature below 5 °C		13.08.2024/ 14.08.2024	23:05	01:08	02:03
Raise reaction mass temperature and charge Ru catalyst into the reactor at 27.5±2.5 °C.		14.08.2024	01:08	05:10	04:02
Maintain the reaction mass under stirring condition for still		14.08.2024/ 15.08.2024	05:10	07:20	26:10

Operation	Reactor number	Date	Time		Duration
			From (HH:MM)	To (HH:MM)	
completion of reaction.					
Wash the reaction mass with sodium bicarbonate solution & purified water and sodium chloride solution.		15.08.2024/ 16.08.2024	07:20	15:00	31:40
Distill the reaction mass at below 45 °C.	R-2210	16.08.2024/ 17.08.2024	15:05	04:00	12:55
Cool the mass to 30±5, Charge dichloromethane, charge triethylamine		17.08.2024	04:00	12:40	08:40
Add TOT1 into the reactor through feed vessel	R-2210	17.08.2024/ 18.08.2024	12:45	02:15	13:30
Maintain the reaction mass for 1 hour 30 minutes ± 10 minutes		18.08.2024	02:15	07:20	04:55
Wash the reaction mass with aq. ammonium chloride solution, sodium bicarbonate solution, purified water & sodium chloride solution.		18.08.2024/ 19.08.2024	07:20	11:00	27:40
Distil the solvent at below 45 °C under vacuum until no more solvent distills		19.08.2024/ 20.08.2024	11:00	02:20	15:20
Charge 700 L methyl tert-butyl ether into the reaction mass at 30±5 °C		20.08.2024	02:20	05:16	02:56
Reaction mass treat two times with 84.0 Kg activated Carbon & wash with 1120 L methyl tert-butyl ether		20.08.2024/ 21.08.2024	05:16	09:40	28:24
Apply vacuum and heat the mass to distill, continue the distillation of the mass (methyl tert-butyl ether) at below 45 °C under vacuum.	R-2220	21.08.2024	09:40	13:45	04:05
<b>Distilled MTBE transferred to MLST-3401 from vacuum receiver VR-2225.</b>		21.08.2024	14:00	Under process	

**Sequence of operations from the observation of solvent leakage:**

1. Solvent Methyl tert-Butyl ether (MTBE) is being transferred activity started from the Receiver VR-2225 capacity 500 Lt. to storage tank MLST-3401 capacity 10 KL at around 14:00Hrs in second floor.

2. Meanwhile Mr. B RamaChandraRao(Production-chemist) was informed to Mr. J SrinivasaRao (Production-Shift in-charge) that there is solvent leakage observed at ground floor suit-1 & suit-2 south technical area at around 14:08 Hrs.
3. Both Mr. B Ramachandrarao&Mr. J SrinivasaRao went to ground floor solvent leakage area and observed there is solvent leakage at around 14:10 Hrs.
4. Immediately Mr. J SrinivasaRao went to Second floor office room from ground floor to inform the same to Mr. P. Jagadesh (Production Manager) &JagadeswaraRao(Production in-charge) at around 14:12 Hrs.
5. parallely the leakage information is passed to the Mr K ShanmukhaRaju(Production-chemist) at around 14:15 Hrs by Mr P Demudu(Sr. Engineer) regarding the solvent leakage and enquired any solvents transfer is being processed.
6. Immediately Mr ShanmukhaRaju was responded to Mr Demudu, and he has stopped the solvent transfer from the Receiver VR-2225 capacity 500 Lt. to storage tank MLST-3401 capacity 10 KL at around 14:15 Hrs by closing the Receiver VR-2225 bottom valve parallely he stopped the nitrogen supply to the Receiver VR-2225.
7. Both Mr Shanmuka Raju and Mr Demudu went to the First floor to check the solvent leakage area by using south side staircase, meanwhile they saw Mr BhagyaRajuWho is manager of Production coming from technical area and informed that there is solvent leak happened at around 14:17 Hrs.
8. The same time Mr.JSrinivasarao, Mr. P Jagadeesh&JagadeswaraRao started to visit the leakage area through south technical area staircase by the time MrShanmukaRaju and MrDemudu also met at First floor and MrShanmukaRaju has told them stopped the MTBE transferring from the receiver at around 14:19 Hrs.
9. Explosion occurred at around 14:20 Hrs from the ground floor technical electrical panel area.
10. Immediately Emergency siren was activated to alert all employees at about 14:22 hrs.
11. Observed few of the injured persons running towards the Entry/Exit gate at around 14:25 hrs from the API Block (productionblock).
12. Meanwhile lot of Mist and dense smoke was observed from the incident area and alerted the ERT team and responsible Key persons to start the rescue operation and firefighting operations at around 14:30 Hrs.
13. Parallely one rescue team was acted to send the injured persons to the OHC.

14. Information given to some of the government authorities regarding the incident occurred at the premises at around 14:40 hrs.
15. Immediately all the injured persons were shifted to nearby emergency hospital for the further treatment by using ambulances and company vehicles.
16. Allowed neighbored industries and government authority emergency vehicles (ambulances and fire tenders) into the premises to fire fighting and start rescue operations at around 14:45 Hrs.
17. Meanwhile Government authorities like Collector, Police, Factories department, Fire department, Industries , APIIC Atchyuthapuram, pollution control board & Drug control department Etc. are visited the company to support fire fighting and rescue operations at around 15:30 Hrs.
18. Meanwhile informed to the Pidilite to send boom lift to bring down the persons who are stuck at 3<sup>rd</sup> floor and about 13 Employees were rescued safely from the 3<sup>rd</sup> floor by using the boom lift which was arranged by Pidilite company, at about 16.30 Hrs.
19. Arranged one JCB to remove the debris from the impacted areas to rescue/recover the infected Employees at around 16:30 Hrs.
20. 2 infected bodies were recovered from the process development debris and sent to the hospital with help of government/neighbored industry ambulances at around 18:30 Hrs.
21. With the help of fire tenders which received from the neighbored industries and government authorities continued the fire fighting and got controlled First floor and Second floor fire, hence the both the floors fire controlled at around 18:30 Hrs.
22. Meanwhile NDRF team was entered into the Premises to help in the rescue operations which are continuing by the Escientia team, neighbored industries.
23. All the API block glasses are broken with the help of Crane/Hydra to free from the accumulated vapours and smoke free from the building areas.
24. NDRF team was entered into the Ground floor area to check for any infected bodies and identified 10 bodies infected and one person with a live rescued and sends to the hospital for treatment.
25. All the areas are thoroughly inspected by the NDRF team, and the rescue operation was completed at around 22:10 Hrs.
26. Last dead body was shifted to the KGH( king George hospital) Visakhapatnam at about 00.30 AM on 22-08-2024.
27. Over all 17 employees were declared dead and 39 employees were bodily injured, and are admitted in different hospitals for treatment.

The Deputy Chief Inspector of Factories, Vizianagaram has issued Prohibitory Order to the Management vide Lr no: R.No:104374/2024/special, Dt: 24-08-2024.

**Prohibitory Order copy: (Annexure Enclosed)**

The entire production block was divided into 4 suits in between suit I, Suit-II, & Suit-III, suit-IV areas are utilized as technical area and in between suit-I, suit-IV and Suit II, suit-III it is used as corridor for walk ways.

The following equipment is available in the entire production block on all 3 floors including ground floor.

SI No	Floor	Suit-I	Suit-II	Suit-III	Suit-IV
1	Ground floor	Large Scale Powder processing Area(Sifter – 1 nos Air Jet Mill – 1 nos Blender – 1 nos Weighing Balance – 1 nos Dry Air Storage tank – 1 nos)	Large Scale Powder processing Area & PD Lab(Sifter – 1 nos Multi Miller – 1 nos Air Jet Mill – 1 nos Blender – 2 nos Weighing Balance – 2 nos <b>2. PD Lab</b> (Autoclaves – 5 nos Laminar Fume hoods – 08 nos)	1). Small Scale Powder processing Area. 2). Kilo Lab (2 no's Glass Reactors & Vacuum Tray Drier)(Sifter – 1 nos Air Jet Mill – 2 nos Weighing Balance – 1 nos <b>2. Kilo Lab</b> (Weighing Balance – 2 nos Glass Reactors – 2 nos Centrifuge – 1 nos Vacuum Tray Dryer – 1 nos Glass Column – 1 nos)	1). High point area (Reactors, ANFD & powder process Equipment's)(Reactors – 4 nos Holding tank – 2 nos Vacuum Receiver – 4 nos Agitated Nutsche Filter Dryer – 1 nos Isolators – 2 nos Weighing Balance – 1 nos Fume hood – 1 nos)
2	1 <sup>st</sup> floor	Filtration area & Drying area ( Centrifuge, VTD, ANFD, receivers & RCVD) (Roto Cone Vacuum Dryer – 1 nos Agitated Nutsche Filter Dryer – 1 nos Vacuum Tray Dryer – 2 nos Centrifuge – 3 nos Pressure Nutsche Filter – 1 nos	Filtration area & Drying area ( Centrifuge, VTD, ANFD, receivers & RCVD)(Roto Cone Vacuum Dryer – 1 nos Agitated Nutsche Filter Dryer – 2 nos Vacuum Tray Dryer – 2 nos Centrifuge – 4 nos Holding Tank – 4 nos	Filtration area & Drying area ( Centrifuge, VTD, ANFD, receivers & RCVD)(Roto Cone Vacuum Dryer – 2 nos Agitated Nutsche Filter Dryer – 2 nos Pressure Nutsche Filter – 1 nos Vacuum Tray Dryer – 1 nos Centrifuge – 3 nos Holding Tank – 7 nos Centrifuge Storage tank – 1 nos)	Quality control department(QC) lab area

		Columns – 1 nos Holding Tank – 4 nos)	Centrifuge Storage tank – 1 nos Centrifuge Mother liquor tank – 1 nos)		
3	2 <sup>nd</sup> floor	1.Production area-reactors, receivers,feed vessels, condenser & Utilities. (Reactors – 6 nos, Vacuum Receivers – 6 nos, Holding tanks – 4 nos, Feed Vessels – 6 nos, Wash Tank – 1 nos, Condensers& Utilities.)	1.Production area-reactors, receivers,feed vessels, condenser & Utilities. (Reactors – 6 nos, Vacuum Receivers – 6 nos, Holding tanks – 2 nos, Feed Vessels – 6 nos, Wash Tank – 1 nos, Condensers& Utilities.)	1.Production area-reactors, receivers,feed vessels, condenser & Utilities.(Reactors – 6 nos, Vacuum Receivers – 6 nos, Holding tanks – 3 nos, Feed Vessels – 6 nos, Wash Tank – 4 nos, Condensers& Utilities.)	1.Quality control department(QC) lab area. 2.Quality assurance department(QA)
4	3 <sup>rd</sup> floor	1. Production area-reactors, receivers,feed vessels, condenser & Utilities.(Reactors – 4 nos, Vacuum Receivers – 4 nos, Feed Vessels – 4 nos, Condensers& Utilities.)	1. Production area-reactors, receivers,feed vessels, condenser & Utilities. (Reactors – 4 nos, Vacuum Receivers – 4 nos, Feed Vessels – 4 nos, Condensers& Utilities.)	1. Production area-reactors, receivers,feed vessels, condenser & Utilities. (Reactors – 5 nos, Vacuum Receivers – 5 nos, Feed Vessels – 5 nos, Condensers& Utilities.)	Pilot plant ( Reactors, centrifuge & VTD)(Reactors – 6 nos, Vacuum Receivers – 6 nos, Holding tanks – 6 nos, Centrifuge – 1 nos, Agitator Nutsche Filter dryer – 1 nos, Vacuum Tray Dryer – 1 nos, Feed Vessels – 6 nos, Condensers& Utilities.)
5	Location of the suit	East and south corner of the production block	south west corner of the production block	North west corner of the production block	North east corner of the production block

The particular accident took place in Suit-II, where MTBE solvent is distilled in 2<sup>nd</sup> floor in the reactor ( R2220) and collected in a receiver (VR-2220) in the 2<sup>nd</sup> floor and is transferring from the receiver 2<sup>nd</sup> floor to the storage tank on the ground floor which is located on the west side of the production block out side. The entire pipe line,(diameter one and half inch SS)is connected with 24 joints and the particular solvent leak occurred at 9<sup>th</sup> joint counting starting point from the receiver. The 9<sup>th</sup>

joint is over the first floor and below the 2<sup>nd</sup> floor in suite 2, i.e. in between 1<sup>st</sup> floor and 2<sup>nd</sup> floor where the pipe joint is taken to the outside from the production block. Below this pipe line in the 1<sup>st</sup> floor there is a cut of the first floor for to connect the cables in to the MCC electrical panel board which is located on the ground floor, even though after noticing the solvent smell at the time of minor leakage neglected to arrest the leak as it is a lunch time & shift change over time. The management failed to declare emergency even after noticing the MTBE solvent leak and also failed to evacuate the workers even after finding/noticing leak of highly flammable solvent. The boiling point of MTBE is 55<sup>0</sup>C and flash point is 28<sup>0</sup>C. The LEL & UEL are 1.6% and 15.1% respectively. MSDS (material safety data sheet) of MTBE is attached to the report separately.

After distilling the solvent by verifying the gauge of the receiver it is observed that 500LT of MTBE solvent is recovered & it will be transferred from the receiver 2<sup>nd</sup> floor to the storage tank on the ground floor by applying nitrogen pressure to the receiver. The nitrogen pressure is at about 2.5 Kg/cm<sup>2</sup> from the nitrogen line, by opening the valve slowly with a pressure of 0.5 Kg/cm<sup>2</sup> to 1Kg/cm<sup>2</sup> nitrogen will be applied to the receiver. May be if the worker has applied more nitrogen pressure to complete it as early as possible there is a chance of leakage of solvent from the flange joint where ever weak point. May be this is one of the main reason for a chance of leakage of solvent through the pipe line joint. The management failed to provide rotometer to the receiver for to control (regulate) the nitrogen with pressure.

### Probable Causes of the Accident

1. HARA (Hazard Analysis and Risk Assessment) report is not prepared/carry out by including the manufacturing of RGP (Remigepant Sulphate) product to know the risks involved in the process and also not submitted the report in the office of the Deputy Chief Inspector of Factories, Vizianagaram along with compliance report for the recommendations mentioned at least 15 days prior to the manufacturing process of RGP.
2. HAZOP (Hazardous operable) studies is not prepared/carry out for the product of RGP total 8 stages by considering the qualitative assessment of risk, to know the hazards in the process, Considering the risk due to MTBE solvent and also not submitted the report in the office of the Deputy Chief Inspector of Factories, Vizianagaram along with compliance report for the

recommendations mentioned atleast 15 days prior to the manufacturing process of RGP.

3. Pipe lines are not tested which are carrying Hazardous chemicals like MTBE solvent with the competent person approved by the Director of Factories, A.P, Vijayawada once in two years to find out the defects in the pipe lines and joints.
4. All the parts of equipment and machinery, failure which can rise to emergency are not identified, and not examined by the competent person once in a month, a record is not maintained, and also not produced the above record at the time of enquiry.
5. The electrical MCC panel board is not provided in a separate room which was installed on the ground floor just below the solvent transferring pipe line joints.
6. Cable opening cut is not closed on the first floor even after installation of the solvent transfer pipe lines and electric cables.
7. The preventive maintenance schedule of the pipe lines as per the SOP (standard operating procedure) is not followed and also not adopted and not appointed cross check mechanism with the senior officers in the factory.
8. On site emergency is not declared by using the manual call points (total 43 manual call points are available in the production block) even after finding/noticing the leakage of highly flammable MTBE (Methyle Tert-Butyle Ether) solvent.
9. Dampers interlink with sensors are not provided to the AHU ducts.
10. ON site emergency is not declared by blowing emergency siren and addressing with public address system (PAS) even after noticing of the solvent leak to save lives of the workers, instead of waiting up to caught on fire and explosion. Nearly 12 minutes (FROM 2.08 pm to 2.20 Pm) is not utilised for declaration of emergency.
11. Time spends in informing leak information to the authorities, instead of evacuating the workers from the production block to assembly point.
12. Balconies are not provided for all the elevated floors of the process buildings where hazardous chemicals are being used stored/processed.
13. Detectors are not provided along with alarms in all the floors of the production block for early detection of the solvent vapours.
14. Escape routes are not demarked from all the floors of the production block, and also awareness is not created on escape routes.

15. The departments like QA, QC and PD lab are not constructed away from the production block.
16. Rotometers are not provided to the receivers for to control (Regulate) nitrogen pressure.
17. Personnel protective equipment like fire resistant suits is not issued to the workers who were attended for arrest of leak, and also not insisted to wear and work while attending leak arrest of highly flammable solvents.

## 5) CASUAL FACTORS

- 1) Failed to prepare/carryout HARA (Hazard Analysis and Risk Assessment) report by including the manufacturing of RGP (Remigepant Sulphate) product and also failed to submit the report in the office of the Deputy Chief Inspector of Factories, Vijayanagaram along with compliance report for the recommendations mentioned at least 15 days prior to the manufacturing process of RGP.
- 2) Failed to prepare/carry out HAZOP (Hazardous operable) studies for the product of RGP total 8 stages by considering the qualitative assessment of risk. Considering the risk due to MTBE solvent and also failed to submit the report in the office of the Deputy Chief Inspector of Factories, Vizianagaram along with compliance report for the recommendations mentioned at least 15 days prior to the manufacturing process of RGP.
- 3) Failed to test the pipe lines carrying the Hazardous chemicals like MTBE solvent with the competent person approved by the Director of Factories, A.P, Vijayawada once in two years to find out the defects in the pipe lines and joints.
- 4) Failed to examine all the parts of equipment and machinery, failure which can rise to emergency shall be got identified and examined by the competent person once in a month and also failed to produce the above record at the time of enquiry.
- 5) Failed to keep the electrical MCC panel board in a separate room which was installed on the ground floor just below the solvent transpiring pipe line joints.
- 6) Failed to close the cable opening cut on the first floor after installation of the solvent transfer pipe lines and electric cables.

- 7) Failed to follow the preventive maintenance schedule of the pipe lines as per the SOP (standard operating procedure) and also failed to adopt and appoint cross check mechanism with the senior officers in the factory.
- 8) Failed to declare emergency by using the manual call points (total 43 manual call points are available in the production block) even after finding the leakage of highly flammable MTBE ( MethylTert-ButyleEather) solvent.
- 9) Failed to provide dampers inter locking with sensors to the AHU ducts.
- 10) Failed to declare emergency by blowing emergency siren and addressing with public address system (PAS) after noticing of the solvent leak to save lives of the workers, instead of waiting up to caught on fire and explosion.Nearly 12 minutes time spends (2.08 PM to 2.20 PM) in informing leak information to the authorities, instead of evacuating the workers from the production block to assembly point.
- 11) Failed to provide balconies for all the elevated floors of the process buildings where hazardous chemicals are being used stored/processed.
- 12) Failed to provide detectors with alarms in all the floors of the production block for early detection of the solvent vapours.
- 13) Failed to demarcate the escape routes from all the floors of the production block, and also failed to create awareness on escape routes.
- 14) Failed to keep away the departments like QA, QC and PD lab away from the production block.
- 15) Failed to provide Rotometers to the receivers for to control (Regulate) nitrogen pressure.
- 16) Failed to issue personnel protective equipment like fire resistant suits, Face Shields to the workers who were attended for arrest of leak, and also failed to insist to wear and work while attending leak arrest of highly flammable solvents.

## 6) CONCLUSION

### The accident could have been averted

- 1) If the Rotometers is provided to the receivers for to control (Regulate) nitrogen pressure.
- 2) If the pipe lines are tested with the competent person approved by the Director of Factories, A.P, Vijayawada once in two years to find out the defects in the pipe lines and joints which are carrying the Hazardous chemicals like MTBE solvents.

- 3) If all the parts of the equipment and machinery, failure which can rise to emergency shall be identified and examined by the competent person once in a month.
- 4) If the electrical MCC panel board is kept in separate room for to avoid falling of solvent leaks on MCC panel board.
- 5) If the cable opening cut on the first floor is completely closed without leaving the gap, the leaked solvent may not fall on the electrical MCC panel board.
- 6) If the preventive maintenance schedule of the pipe lines is followed as per the SOP and if the cross check mechanism is adopted with the senior officers in the factory to know whether preventive maintenance schedule is followed correctly or not as per SOP.
- 7) If the emergency is declared and evacuated all the workers working in the entire production block immediately after noticing the leak of highly flammable solvent MTBE, to avoid human loss.
- 8) If the detectors provided along with alarms in all the floors of the production block for early detection of the solvent vapours.

A Show cause notice is being issued by the Deputy Chief Inspector of Factories, Vizianagaram to the both occupier and manager of the factory for the contraventions under **Section 7A(2) read with Section 87 & Rule 95 Schedule XV Part II Para 5,10,11,12,13(1),15 and part III Para 7.**

The management has submitted Form No. 18 in the office of Deputy Chief Inspector of Factories, Vijayanagaram; we have obtained photographs of the scene of the accident and also obtained statement from the witness.

I am here with submitting Form No. 18 copy, photographs & witness statements for kind perusal.

Joint Chief inspector of factories  
Visakhapatnam

Submitted to the Director of factories AP Vijayawada,  
Copy to the Deputy Chief inspector of factories Vijayanagaram,  
Copy to the inspector of factories Visakhapatnam-II

**GOVERNMENT OF ANDHRA PRADESH  
ABSTRACT**

Industries & Commerce Department – Pursuant to the major accident with an explosion followed by fire in the Production block of a factory M/s Escientia Advanced Sciences Pvt. Ltd, Plot No.11, 11A, 12 & 12A, APSEZ, Achutapuram, Anakapalli occurred on 21.08.2024 - Constitution of High Level Committee to suggest measures for increasing the Industrial Safety in the State of Andhra Pradesh – Orders - Issued.

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**INDUSTRIES & COMMERCE (P&I) DEPARTMENT**

**G.O.Ms.No.51**

**Dated:13.09.2024**

Read the following:

1. G.O.Ms.No.135, Industries & Commerce (P&I) Department, Dt:12.10.2017.
2. Preliminary Investigation Report of Director of Factories, Government of Andhra Pradesh, Dated:25.08.2024

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**ORDER:**

In the 1<sup>st</sup> reference read above, orders have been issued for constituting "Central Inspection Monitoring Committee (CIMC)" under the Chairmanship of Commissioner of Industries, AP and Member Secretary, APPCB, Member Convenor with the primary aim of the committee is to guide and improve the activities/inspections under the Central Inspection System.

2. Vide reference-2 of preliminary investigation report, Director of Factories, Government of Andhra Pradesh stated that a major accident with an explosion followed by fire in the Production block of a factory by name M/s Escientia Advanced Sciences Pvt. Ltd, Plot No.11, 11 A, 12 & 12A, APSEZ, Achutapuram, Anakapalli occurred on 21.08.2024 at 02.18 PM, in which, 17 workers have died and about 40 others were injured and hospitalized. Immediately, all the stakeholder departmental officials and District Collector rushed to the accident scene and attended to the aftermath. The fire services from Department of AP Fire and Disaster Response and the other private industries have attended to the fire fighting and brought the fire under control. Rescue operations were conducted by the Fire services and NDRF team and retrieved the dead bodies. The injured were admitted in different hospitals.

3. Further, Director of Factories has informed that a prohibitory order duly prohibiting the further operations in the production block till further

orders was issued under Section 40(2) of Factories Act, 1948 and further action shall be initiated as per the rules after completion of investigation.

4. Hon'ble Chief Minister has visited the accident site the next date and reviewed with all the officials, besides visiting the families of deceased and injured people. Administration implemented an exgratia of Rs 1Cr to the deceased, Rs 50 Lakhs for the seriously injured and Rs 25 lakhs for the injured in the accident.

5. In order to prevent industrial accidents in the State, especially, Red Category Industries and after deliberations with various officials of stakeholder departments, SEZ Industrial representatives and District Officials, Government hereby constitute a High Level Committee to suggest measures for increasing the Industrial Safety in the State of Andhra Pradesh with the following members:-

#### **A. Composition**

Smt. Vasudha Mishra, IAS (Retd).	Chairperson
Special Chief Secretary, Environment, Forest, Science & Technology Department.	Member
Principal Secretary, Home Department	Member
Secretary, Labour Factories Boilers & Insurance Medical Services Department	Member
Secretary, Industry and Commerce Department	Member
Development Commissioner, VSEZ, Government of India	Member
Director General, Fire services	Member
Member Secretary, Andhra Pradesh Pollution Control Board	Member
Director of Boilers	Member
Director of Industries	Member
Vice-Chairman & Managing Director, APIIC	Member
Director of Factories	Convener

#### **Industry members/experts from**

1. Sri City, Tirupati District
2. Pharma City at Parwada, Anakapalli District
3. Bulk Drug Manufacture Association (BDMA)
4. BRANDIX SEZ
5. APIIC SEZs such as Atchuthapuram, Naidupeta, etc
6. Prominent Industry Safety experts from IIT Chennai and IIT Tirupati
7. NITI Aayog Expert on Industrial Safety

8. The Chairperson may co-opt other members and experts, as found required.

### **B. Terms of Reference**

- a. To study the recent two episodes of the Industrial Accident in detail, identify the reasons and suggest required organizational, legal and administrative measures required for increasing the industrial safety
- b. To suggest the measures for strengthening the processes and timelines of Safety Inspections and Audits such as Centralized Inspection System, Third Party audits, etc
- c. To recommend the measures regarding qualified safety officers in the System (both from company and departments) and improving their training and technical skills

### **C. Other information**

Committee is expected to held meetings with all stakeholders in different parts of the State and submit its recommendations or report within 2 to 3 months of taking charge. The Director of factories, Government of Andhra Pradesh will provide the necessary secretarial assistance and other support to the Committee.

6. The Director of Factories, Government of Andhra Pradesh, shall take further necessary action accordingly.

**(BY ORDER AND IN THE NAME OF THE GOVERNOR OF ANDHRA PRADESH)**

**N YUVARAJ  
SECRETARY TO GOVERNMENT & CIP**

To

The Director of Factories, Government of Andhra Pradesh, Vijayawada.

All the Members Concerned.

The Secretary, Labour Factories Boilers & Insurance Medical Services Department, Government of Andhra Pradesh.

All the Departments of the Secretariat.

The Director of Industries, Andhra Pradesh, Mangalagiri.

The Vice-Chairman & Managing Director, APIIC, Mangalagiri

Copy to:

The Additional Secretary to Hon'ble Chief Minister.

The PS to Hon'ble Minister, Industries and Commerce.

The PS to Hon'ble Minister, Mines & Geology.

The PS to Hon'ble Minister, Handlooms & Textiles.

The PS to Hon'ble Minister, MSME.

The PS to Hon'ble Minister for Environment, Forest, Science & Technology.

The PS to Hon'ble Minister for Labour.

The PS to Principal Secretary to Government, Ind.& Com. (Handlooms& Textiles) Departmentt.

The PS to Secretary to Government & CIP. Industries & Commerce Department.

The Secretary to Govt., Finance Department.

SF/SC.

//FORWARDED:: BY ORDER//

  
SECTION OFFICER