



State level Mock Exercise on Chemical Disaster 7th March 2024



Organised by
Andhra Pradesh State Disaster Management Authority
In Collaboration with
National Disaster Management Authority



CONTENTS

Sl. No.	Item	Page No.
1	State Background, Hazard Vulnerability Assessment	1
2	Aims and Objectives of Mock Exercise	3
3	Focus Areas	4
4	Scope of Mock Exercise	5
5	Line Departments and Central Agencies Participated	8
6	Pre ME operations carried out by SDMA	9
7	NGOs, community groups, NSS/NCC/Apada Mitra participated	10
8	Subject Matter Experts (SMEs) involved	10
9	Local universities, medical colleges, nursing schools and IITs participated.	11
10	Industry associations, chambers of commerce participated	11
11	Local hospitals, Public Health Centres and Industry medical establishments participated.	11
12	Details of nodal officers and incident commanders	12
13	Multiagency/multi-department Meetings conducted at District, Taluka & State level	14
14	Participation of DDMA committees in the mock exercise	15
15	Community Awareness Campaigns carried out by District/ Industry	16
16	Community resources utilized during mock exercise	16
17	Resource Mobilization during the mock exercise	17
18	Use of technologies during mock exercise	18
19	Data generated and data handling/processing during mock exercise.	18
20	Scenarios and response carried out at each location	19
21	Strengths, limitations and gap areas identified	31
22	Traditional as well as out of the box response and survival strategies employed	33
23	Media engagement	34
24	Lessons learned	35
25	Recommendations and comments from districts, industry, state line departments and NDMA	37
26	Improvement plan and targets to be achieved before next mock exercise for DDMA, DEOC, SDMA and SEOC	39
Annexures		
Annexure-1: District Wise Mock Exercises Photos		41
Annexure 2: Newspaper Clippings		57

1. State Background, Hazard Vulnerability Assessment

1.1 State Background

The State of Andhra Pradesh having boundaries with Telangana in the North –West, Chhattisgarh in the North, Tamil Nadu in the South, Odisha in the North-east, Karnataka in the West and the water bodies of Bay of Bengal in the East. A small enclave of 30 KMs (12 sq. miles) of Yanam, a district of the Union Territory of Pondicherry, lies in the Godavari delta to the North –East of the state. AP State is one of the 29 states with a coast of 974 KMs situated on the country’s South –East Coast. According to the 2011 Census, it is the eighth largest State with an area of 1,62,970 (Sq. KMs.) and the tenth biggest State with a population of 495.77 lakhs. The State is endowed with a variety of physiographic features ranging from Eastern Ghats, Nallamala Forest, Coastal plains to the deltas of the two major rivers, namely the Krishna and the Godavari.

The Government of Andhra Pradesh in the interest of better administration and development of the area concerned, have reorganized the erstwhile 13 districts into 26 districts of Andhra Pradesh with effect from 04th April 2022 published through AP Gazette No. 472, dated 03rd April, 2022. These districts are divided into three regions- North Coastal, South Coastal and Rayalaseema.

North Coastal: (11 districts)	Srikakulam, Parvathipuram Manyam, Vizianagaram, Visakhapatnam, Alluri Sitarama Raju, Anakapalli, Kakinada, East Godavari, Dr. B. R. Ambedkar Konaseema, Eluru and West Godavari,
South Coastal (7 districts)	NTR, Krishna, Palnadu, Guntur, Bapatla, Prakasam, SPSR Nellore
Rayalaseema: (8 districts)	Kurnool, Nandyal, Anantapuram, Sri Satya Sai, YSR, Annamayya, Tirupati and Chittoor

There are 13,385 Gram Panchayats in 686 Mandals, 76 divisions, 16 Municipal Corporations, and 77 Municipalities, 27 Nagar Panchayats in the State. Visakhapatnam, Vijayawada and Guntur are the three largest cities in AP.

1.2 Vulnerability Assessment

The state of Andhra Pradesh, on account of its geographical location and conditions, is vulnerable to various disasters such as Cyclones, Floods, and Droughts besides minor disasters like lightning, heat wave, landslides, and storm surges. About 44% of the state is prone to tropical storms and about 29 million people in 178 mandals are vulnerable to Cyclones. Five (5) rivers viz., Godavari, Krishna, Penna, Vamsadhara and Nagavelli are flowing across the state and thus, the state is prone to recurring floods. About 12% of the total area (44 Million hectares) covering 766 villages in 112 mandals are prone to floods and river erosions. Drought is a common phenomenon in the state and about 68% of the area is prone to drought. Though drought is very common in Rayalaseema districts and Prakasam district, with the change in weather pattern many more interior areas of the coastal belt are experiencing drought in the recent past. On account of its geographical condition and location, State is vulnerable to one or another disaster every year and sometimes, prone to more than one disaster.

There are 25, 279 factories in the state of Andhra Pradesh covered under Factories Act 1948. Among them about 1350 factories are using the hazardous chemicals as defined under Manufacture, Storage and Import of Hazardous Chemicals Rules 1989. (MSIHC Rules). Among these 1350 factories, about 88 factories are having the inventory of Hazardous chemicals more than the threshold Quantities prescribed in Schedule – 3 of said MSIHC Rules thereby these factories are considered as High-Risk factories with Offsite Emergency Potential (as the impact of a major accident in them is expected to go beyond the boundaries of the respective factories). Therefore, the Factories Department has classified them as MAH factories. Fertilizer, Pesticides, Major Bulk Drug, Chloro Alkali plants, Petroleum and petrochemical industries are falling into this category.

2. Aims & Objectives of Mock Exercise:

The prime objective is to ensure that the occurrence of chemical accidents is minimized and risks posed to life, environment and property are reduced. The ‘National Disaster Management Guidelines—Chemical Disasters’ document contains details that are required by the planners and implementers and will help in the preparation of plans by the central ministries/departments and the states. There has been a paradigm shift in the government’s focus from its rescue, relief, and restoration centric approach to a planning, prevention/mitigation and preparedness approach. It has been realized that effective Chemical Disaster Management (CDM) is possible by the adoption of preventive and mitigation strategies as most chemical disasters are preventable in comparison to natural disasters that are difficult to predict and prevent. Recognizing the gravity of the risk posed by Hazardous Chemicals the National Disaster Management Authority (NDMA) took up the task of strengthening Chemical Disaster Management.

In the state level mock exercise was carried out in Andhra Pradesh from 05.03.2024 to 07.03.2024, 22 industries from 17 districts in the state participated, with each industry attending to a potential scenario of an associated chemical disaster. The mock exercise aims to address the following:

To review the DM plan and associated SOPs of the State, each department, and its district

- To establish awareness and coordination between industries and district disaster management authorities to ensure preparedness.
- To highlight the roles and responsibilities of various stakeholders as per IRS and institutionalize the use of IRS in the response mechanism.
- To ensure coordination among Emergency Support Functions at the District level
- To generate Public Awareness by involving the media, LGBs (Local Governing Bodies), NGOs and Community.
- Focus on Fire & Rescue services, Health & Medical Services, Industrial Safety & State Pollution Control Dept, Community/NGO.
- To identify gaps, if any in the resources, manpower, communications, response capabilities, etc.
- Effective use of Common Alert Protocol (CAP).

3. Focus Areas

The focus areas of the mock exercise covered various aspects of emergency response and preparedness. Here are the key focus areas:

➤ Notification and Activation Procedures:

The effectiveness of the procedures for promptly notifying relevant authorities and activating emergency response protocols upon the occurrence of a spillage/blast incident at offsite areas was evaluated.

➤ Coordination and Communication:

The coordination and communication among different response agencies, including fire departments, hazardous materials teams, law enforcement, environmental agencies, and other relevant stakeholders, were assessed. The communication channels for exchanging information, coordinating response efforts, and disseminating updates to the public and media were tested.

➤ Hazards Assessment and Risk Management:

A thorough assessment of the hazards associated with methanol, including its flammability, toxicity, and environmental impact, was conducted. Risk management strategies were implemented to minimize exposure risks to responders, the public, and the environment.

➤ Scene Assessment and Management:

The speed and effectiveness of initial scene assessment and management, including establishing evacuation zones, securing the area, and assessing the extent of the spill, were evaluated.

➤ Containment and Mitigation Strategies:

The deployment and effectiveness of containment and mitigation strategies to prevent the spread of the spill and minimize its impact were tested. The utilization of specialized equipment and resources, such as absorbent materials, containment booms, and vapor suppression systems, was assessed.

➤ Emergency Response Actions:

The deployment of response personnel and resources to execute various response actions, including spill control, decontamination, and medical assistance, was evaluated. The efficiency of evacuation procedures, sheltering, and providing medical care to affected individuals was tested.

➤ Environmental and Health Considerations:

The impact of the spill on the environment, including soil, groundwater, surface water bodies, and air quality, was assessed. The measures taken to protect public health and safety, including monitoring for exposure risks and providing medical treatment as needed, were evaluated.

➤ Training and Preparedness:

Training needs and gaps in preparedness among response personnel were identified. The effectiveness of training programs and exercises in building response capabilities and familiarizing personnel with emergency procedures was evaluated.

➤ Documentation and Reporting:

Proper documentation of response actions, including incident reports, resource usage, and lessons learned, was ensured. The effectiveness of reporting procedures for regulatory compliance and accountability purposes was evaluated.

4. Scope of Mock Exercise

- The mock exercise on chemical disaster was initiated as a joint venture by the National Disaster Management Authority (NDMA) and the APSDMA on 7th March 2024.
- The AP Factories Department coordinated this state level mock exercise, with active participation from 22 industries from 17 districts in the state.

- Every participating industry has MAH installations, explaining the importance of preparedness and rescue measures in case of a chemical hazard.
- The exercise involved active participation from district administration, industry clusters, general public, NGOs, mutual aid members, local hospitals and medical colleges, police, fire services, local municipalities and state government organizations like the APSDMA, SDRF, and the AP-PCB.
- The NDRF and SDRF, along with the director of factories closely examined their participation and preparedness in countering emergencies.
- Central government organizations such as the Indian Navy, Indian Air Force, NDMA and the NDRF participated in rescue operations, where the hazard demanded their assistance.
- Following table shows the participating districts along with the participating industries and coordinating officers for the chemical hazard mock drill.

Sl. No	District	Industry	Coordinating Officer
1	Srikakulam	Smart Chem Technologies Limited, Ponnada, Etcherla, Srikakulam	Sri B.Ram Babu, DCIF, SKLM
2	Vizinagaram	Mylan Labs Limited, G.Chodavarm, Pusapatirega, Vizianagaram	Sri O.V.V.S. ffarayana, DCIP, VZM
3	Visakhapatnam	The Andhra Petro Chemicals Limited, Opp. Naval Dockyard, Visakhapatnam	Sri J.Siva Samara Reddy JCIF,VSP
		Chemtech Alkoxides, Duvvada SEZ, Visakhapatnam	Sri Sudhakar,IF, VSP-I
4	Anakapalli	Vasant Chemicals (APSEZ) APSEZ, Atchyutapuram,Anakapalli	Sri Chinna Rao,IF, VSP-II
		Laurus Synthesis, JNPC Parawada, Anakapalli	Sri V.Suresh,DCIF,VSP
5	Kakinada	NCS industries Pvt Limited, Vakalapudi Kakinada	Sri D.Radha Krishna,DCIF KKD
		Devi Fisheries Limited, Panasapadu, Kakinada	Sri A Murali Krishna,IF, KKD-I
6	East Godavari	HPCL-Gail cross country pipeline, Gokavaram, Rajahmundry	Kum. swathi,IF, RJY
7	West Godavari	Andhra Sugars Limited, HTTP Plant, West Godavari	Sri R.Trinadha Rao,DCIF, ELR
		Anand Enterprises India Pvt Limited, Palakoderu, West Godavari	Sri B.Rama krishna,IP BVRM
8	Eluru	Prism Johnson Limited (Silica Ceramica Pvt Limited), Unguturu (M), Narayanapuram. Eluru	Sri Srinivasa Rao, IF, ELR

Sl. No	District	Industry	Coordinating Officer
9	NTR	Orch Laboratories Kondapalli, Ibrahimpalnam	Sri K.Srinivasa Rao DCIF,VJA
		Cohance Life Sciences Limited, Jaggaiahpetta	Sri T Raju, IF,VJA,
11	Prakasam	Devi Sea Foods, Singarayakonda, Prakasam District	Sri K.Pafameswara Rao, DCIF, ONG
12	Nellore	BPCL Plant, IP Port, Muthukur, SPSR Nellore	Sn Ch.Sailendra Kumar, DCIF HLR
14	Chittoor	Hindalco Industries Limited, Indl. park, Ekrlapalli, Chittoor	Sri H.Siva Sankara Reddy, IF, CTR
15	Kadapa	HPCL	Sri K.Krtsh na Nlurthy, DCIP, KOP
16	Kurnool	TGV SRAAC Limited. GondiparIa, Kurnool	Sri I.Narayana Reddy, DCIF XNL
17	Sri Satya Sai	British Paints, APIIC Industry Park, Gollapuram, Hindupur	Sri K.KesavuIu, OCIF, ATP

5. Line Departments and Central Agencies participated.

As directed by the NDMA, following line departments participated in the mock drill.

- Revenue department
- Police department
- Fire services.
- Health and medical department
- Andhra Pradesh Pollution Control Board (AP-PCB)
- Panchayat Raj
- Rural water supply

- Local municipal corporations
- Women and child welfare
- State Disaster Relief Force (SDRF)
- State/District Emergency Operations Centre

Central agencies were actively involved in the mock exercise. They are listed as follows:

- National Disaster Management Authority (NDMA)
- National Disaster Relief Force (NDRF)
- Indian Navy
- Indian Air Force
- Central Industrial Security Force (CISF)
- Central Reserve Police Force (CRPF)
- Naval Dockyard

6. Pre-ME operations carried out by SDMA:

Keeping in view its vulnerability to industrial accidents, the state of Andhra Pradesh had been selected for conducting Mock Exercise on Chemical Disasters on 07.03.2024. This exercise has been organized in two stages.

Stage – 1: Table Top Exercise on 05.03.2024

Stage – 2: Physical Mock Exercise on 07.03.2024

In pursuance of the instructions of the National Disaster Management Authority (NDMA), the following preparatory activities for conducting Mock Exercise on Chemical Disaster in the State have been taken up. The NDMA consultant, the Director of Factories, and the Executive Director of the APSDMA undertook the table-top exercise for the mock drill on 05.03.2024. This meeting was conducted to establish coordination between the DEOC, SEOC, participating industries, the district administration to ensure all preparatory measures are in place.

Following measures were ensured from the districts:

- Appointment of nodal officers and incident commanders.
- Appointment of observers to both offsite and onsite mock drills.

- Activation of DEOCs and MEOCs in all participating districts.
- Intimation to hospitals, medical officers, fire department, SDRF and NDRF
- Arrangement of relief camps, food and water supply and sanitation facilities.
- Arrangement for wide Publicity about conduct of physical ME through print and electronic media, CAP etc., the previous day of conduct of ME to make the local people free from fear and anxiety.
- WhatsApp groups created with the major stakeholders of ME.

7. NGOs, Community Groups, NSS/NCC/Apada Mitra participated.

A vital aspect of this mock exercise was to enhance collaboration between industries and external organisations like NGOs, Self Help Groups (SHGs), local governing bodies and the general public. Overall, NGOs from Srikakulam, Vizianagaram, West Godavari, Kakinada and Chittoor districts actively participated in the mock exercise to assist in rescue operations from the site and in relief camps. SHGs from Srikakulam, Kurnool and Sri Sathya Sai districts participated in the drill. While Visakhapatnam and Kadapa districts did not seek external help from NGOs and SHGs, industries in Srikakulam, Anakapalli, Sri Sathya Sai and Eluru districts involved the local community and area sarpanch.

Asha workers, Anganwadi, mutual aid and red cross society volunteers participated in rescue operations in Vizianagaram, Kakinada, Kurnool, West Godavari and Sri Sathya Sai.

NCC participants helped in hazard management operations in Sri Satya Sai district. Moreover, a large number of Aapda Mitra volunteers took part in assisting the rescue and relief operations from Srikakulam, Vizianagaram, Kakinada, Anakapalli, Chittoor and Kurnool districts.

8. Subject Matter Experts (SMEs) involved

Participating factories from Chittoor, Kurnool and Sri Sathya Sai districts utilised SMEs from neighbouring industries. 5, 2 and 3 SMEs were involved from Srikakulam, Kadapa and Nellore districts respectively. Industries in Vizianagaram

district had 44 SMEs, 13 from Anakapalli and Devi Fisheries Pvt Ltd and NCS Industries Pvt Ltd from Kakinada involved 4 and 9 SMEs respectively. Additionally, factories from Eluru and West Godavari used the SMEs, unlike Guntur and Visakhapatnam, who did not involve SMEs in the mock drill.

9. Local Universities, Medical Colleges, Nursing Schools and IITs participated.

Few local academic institutions participated in the mock exercise. 1 medical college, each from Kadapa, Chittoor and Kurnool districts volunteered to assist in providing medical assistance to injured people, without interfering in the daily whereabouts of the institution. Junior and degree colleges from Guntur and Eluru districts also participated in relief operations. Students from the Junior and degree college in Eluru district volunteered in the relief activities.

10. Industry Associations, Chambers of Commerce participated.

Active participation from neighbouring industries during the mock drill was taken up by Kakinada, Chittoor, Ananthapuramu and Eluru districts. Industry in Visakhapatnam involved all 17 MaH units in the drill. 6 industry associations in Vizianagaram, 2 in Anakapalli, 4 from Kakinada and 1 transport representative in Kadapa district is noted.

11. Local hospitals, Public Health Centres and Industry Medical Establishments participated.

In addition to medical and nursing colleges, significant role of local hospitals, Public Health Centres (PHCs) and medical staff from industries was observed in the mock exercise. While all participating districts ensured the involvement of local hospitals and PHCs, factories from Vizianagaram, West Godavari and Nellore made use of the industry-based medical establishment.

12.Details of Nodal Officers and Incident Commanders

Following table gives the details of the nodal officer associated with the factory and the respective district.

Sl. No	District Name	Factory Name	Name of Nodal Officer	Contact No.
1	Srikakulam	Smart Chem Technologies Limited,	Sri Rangayya, RDO, Srikakulam	9392599277
2	Vizianagaram	Mylan Labs Limited,	M.V. Suryakala, RDO, Vizianagaram	9491012021
3	Visakhapatnam	The Andhra Petro Chemicals Limited,	J Siva Sankar Reddy	9848484305
		M/s Chemtech Alkoxides Private Limited,	Sri K.Sudhaker, Inspector of Factories	9618789799
4	Anakapalli	Vasant Chemicals Pvt ltd,	V Suresh, Dy Chief Inspector of Factories	9491908225
		M/s Laurus Synthesis Private Limited,	S Ganapathi Rao, Tahsildar	9493909694
5	Kakinada	NCS Industries Pvt Limited,	D.Radha Krishna	9440174801
		Devi Fisheries Limited,	D.Radha Krishna	9440174801
6	West Godavari	Andhra Sugars Limited, HTPB Plant,	K.Chennaiah, RDO, Tadepalligudem	6281233255
		Ananda Enterprises IndiaPvt Limited,	K.Srinivasulu Raju, RDO, Palakonderu	6302023578
7	Eluru	Prism Johnson Limited (Previously known as Silica Ceramica Pvt Limited),	Sk. Kazavali, RDO, Eluru	9491041424
8	NTR	Orch Laboratories India Pvt Ltd,	B.S.V.S.R.L.Raju, Tahsildar	9849903999
		Cohance Life Sciences Limited,	G.V.Seshagiri	9849903996
9	Guntur	CCL Products India Ltd	Sri.M.V.Siva Kumar Reddy, Inspector of Factories	9440878658

Sl. No	District Name	Factory Name	Name of Nodal Officer	Contact No.
10	Prakasam	Glocell Chemical Industries P.Ltd	K.Parameswara Rao	9490889977
11	SPSR Nellore	BPCL Krishnapatnam Coastal Installation	Sri Ch Sailendra Kumar, Inspector of Factories	8555841701
12	Chittoor	Hindalco Industries Limited,	M.V.Siva Shankar Reddy, Inspector of Factories	7671824964
13	Kurnool	TGV SRAAC Limited,	Narayana Reddy, Deputy Chief Inspector of Factories	9010641556
14	YSR Kadapa	HPCL Cross Country Pipeline,	K M Krishnamurthy	8241515134
15	Sri Satya Sai	British Paints,	Apoorva Bharath I,A,S.	9493188809

Following table gives the details of the incident commander associated with the factory and the respective district.

Sl. No	District Name	Factory Name	Name of Incident Commander	Contact No.
1	Srikakulam	Smart Chem Technologies Limited,	Sri Rangayya, RDO, Srikakulam	9392599277
2	Vizianagaram	Mylan Labs Limited,	M.V. Suryakala, RDO, Vizianagaram	9491012021
3	Visakhapatnam	The Andhra Petro Chemicals Limited,	Sri Hussain Saheb, RDO, Visakhapatnam	9849903825
		M/s Chemtech Alkoxides Private Limited,	Sri K.Sudhaker, Inspector of Factories	9618789799
4	Anakapalli	Vasant Chemicals Pvt ltd ,	A.G. Chinnikrishna, RDO, Anakapalli	8978281888
		M/s Laurus Synthesis Private Limited,	Santhibhushan, Deputy Tahsildar	8500651489
5	Kakinada	NCS Industries Pvt Limited,	Itla Kishore, RDO, Kakinada	9849903864
		Devi Fisheries Limited,	Itla Kishore, RDO, Kakinada	9849903864
6	West Godavari	Andhra Sugars Limited, HTPB Plant,	K.Chennaiah, RDO Tadepalligudem	6281 233 255
		Ananda Enterprises India Pvt Limited,	K.Srinivasulu Raju, RDO Palakonderu	6302023578
7	Eluru	Prism Johnson Limited (Previously known as Silica Ceramica Pvt Limited),	Sk. Kazavali, RDO, Eluru	9491041424

Sl. No	District Name	Factory Name	Name of Incident Commander	Contact No.
8	NTR	Orch Laboratories India Pvt Ltd,	Bhavani Sankar, RDO, NTR	9849903965
		Cohance Life Sciences Limited,	Sri A.Ravindra Rao, RDO, Nandigama	9154970459
9	Guntur	CCL Products India Ltd	Sri.Prakhar jain,I.A.S., RDO, Tenali	9849904008
10	Prakasam	Glocell Chemical Industries P.Ltd	V.visweswararao, RDO Ongole	9281034448
11	SPSR Nellore	BPCL Krishnapatnam Coastal Installation	Sri A Malola, RDO Nellore	9849904055
12	Chittoor	Hindalco Industries Limited,	G.Sreenivasulu, RDO, Kuppam	9491074513
13	Kurnool	TGV SRAAC Limited,	M.Seshi reddy, RDO Kurnool	9849904163
14	YSR Kadapa	HPCL Cross Country Pipeline,	RDO, YSR Kadapa	9849904117
15	Sri Satya Sai	British Paints,	RDO, Penukonda	9493188809

13. Multiagency/multi-department Meetings conducted at District, Taluka & State level

Multi-agency and multi-department meetings were conducted at different levels. Following steps significantly backed the working of the mock exercise, to facilitate coordination between various stakeholders.

- Coordination and briefing between the NDMA, SDMA, Director of Factories and the Chair of District Collectors was conducted for finalisation of the action plan for the proposed mock exercise.
- All line departments, emergency services and response teams involved in the mock exercise were intimated to ensure quick response to the incident.
- Nodal officers and incident commanders were appointed for each factory.
- Roles and responsibilities of each official in the mock exercise was discussed at the District Collectors office.

- NDMA consultant visited a few factories on 06.03.2024 to discuss their working and hazard management methods.
- Preparedness activities, including training sessions, equipment readiness checks, and resource mobilization efforts, were coordinated.
- Roles, responsibilities, and chains of command for each participating agency or department were clarified during the mock exercise.
- Resource allocation, including personnel, equipment, and supplies, was coordinated to support emergency response efforts.
- Coordination with NGOs, SHGs, Aapda Mitra groups and general public was established not only to increase awareness, but to actively involve and prepare them for emergency response.
- Communication protocols and channels for real-time information sharing and coordination were established during the mock exercise.
- A table-top exercise was conducted on 05.03.2024 to improve preparedness and establish communication between the DDMA, APSDMA, NDMA and corresponding line departments.

14. Participation of DDMA committees in the mock exercise

The participation of District Disaster Management Authority (DDMA) committees during the mock exercise involved key stakeholders at the district level responsible for coordinating and managing disaster response efforts. The DDMA in Visakhapatnam and Guntur districts conducted a comprehensive meeting with the District Crisis Group (DCG), while Kadapa district involved the NDRF. The Mandal Revenue Office (MRO) and the Revenue Divisional Office (RDO) participated from Anakapalli.

All the DDMA committee members, like Revenue, police, fire, factories, AP-PCB, electricity, agriculture and transport departments actively participated in the mock exercise in Vizianagaram, Kakinada, Guntur, Kurnool, Srikakulam, Sri Satya Sai and Eluru districts. District Fire Service Officer and representatives of M&HO took part in the mock exercise in Nellore District.

15. Community Awareness Campaigns carried out by District/Industry

In order to alert the general public and spread awareness in the community about the importance of preparedness against chemical hazards in their neighbourhood, several methods were employed before and during the mock exercise.

Awareness campaigns via print media, posters, banners and pamphlets were conducted in Srikakulam, Vishakhapatnam, Vizianagaram, West Godavari, Kakinada, Kadapa and Anakapalli districts. In addition to print media, Srikakulam, Kakinada and Anakapalli spread alerts through tom toms and microphones on public transport or megaphones. Alerts through social media, hotline numbers, question and answer sessions from district and industry to public forums was specific to West Godavari district.

Preparatory meetings with village sarpanch, secretariat and local villagers was actively conducted in Vizianagaram district, along with an interactive session with school children at relief camps in Kurnool district. Similarly, community awareness campaigns were also carried out at Nellore, Chittoor and Sri Sathya Sai districts. Pre news bulletins were published in local newspapers in Eluru.

16. Community resources utilized during mock exercise

To assist in search and rescue operations during the mock drill, resources from the state government, DDMA and corresponding line departments were widely used. Industries in Visakhapatnam and Vizianagaram sought help from neighbouring industries. Srikakulam, Vizianagaram, Kakinada, Nellore, Kurnool and Eluru based participating industries used the relief camps and rehabilitation centers made available by Apada Mitra teams, NGOs, community centers, function/event

halls, schools, factory godowns and guest houses to accommodate victims of the hazard.

Additionally, local police, village heads, corresponding panchayat volunteers and local village volunteers helped in transportation of casualties. Support for mobilization and rescue from local village officials, along with NGOs, Asha workers, Anganwadis and SHGs was taken in nearly all participating districts.

17. Resource Mobilization during the mock exercise

Resource mobilization is crucial for organizations to effectively implement their plans and achieve their objectives. In this mock exercise, the industries categorized this in terms of manpower, equipment, materials, and supplies.

The local police, SDRF and NDRF personnel actively assisted, specifically in Srikakulam, Vizianagaram, Guntur and Kurnool districts.

The medical team, fire officials, Emergency Response Team (ERT), industry workers from the participating and neighbouring industries were primary in resource mobilization in all districts.

In terms of equipment, ambulances and first aid kits, fire tenders, communication devices including megaphones for onsite coordination, buses for transportation of injured people to hospitals and relief centers were readily kept and used during the hazard in sufficient numbers from all participating districts.

For scenarios involving gas leaks and blasts, gas detection systems, personal protective equipment, SCBA sets, cartridge and cannister masks, helmets, gloves, and goggles were used by the Emergency Rescue Teams and line department officials involved. This is specifically for use in industries in Srikakulam, Visakhapatnam, Vizianagaram, West Godavari, Kakinada, and Guntur districts to handle cases like Ammonia leak and LPG blast. Fire hazards also demanded a requirement of full pace respirators and fire suits, in addition to the above-mentioned protective equipment.

18. Use of technologies during mock exercise

The line departments, in good coordination with the ERT, could improve the rescue operations with the help of high-end technologies to detect and monitor the hazards.

On the spot communication devices like walkie-talkies were used by industries in Visakhapatnam, Vizianagaram, Anakapalli and Nellore districts.

Water sprinkling systems to dissolve gas leakage and foam monitors to contain fire outbreaks oil, petroleum and industries based on combustible liquids are remedies used in factories in Srikakulam, Visakhapatnam, Vizianagaram, Kurnool and Eluru districts.

In addition, factory in Chittoor district used an advanced multi gas detector for LPG vapour detection. Rim Seal Fire Protection System (RSFPS) and High-Volume Long Range (HVLRL) monitors were implemented in the industry in Kadapa for detecting extreme heat and fighting fire respectively. Process Hazard Analysis Software Tool (PHAST) and Incident Command Systems (ICS) in West Godavari district were useful for data generation and processing, situation reports and information flow via DEOCs.

Nellore based industry practiced an automated shut down of all process operations on intimation of a disaster, Local hooters at all operating areas, opening of barrier gates, turnstile gates and activation of electrical Sirens.

19. Data generated and data handling/processing during mock exercise.

During the mock exercise, significant data was generated and managed at various levels, including District Emergency Operations Centers (DEOCs) and State Emergency Operations Centers (SEOCs). Here's a brief overview of data generation, handling, and processing:

At Srikakulam DEOC, a control room was established, data was obtained from time to time and submitted to the SEOC. The DEOC coordinated with stakeholder by providing the required resources by coordinating with government authorities.

Status report, first damage assessment report, self-assessment report was generated by each stakeholder department official in Vizianagaram, Kurnool and Guntur districts. In Kadapa district, the deputy chief inspector of factories (DCIF) along with the occupier of the factory informed collectorate office, the NDRF, SDRF and the SEOC.

20. Scenarios and response carried out at each location

This mock exercise involved over 50 stakeholders from 17 districts in the state, with each district given a chemical disaster event associated with an industry, relating to possible scenarios of hazards in the workplace and their association with the district administration/district collector to tackle the same.

District wise scenarios for the chemical hazard are given as follows. As each industry was given an exclusive hazard to tackle, based on their production mechanisms, their response techniques were equally distinct.

a. Srikakulam

Scenario:

During Ammonia Road tanker unloading operation, nearby unloading platform area, Liquid isolation valve gasket got punctured resulting in Ammonia leak. During Ammonia Road Tanker 20.78 T unloading operation, nearby platform area liquid isolation valve flange leak resulting into the formation of toxic gas cloud. Ammonia concentration is found to be more than 300 PPM at the incident site, and due to wind direction, the ammonia gas gone behind the nearby village Simhapuri colony.

Response:

- Emergency Siren Blown by the Emergency Security Team
- Communication raised to evacuate all employees and workers move to the nearest assembly point.

- Fire Fighting Team arrived at site with SCBA Sets, lined up Fire hydrant network and Mayura Curtain arrangement to sprinkle water to control the ammonia gas spreading from incident location.
- All workmen, employees reached the assembly point and HR coordinator took the head count.
- Maintenance in charge was instructed to keep enough manpower ready for any maintenance activity and store in charge to issue material without any delay.
- Ambulance from Red cross society reached the off-site emergency spot as per the instruction of DCIF and shifted the victims to First Aid center.
- An evacuation vehicle was arranged to mobilize the villagers to Assembly point
- Public announcement system triggered to alert affected villagers to not panic and remain in the houses.
- People located outside reached assembly point located in their village by observing the wind direction. wet cotton hand kerchiefs were distributed to all the villagers.
- Mutual aid and Fire tender reached the offsite location and started rescue operations

b. Visakhapatnam

Scenario:

Propylene gas leakage detected from upstream flange of the bottom Remote Operating Valve (ROV) of Sphere-A, which contains 100MT of propylene. As efforts were made to control the flange leak, liquid Propylene unexpectedly flowed into the dyke, resulting in a spark during the flange leak containment. This spark ignited a jet fire, externally heating D-801A Sphere and causing a rapid increase in pressure and temperature inside the Sphere. Consequently, an offsite emergency was declared.

Response:

- Immediate operation of fire hydrant and monitors was done.

- Sprinklers were activated for cooling.
- Communication to statutory bodies was established.
- While mitigating the leak, Propylene caught fire from a nearby ignition source
- (Static charge), necessitating the evacuation of an offsite emergency for additional assistance.
- A notable incident occurred where 25 members (Firefighters, Rescue, maintenance, civil, etc.,) fell due to the thermal radiation effect.
- The mitigation process was estimated to take a minimum of 2 and half an hour, involving the Firefighting of Propylene, cooling of nearby equipment and preventing the tank temperature below boiling point.
- As a precaution, the surrounding area within 1.2 KM was declared a high alert zone until the situation was brought under control at the site.

c. Vizianagaram

Scenario:

Ethyl acetate solvent transferring from Storage tank to Road tanker is getting leakage from unloading valve & spread out on floor towards ammonia manifold area which is 25 ft away from spot & caught fire when workers tried to control valve. Due to this fire, nearby Ammonia manifold gasket got melted which is connected & 50 kg ammonia gas released and spread towards south wind direction where the village is nearly 1.5km away.

Response:

- After hearing the fire alarm, security person sent the ambulance to the incident spot immediately.
- Incident controller intimated to site controller-on site (Plant head), Safety head & Security to blow the emergency siren and alerting to ERT & other employees.
- Rescue team (Green jackets) rescued 02 persons (red category) from tank farm area with stretcher and decontaminated with body shower.
- Ambulance arranged for further shifting to Community Health centre.

- Simultaneously, evacuation was done from nearby blocks and workforce assembled at assembly points considering the wind direction.
- Fire fighters sprayed water using the monitor on road tanker to put off the fire according to wind direction and sprinkler system was area activated for cooling the tanks.

d. West Godavari

Scenario:

Ammonia gas leak from 0.5 Inch stainless steel hose pipe connected to 50 Kg (Liquid ammonia stored under pressure) of Ammonia cylinder. While charging Ammonia from Cylinder to Vessel through hose pipe length of 15 Mtrs, the burst of hose taken place.

Response:

- Immediate containment and clean-up control efforts were initiated by onsite ERT using neutralization of ammonia, dilution with water, specialized equipment.
- Emergency medical services (EMS) teams triaged, stabilized, and evacuated injured individuals to relief centre and medical facilities for further treatment.
- Evacuation routes were established to safely relocate residents to designated rehabilitation centres.
- Incident Command post (ICP) was established to unified command, streamline communication, and optimize resource allocation.

e. Kadapa

Scenario:

VDPL pipeline has developed a small hole (50 mm) during the excavation process. In this worst-case Scenario, Diesel leak release rate is 161 KL/Hr is envisaged with Probable The leakage of Diesel is traced on surface of HPCL VDPL Pipeline ROU. HPCL Maintenance, HSE, teams awaited at the site. It is

a level-3 Emergency. While attending to arrest the oil leak on HPCL Pipeline, fire broke out due to spark generated from nearby by villager's vehicle engine start.

Response:

- Combat team was instructed to activate rim seal fire protection system (RSFPS) of MS tank on intimation of fire.
- SIC immediately informed combat team to operate the High-Volume Long Range-HVLR monitors as per the wind direction.
- The communication team informed all Mutual Aid members and District authorities regarding the incident and informed that help could be required in case things are out of HPCL control.
- Deputy Chief Inspector of Factories (DCIF) took control of the incident as Chief Incident Controller and maintained up-to date communication with the HPCL team and the External Authorities.
- AP fires services department, mutual aid, NDRF and SDRF reported to the staging area. SDRF took casualties from yellow zone to the decontamination area and medical camp.
- On announcement of re-trigger, The AP Fire Services were directed for the cooling of tank TK201B from the South side while the VDPL Fire Tender was cooling the tank TK201B from the North side.
- NDRF and SDRF assisted to remove casualties from Red zone and carry them to the Medical Camp area. They also helped in shifting people with minor injuries to decontamination site.

f. Kakinada

Scenario:

Devi Fisheries Pvt. Ltd: Ammonia leak from condenser tank form and spread all over the factory, two workers involved in controlling operations got effected and also the ammonia vapours crossed the boundary of the factory and spread to the residential area located opposite to the factory. The above incident triggered an emergency effecting about 20 people working in the factory and

also created panic to the people residing opposite to the compound of the factory and required their evacuation

NCS Industries Pvt. Ltd: over flow of Motor Spirit (MS) from one of the storage tanks of capacity 2423 KL and accumulation of the MS in the bund around the tank and formation of MS vapours. These MS vapours got ignited from a nearby electrical source causing large fire and explosion. The above incident triggered an emergency affecting ten of people working in the factory and also created panic to the people residing adjacent to the compound of the factory and needs their evacuation

Response:

District Officials arrived to the spot and under the instructions of the incident commander carried out emergency mitigation procedures like mutual aid mobilization, setting up of triage, setting up of staging etc.and interacted with the population residing adjacent to the boundary of the factory.

g. Anakapalli

Scenario:

As per regular industry protocol, Chlorine gas passing activity was initiated at around 09:15 hours by two members, one from maintenance and another from production team under the supervision of the shift incharge. Chlorine gas passing was verified by the shift fitter initially and found no abnormality. When passing started by chemist to plant in presence of fitter and found minor leakage. Fitter tried to attend the leakage and found leakage from valve body. While performing Chlorine gas passing activity, suddenly Chlorine gas leakage occurred from the chlorine cylinder tonner in the regulator area, and it was not controlled inhouse, leading to emergency facility and consequently as an offsite emergency.

Response:

- Safety officer, Shift-In-Charge and ERT Members rushed to the incident spot with SCBA and full body PVC suit.
- First Aid team evacuated the first responder and called ambulance & Fire tender for further medical assistance.
- Ambulance arrived the incident area and send victims to the hospital.
- ERT team started leak detection by using of sodium torch and identified the chlorine leakage. They activated the emergency siren.
- All employees and contract labourers gathered at assembly point.
- The chlorine gas was controlled, and the accumulated chlorine was completely dissolved, but the ongoing sprinkling activity persisted.
- A trained individual, equipped with full personal protective equipment (PPE) and water hose, entered the chlorine gas water drain area.
- Following the Incident Controller's guidance, the site Incident Controller conveyed to the District Emergency Controller that everything was under control and Chlorine shredded the All Clear.

h. Guntur**Scenario:**

At the CCL products India Ltd, Guntur, an Ammonia leak at Separator Valve and a Fire at LPG leak at flange of line supplying to Burner in Roaster section were primary scenarios of the industry's chemical hazard.

i. SPSR Nellore**Scenario:**

12 KL capacity tanker and heavy vehicle Collision, Discharge valve Damaged heavily and HSD leakage occurred and caught fire due to friction caused by heat. Firefighting teams rushed to site. Emergency shutdown (ESD) operated as fire was from tank Lorry is observed. Due to the heavy leakage and HSD fire

at Gantry area, Level 2 emergency is declared. Also, neighboring industries are alerted, Mutual aid members informed.

Response:

- Emergency was activated and all operations were shut down.
- District administration is immediately informed.
- Mutual aid team also informed for medical emergency.
- Neighboring industries alerted.
- Mutual aid teams reach terminal for assisting in the emergency.
- Informed district authorities about the emergency.
- District authorities take control.
- Fire brigade and medical teams arrived.
- Road to terminal traffic was diverted.
- Evacuation teams on standby.
- Foam applied in tank lorry both sides.
- Evacuation and rescue operations continued.
- After ensuring no vapours were present, all clear was given.
- Decontamination activity performed.

j. Chittoor

Scenario:

At the LPG storage yard, LPG leakage from the flange of one-inch MS discharge line of LPG Bullet no.2 was spotted due to failure of gasket. As the LPG gas leaked from the pipeline and converted to vapour, it accumulated over the surface of the LPG yard, where one out of six leak detectors sensed the emergency and extended signal to the alarm centre located at the Maintenance office.

Response:

- Communication to Emergency response team and incident controller.
- Emergency was declared
- Activation of fire alarm by pulling the nearest manual call point

- All staff and workers reached the assembly point for head count
- Rescue operations were carried out by the APSDMF

k. Sri Sathya Sai and Ananthapuramu

Scenario:

At British Paints India Ltd., the main scenario is to handle major spillage of Enamel paint, which contains petroleum chemicals like Mineral Turpentine Oil in the paint filling area. This spillage resulted in toxic vapours around the area, declaring an emergency.

Response:

- Communication to emergency response team and incident controller was established and emergency was declared.
- Fire alarm was activated by pulling the nearest manual call point.
- All staff and workers reached the assembly point for head count.
- Rescue operations were carried out by the APSDMF.

l. Eluru

Scenario:

The Mock Exercise was organized in two levels to assess the preparedness of the organization as well as District Administration. Initially, leakage of Propane from Water discharge line of Propane Storage tank (121 Tons Capacity) leads to onsite emergency in the complex. Later, the Gas spread towards NTR Colony at the time Hotel Owner Ignited the stove and Major Fire caught caused triggering of Offsite scenario at NTR Colony (Chebrole) and resulted in multiple injuries which caused death to 3 workers (one is Inside plant Another one is Outside the Factory), severe injuries to 4 workers and minor injuries to 20 workers at the workplace. Since the impact crosses the boundary of the factory, they call for District Administration help. After explosion, jet fire continues and it is confined to factory premises. Factory management tries to mitigate the fire by

using their resources fire hydrant system and water sprinklers etc., but they could not able to control the fire.

Response:

- Hydro Carbon sensors Alarmed due to Propane Gas leaked from Drain pipe line.
- The Site Controller Declared Level -2 Emergency and Siren was alarmed.
- Combat team attend the spot to arrest the leakage with wearing Fire suit & SCBA Set.
- The ERT evacuating nearest Persons from the Red zone to Green zone.
- The Incident Commander Alerted Fire, Police, Revenue, APPCB, Medical, Transport Departments officials etc.
- The fire Brigades Controlling the fire and AP SDMA Team evacuating the nearest Public to Relief Centre
- The Medical team identified the victims as severe, the team shifted to Hospital immediately and those who were identified for minor injuries were given First aid.

m. Kurnool

Scenario:

At Liquid Chlorine storage building, 4 tanks of 100 MT capacity of each are available. Out of 4 tanks 1 tank is always kept empty to use in case of any emergency to transfer Chlorine from other tanks. Out of 3 tanks 1 tank will be receiving liquid Chlorine from Process. 2nd tank is used to transfer liquid Chlorine from storage tank to Chlorine filling station. 3rd tank will be readily available for receiving production if running tank is full. Liquid Chlorine is transferred from storage tank to filling station by pressurising the tank up to 12 kg/cm² pressure using padding air. At present 10 Chlorine filling points are in operations out of 14 No's. Out of 10 filling points 6 filling points will be in filling condition. The operator is carrying out the filling activity. Suddenly large quantity of Chlorine leakage observed from the transfer line from liquid storage tank to filling station. Due to leakage of liquid chlorine the leaked liquid from

the pipeline created a toxic vapour cloud pool at the leakage point. The operator observed that the auto shutoff valve is not closed inspite of Chlorine concentration is beyond 5 PPM. Due to large quantity of liquid leakage the vapours from the area started going beyond the factory premises towards nearby village as the wind direction was towards of the nearest village.

Response:

- Control room engineer announced onsite emergency in the area.
- All employees reported to the assembly point, after wind direction was noted.
- Incident Controller reported at the scene wearing personal protective equipment.
- Site controller informed the DEOC and made incident characterization with Deputy Chief Inspector of Factories, Environmental Engineer of APPCB and other stake holders, declaring offsite emergency and deployment of manpower and equipment to meet the emergency situation.
- Mutual Aid PPEs and 4 Ambulances arrived at the site and started their activities. 6 teams comprising Fire, SDRF and NDRF crew reached the incident site duly wearing appropriate respiratory PPE and started searching and rescue operations and shifting of affected persons to Medical Aid Post.
- Traffic was controlled and diverted personnel and the Pollution monitored air pollution from emergency.

n. Prakasam

Scenario:

A violent collision of two tankers containing with solvents (Hexane & Toluene) parked on the road at the gates of the Keyv's Generic Pvt. Ltd Unit-II & Glocell Chemical Industries (P) Ltd., took place in the Gundlapalli Industrial Growth Centre. As a result, large quantity of solvents started leaking from both tankers.

Due to static charges present on tank bodies, the leakage subsequently lead to fire and resulted in burning of remaining solvent in Tank truck. As the fire seems to be uncontrolled, the Glozell Chemical Industries Pvt Limited management informed to the Dy. Chief Inspector of Factories, Ongole and declared it as off-site emergency.

Response:

- After spotting the incident, the security guard alerted it to nearby industries.
- Inhouse fire teams started controlling the leakage, which aggravated into a fire hazard due to static charges.
- All employees including those in nearby industries were immediately evacuated.
- Power supply was cut off.
- State fire brigade and combat team members reported to diffuse the fire and help evacuate injured persons to medical camps.
- Assistant Environmental Engineer monitored the LEL levels around both tankers and leakage area.
- Police handled traffic divergence in the area.

o. NTR

Scenario:

Cohance Life Sciences Ltd: MS vertical tank ST-21 body valve leakage heavily. Hydrocarbon Toluene smell was observed and rescue, spill management, firefighting teams rushed to the leak site area. Emergency shutdown (ESD) operated as heavy leak from tank body valve is observed. Due to the heavy leakage Toluene filled in the dyke area and vapour cloud formed in the tank farm area. Emergency declared. Neighboring industries alerted; Mutual aid members informed.

Heavy vapours began spreading outside of site premises, and due to spark generation from unknown sources, vapour cloud explosion took place effecting the facilities in the factory premises and area beyond the factory boundary.

Emergency was declared and the district authorities were informed of an offsite emergency.

Response:

- Site controller acted immediately to estimate further consequences in consultation with emergency coordinators.
- APSDMA was intimated about the hazard.
- All ERT members were instructed to start the mitigation operations
- Sprinklers and water/foam monitor were activated
- All tank lorries were evacuated from the site to control fire and evacuate injured people.

21. Strengths, limitations and gap areas identified

Strengths:

- Most factories reported good cooperation between workforce and stakeholders for carrying out search, rescue and mitigation operations during the mock drill.
- Good coordination between the ERT, mutual aid, NDRF, SDRF, fire team, medical team, and neighbouring industries to facilitate quick response for search and rescue was reported in Srikakulam, Visakhapatnam, West Godavari, Kadapa, Kakinada, Anakapalli, Nellore, Kurnool, Ananthapuramu, Sri Sathya Sai and Eluru districts.
- Srikakulam based factory installed Ammonia detectors at various locations around the plant.
- The Indian Navy actively participated in the industry based in Visakhapatnam.
- The factory in Anakapalli made sure to locate the chlorine shed away from the production and manufacturing blocks to avoid spread of toxic gases.
- Availability and use of good decontamination equipment, PPE, sprinkler systems, barricades for the security area and traffic control measures were major strengths mentioned by the industries to carry out the mock exercise.

- Overall, manpower, equipment and materials were effectively used. People from nearby villages participated in the exercise. Interagency collaboration, like the state government, central government, line departments and neighbouring industries and community participation was established in most districts.

Limitations:

- While numerous factories mentioned good communication and coordination between the stakeholders, government agencies and general public as their strengths, industries in Vizianagaram and Chittoor districts mentioned difficulty in lines of communication between factory workforces, line departments and government authorities.
- Visakhapatnam based factory reported difficulty in coordinating with the Indian Navy to inform about the exercise.
- Traffic congestion between approach roads to villages and bottlenecks, unavailability of local police, medical facilities at faraway places lead to delay in transportation, restricted movements of emergency vehicles and hectic evacuation.
- Response agencies are not well familiarized with the usage of equipment provided during the mock exercise.
- Equipment shortages like firefighting equipment, SCBA sets, PPE, security barricades, inefficient decontamination procedures were noted.
- Lack of communication devices, inaudible sirens and short supply of walkie talkies.
- Barricades were not properly placed. Unauthorized people were spotted in the red zone.
- Lack of awareness among work force team members, coordination between stakeholders and the general public.

Gap Areas:

- A major gap is stated in the area of need for enhanced training and capacity building initiatives among SDRF to address skill gaps and readiness in the event of chemical hazards.
- The whole district administration must be involved
- Local hospitals and medical centers should create special units to deal with the injuries due to the area's specific chemical hazards.
- More directional boards and signals should be installed near the factory.
- Road network should be more robust in and around the industry premises.
- Awareness among general public should be emphasized.

22. Traditional as well as out of the box response and survival strategies employed

➤ Containment, Dilution/Neutralization and Firefighting:

Traditional response strategies such as dilution of ammonia with Large quantity of water or containment of fire outbreaks using foam to control the spillage and suppress the spread of the gas/fire.

➤ Medical Evacuation and Treatment:

Standard medical evacuation procedures were followed to transport injured individuals to nearby hospitals and medical facilities for further treatment.

➤ Evacuation and Sheltering:

Traditional evacuation and sheltering strategies were implemented to relocate workers from affected areas to designated assembly points and rehabilitation shelters.

➤ Communication:

Internal emergency communication such as walkie talkies, public addressing system, emergency siren and external communication systems like auto rickshaws, tom toms and microphones were used.

➤ Timely Medical Assistance:

Prompt medical assistance and evacuation of injured individuals to nearby hospitals were essential survival strategies to ensure timely treatment and minimize the impact of injuries and chemical exposure.

➤ Interagency Collaboration:

Effective collaboration among response agencies and stakeholders, including mutual aid members and district emergency authorities, facilitated a coordinated response and enhanced survival outcomes during the mock exercise.

➤ Technology advancement:

Sensor installation in the borders of the industry premises to alert individuals of an emergency is highly innovative. Updation of factory sytem with latest technologies from other industries would be beneficial, depending on the focus area.

23. Media engagement

DPROs attended the mock exercise, along with videographers and photographers. Mock exercise was publicized via print and electronic media.

Media was briefed the mock exercise by respective nodal officers and incident commanders.

Details of the mock exercise were published in HINDU newspaper, Enadu and Sakshi electronic and print media.

The SEOC coordinated the entire mock exercise from the APSDMA



24. Lessons learnt

The mock exercise provided several valuable lessons that can enhance emergency preparedness and response capabilities. Here's a brief overview of the lessons learned:

- Importance of Equipment Maintenance: The exercise highlighted the critical need for regular maintenance and inspection of equipment, especially valves and firefighting apparatus, to prevent malfunctions and ensure readiness during emergencies. A catalogue of industry, equipment arranged and materials used during the mock exercise should be maintained.
- Effective Communication Protocols: Clear and reliable communication channels are essential for coordinating response efforts. District administration should actively involve in coordination between line departments and mutual aid members. The exercise underscored the importance of establishing robust communication protocols and backup systems to overcome communication challenges and facilitate timely information sharing among response teams and stakeholders.

- Training and Preparedness: Comprehensive training programs are vital to equip emergency responders with the necessary skills and knowledge to handle complex incidents effectively. ERT should be well equipped with SCBA sets and PPE. Local police should be able to manage ongoing traffic in the area to avoid delayed entry and roadblocks. Firefighting team should wear proper gear to regulate emergency responses. The exercise emphasized the importance of ongoing training and preparedness initiatives to enhance response capabilities and ensure a coordinated and efficient response.
- Community Engagement: Engaging with local communities is crucial for fostering resilience and ensuring effective response to emergencies. The exercise demonstrated the importance of community involvement in response activities, including evacuation procedures and support for injured individuals, highlighting the need for continued community outreach and education efforts.
- Interagency Coordination: Effective coordination among response agencies and stakeholders is essential for a unified and efficient response. The factories department could share information about mock drills or actual hazards through a WhatsApp group, where all district groups are present. The exercise revealed the importance of clear command structures, interagency cooperation, and regular communication to optimize resource allocation and response efforts during emergencies.
- Resource Allocation and Procurement: Adequate resources, including specialized equipment and supplies, are essential for effective emergency response. The exercise identified the need for improved resource allocation processes, timely procurement of essential supplies, and strategic resource management to address equipment shortages and enhance response capabilities.
- Continuous Improvement: Regular evaluation and review of response plans and procedures are essential for identifying areas for improvement and

incorporating lessons learned from exercises and real-world incidents. The exercise emphasized the importance of continuous improvement and adaptation to evolving threats and challenges to enhance overall emergency preparedness and response effectiveness.

- Zone classification at the incident area should be done according to NDMA standards & procedures.
- Gate passes for hassle-free entry of line departments, district and state officials into the factory premises should be issued well in advance.
- Standard procedure of decontamination during chemical emergencies should be established.

25. Recommendations and comments from districts, industry, state line departments and NDMA

- To initiate more disaster awareness trainings and maintain its continuity for effective preparation of upcoming offsite mock drills.
- The district authority shall focus on conducting coordination meetings by involving all state holders for smooth and accurate response all individual at the time of emergency situations.
- Special training should be organized for plant ERT teams with coordination of NDRF, APSDRF regularly to improve their competency as well as effective first response at the factories.
- Proper Identification of incident commander like special helmet / vest is required for easy reporting by the outside agencies.

- Naval Dockyard should provide a single point of contact as it was difficult to them in case of emergency.
- Food arrangement to be made at the Rehabilitation Centre.
- Landline connection should be used instead mobile due to weak signals inside factory premises.
- Access control to hot zone area to be established to check PPE, Vehicle Control, etc. The transport departments shall maintain data base about emergency vehicles including ambulances and buses.
- More number of Sign boards for easy reaching of the factory to be arranged for faster reach out to destination.
- Proper Identification of incident controller and Safety Officer like special helmet / Vest is required for easy reporting by the outside agencies.
- The community residing in proximity to the factory shall be frequently trained and educated about the precautions to be observed in case of Ammonia leakage.
- Districts, industries, and state line departments recommended the development of comprehensive training programs for emergency responders, focusing on hazmat handling, firefighting techniques, and medical response to better prepare personnel for complex incidents.
- Improving communication infrastructure, including the installation of redundant communication systems and the establishment of backup channels, was suggested to address communication challenges experienced during the exercise and ensure seamless information sharing during emergencies.

- Recommendations were made to develop clear interagency coordination protocols, streamline command structures, and clarify roles and responsibilities to optimize coordination and collaboration among response agencies and stakeholders during emergencies.
- Districts, industries, and state line departments highlighted the need for conducting regular mock drills and exercises to test response capabilities, identify areas for improvement, and enhance overall readiness to effectively manage emergencies.
- There were suggestions to review and update existing emergency response plans based on lessons learned from the mock exercise, incorporating feedback from stakeholders and incorporating emerging best practices in emergency management.
- Encouragement was given for fostering stronger public-private partnerships to leverage resources, expertise, and capabilities from both sectors to enhance emergency response resilience and effectiveness.

26. Improvement plan and targets to be achieved before next mock exercise for DDMA, DEOC, SDMA and SEOC

- The communication about the Off-Site Emergency to the government authorities shall be improved through a lesioning team of the company, such as Police, SDRF & other Government authorities.
- Financial assistant is to be arranged by the SDMA or NDMA to meet the expenditures at rehabilitation centres.

- Indian Navy and Naval Dockyard should provide their contact details to the industries. Revenue and Police officials shall be trained in Hazardous chemicals handled in the industry and their consequences.
- Comprehensive training programs should be implemented for emergency responders, focusing on hazmat handling, firefighting techniques, medical response, and incident command.
- Installation of redundant communication systems, backup power sources, and satellite communication devices. Conduct regular testing and maintenance of communication equipment.
- Conduct comprehensive assessments to identify resource gaps and prioritize procurement of essential equipment and supplies. Implement inventory management systems to track and maintain resource levels. Establish mutual aid agreements with neighboring jurisdictions and industries to augment resource capabilities.

Annexure – I
District Wise Mock Exercises Photos

Srikakulam



Visakhapatnam





Vizianagaram





West Godavari





Kadapa



Kakinada



Anakapalli



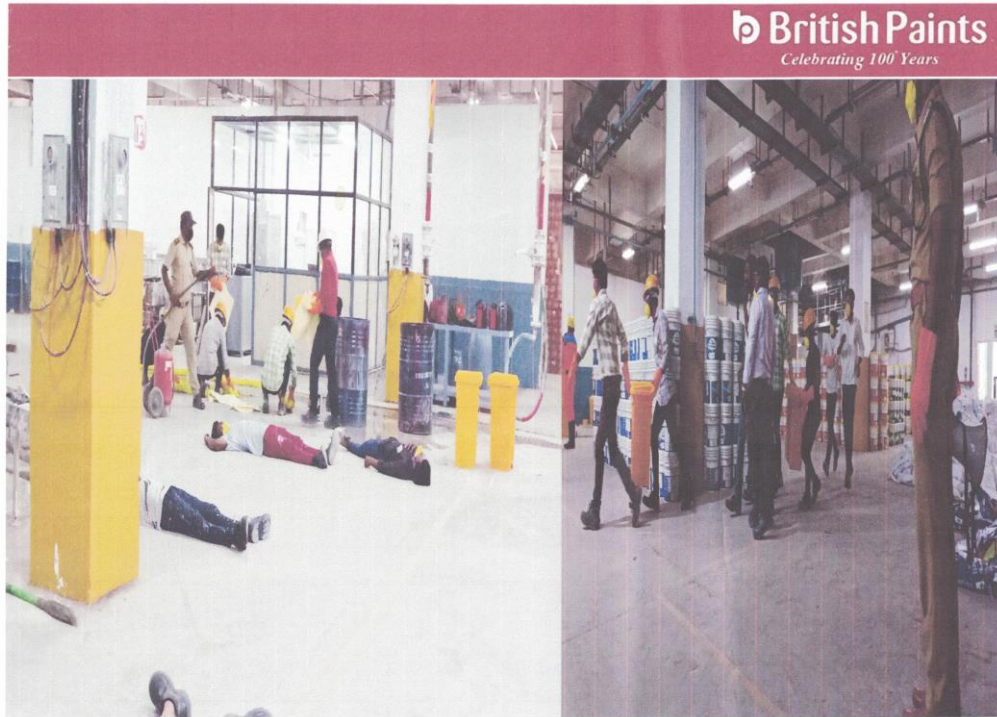
Chittoor



Kurnool



Sri Sathya Sai and Ananthapuramu



Eluru



SPSR Nellore



Prakasam

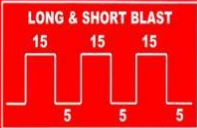


NTR

EMERGENCY SIREN CODE


INTERRUPTED WAILING SOUND OF SIREN FOR 15 SECONDS DURATION WITH A GAP OF 5 SECONDS FOR 1 MINUTE (EMERGENCY DECLARATION SIREN)

LONG & SHORT BLAST



30 SECONDS CONTINUOUS SOUND OF SIREN WILL INDICATE ALL CLEAR (RESTORATION OF NORMALCY)

CONTINUOUS BLAST



గమనిక
ప్రతి గురువారం ఉదా 10-00 నా 10 కు ఎమర్జెన్సీ సైరన్ టెస్ట్ చేయబడును.
టిస్టింగ్ సమయంలో కంఠారు పడవద్దు.
CAUTION
TESTING OF EMERGENCY SIREN EVERY THURS DAY AT 10.00 A.M
Compiled by EHS (Safety Wing)



Annexure – II
Newspaper Clippings

కెమికల్ విపత్తులపై మాక్ డ్రిల్

17 జిల్లాల్లో 22 ఫ్యాక్టరీల్లో సన్నాహక చర్యలు

అమరావతి, ఆంధ్రప్రభ: రాష్ట్ర విపత్తుల నిర్వహణ సంస్థ ఆధ్వర్యంలో డిపార్ట్మెంట్ ఆఫ్ ఫ్యాక్టరీస్ సహకారంతో 17 జిల్లాల్లోని 22 ఫ్యాక్టరీల్లో గురువారం కెమికల్ డిజాస్టర్స్ మీద గురువారం మాక్ ఎక్సర్సైజ్ నిర్వహించారు. విపత్తుల సంస్థ కార్యాలయం నుంచి ఆ సంస్థ ఎండి రోణికి కూర్మనాథ్, రిటైర్డ్ కమాండెంట్ ఆదిత్య కుమార్ ఎస్టీఎంఎ, ఎస్టీఆర్ఎఫ్ కమాండెంట్ జాహెద్ ఖాన్, జాయింట్ డైరెక్టర్ వైద్య ఆరోగ్య శాఖ, ఎస్టీఎంఎ ఈడి నాగరాజు, డైరెక్టర్ ఆఫ్ ఫ్యాక్టరీస్ డి.ఎస్. సి వర్మతో కలిసి మాక్ ఎక్సర్సైజ్ వీడియో కాన్ఫరెన్స్ ద్వారా పర్యవేక్షించినట్లు వివరించారు. మాక్ ఎక్సర్సైజ్ రెవెన్యూ, ఆరోగ్య, ఎడ్యుకేషన్, రవాణా శాఖ, పోలీస్, ఫైర్, ఎస్టీఆర్ఎఫ్, ఎస్టీఆర్ఎఫ్, ఇతర శాఖల అధికారులు, ఫ్యాక్టరీల సిబ్బంది, ఎస్టీవో సంస్థలు పాల్గొన్నారు. ఈ సందర్భంగా ఎస్టీఎంఎ నుంచి వచ్చిన రిటైర్డ్ కమాండెంట్ ఆదిత్య కుమార్ మాట్లాడుతూ ఈ మాక్ ఎక్సర్సైజ్ వలన కెమికల్ డిజాస్టర్స్ జరిగినప్పుడు ఏ విధంగా పరిశ్రమల యజమాన్యం, జిల్లా యంత్రాంగం వెంటనే స్పందించి ప్రాణ, ఆస్తి నష్టం జరగకుండా సత్వరం తీసుకోవాల్సిన చర్యలతోపాటు లోటుపాట్లు గురించి అధికారులకు అవగాహన కలుగుతుందని తద్వారా అవి సరిచేసుకోవడం వలన రియల్ టైమ్ లో సజ్ఞాన్ని తగ్గించగలుగుతామని తెలిపారు. విపత్తుల సంస్థ ఎండి రోణికి కూర్మనాథ్ మాట్లాడుతూ సహజ, మానవ నిర్మిత విపత్తులతోపాటు కెమికల్ డిజా



స్టర్స్ పై విపత్తుల సంస్థ దృష్టిసారించిందని చెప్పారు. ముందస్తు అవగాహన కార్యక్రమాలు, జాగ్రత్త చర్యలతోపాటు ప్రణాళికలు రూపొందించడం వలన రసాయనిక ప్రమాదాల స్థాయిని తగ్గించుకోవచ్చని అన్నారు. ఈ మాక్ ఎక్సర్సైజ్ ద్వారా కెమికల్ డిజాస్టర్స్ సంభవించినప్పుడు ప్రమాద స్థాయిని, తీవ్రతను తగ్గించడానికి దోహదపడుతుందని చెప్పారు. అధికారులతోపాటు, ప్రజలకు కెమికల్ ఫ్యాక్టరీలో ప్రమాదం జరిగితే స్థానికంగా అప్రమత్తతో ఉండి, అధికారులకు, సహాయక బృందాలకు సహకరించడం వంటి వాటిపట్ల మాక్ డ్రిల్ తో అవగాహన కలుగుతుందన్నారు. మాక్ ఎక్సర్సైజ్లో భాగంగా ఫ్యాక్టరీల్లో రసాయనిక ప్రమాదం జరిగితే ఎలా ప్రతిస్పందించి చర్యలు తీసుకుంటారో ప్రత్యక్షంగా చూపించారు. ఫైర్ సిబ్బంది వచ్చి ఫ్యాక్టరీలోని మంటలు ఆర్పడం, ఫ్యాక్టరీ సిబ్బందిని రెస్క్యూ చేయడం, స్థానిక ప్రజలను పునరావాస కేంద్రాలకు తరలించడం, మెడికల్ క్యాంపులు నిర్వహించడం, త్రాగునీరు మరియు ఇతర వసతులు ప్రత్యక్షంగా ఏర్పాటు చేయడం జరిగిందని వివరించారు.

Mock drills on preparedness for industrial accidents mark National Safety Week in Andhra Pradesh

Similar exercises conducted in 17 districts demonstrated a concerted effort to improve emergency preparedness and response capabilities, says APSDMA Managing Director Ronanki Kurmanath

March 07, 2024 08:53 pm | Updated 08:53 pm IST - GUNTUR

SAMBASIVA RAO M.



Participants during a mock drill on chemical accident at the Duggirala unit of CCL Products India Limited in Guntur on Thursday. | Photo Credit: Special Arrangement

In a bid to ensure better preparedness for emergencies, a mock exercise was organised jointly by the National Disaster Management Authority (NDMA) and Andhra Pradesh State Disaster Management Authority (APSDMA) at the Duggirala unit of CCL Products India Limited in Guntur on March 7 (Thursday).

Similar mock drills were conducted simultaneously in 22 other locations in 17 districts, demonstrating a concerted effort to improve emergency preparedness and response capabilities, APSDMA Managing Director Ronanki Kurmanath said in a statement. Such drills were conducted as part of the National Safety Week campaign, which is being

The simulation drill aimed to address potential hazards such as ammonia and LPG leaks and mitigate the risks to life and property. It is the first-of-its-kind exercise in the State where two emergency scenarios—leakage of toxic ammonia and LPG—were simulated at a single factory.

The participants handled both onsite (within the premises of the factory) and offsite (outside the premises of the factory) situations. In the first stage, the mock drill was conducted onsite by deploying the factory employees. Later, the district administration roped in the line departments to mitigate the damage.

The off-site mock drill was supervised closely to ensure swift and effective response measures, said M.V. Siva Kumar Reddy, nodal officer for the exercise and Deputy Chief Inspector of Factories, Guntur. They said more than 150 officers from various line departments participated in the exercise undertaken at the Duggirala factory.

The skilled management teams from the Coca Cola factory, Sangam Dairy, Jocil and others acted as mutual aid during the exercise.

In a simulated situation, medical aid posts were set up by the district administration, where five individuals affected by ammonia exposure received prompt treatment. Six individuals with burn injuries were also attended and four of them were shifted to the government hospital in Tenali. All individuals were discharged after receiving the necessary medical care.

Employees of various departments, five ambulances, two medical teams, and personnel from Apada Mitra, Anganwadi workers, fire, SDRF, NDRE, APPCB, DPRO, health, police and other departments participated in the drill.

THE  HINDU

Srikakulam

సాక్షి

ప్రమాదాల నియంత్రణపై అవగాహన

ఎచ్చెర్ల క్యాంపస్: పొన్నాడ మహాధన్ ఆగ్రిటెక్ లిమిటెడ్ పరిశ్రమ, పరిసర ప్రాంతాల్లో గురువారం అత్యవసర మాక్ డ్రిల్ నిర్వహించారు. జాతీయ, రాష్ట్ర ప్రకృతి విపత్తులు శాఖ ఆధ్వర్యంలో అవగాహన కార్యక్రమాన్ని చేపట్టారు. అమ్మోనియా గ్యాస్ లీక్, ఇతర ప్రమాదాల సమయంలో తీసుకోవల్సిన జాగ్రత్తలు, ప్రజలు రక్షణకు తీసుకోవల్సిన చర్యలపై మాక్ డ్రిల్ నిర్వహించారు. అగ్నిమాపక శాఖ, ఇతర అత్యవసర సర్వీసులు, పరిశ్రమ సిబ్బంది, స్థానిక ప్రజల్లో అవగాహన కల్పించారు. ఆర్డీవో రంగయ్య, ఏపిపీసీఏ అధికారి రామారావు



పరిశ్రమ ఆవరణలో అవగాహన కల్పిస్తున్న అధికారులు నాయుడు, డిప్యూటీ చీఫ్ ఇన్ స్పెక్టరాఫ్ ఫ్యాక్టరీస్ రాంబాబు తో కూడిన అధికారులు పర్యవేక్షించారు.

08/03/2024 | Srikakulam | Page : 9
Source : <https://epaper.sakshi.com/>

Visakhapatnam

సాక్షి

దువ్వాడ వీఎస్ఈజెడ్ ఆవరణలో మాక్ డ్రిల్

అగనంపూడి: దువ్వాడ వీఎస్ఈజెడ్ ఆవరణలో కేమిటెక్ ఆల్టోసైడ్స్ కర్మాగారంలో గురువారం మాక్ డ్రిల్ నిర్వహించారు. రసాయన కర్మాగారాల్లో రసాయనాల పేలుళ్లు సంభవించినప్పుడు, ప్రమాదాలు జరిగినప్పుడు మంటలను ఎలా అదుపు చేయాలి, క్షతగా

త్రులను ప్రమాదం బారి నుంచి తప్పించేందుకు ఎలాంటి చర్యలు చేపట్టాలో మాక్ డ్రిల్ ద్వారా భద్రతా సిబ్బంది వివరించారు. దువ్వాడ వీఎస్ఈజెడ్ ఏడీసీ ప్రసన్నకుమార్, గాజువాక తహసీల్దార్ శ్రీవల్లి, ఇతర విభాగాల అధికారులు పాల్గొన్నారు.



ఫోమ్ తో మంటలను అదుపు చేస్తున్న సిబ్బంది

08/03/2024 | Visakhapatnam(Gajuwaka) | Page : 9
Source : <https://epaper.sakshi.com/>

Vizianagaram

సాక్షి

మైలాన్ లో విష వాయువు లీక్ ?

- పలువురు కార్మికులకు అస్వస్థత
- విపత్తును సమర్థంగా ఎదుర్కోవడానికి యంత్రాంగం

పూసపాటిదేగ: మండలంలోని ఓ రసాయన పరిశ్రమలో ఉదయం 10 గంటల సమయంలో స్టోరేజీ ట్యాంకు నుంచి ట్యాంకర్ లోకి రసాయనాన్ని ఎక్కిస్తుండగా, అన్ టోడింగ్ వాల్ట్స్ పద్ద రసాయనం కొద్దిగా లీక్ అయింది. అదే సమయంలో ఒక్కసారిగా మంటలు చెలరేగాయి. ఆ వేడికి గ్యాస్ కట్ కరిగిపోయిన కారణంగా సమీపంలో 50 కిలోలు అమోనియా సిలిండర్ కు జతచేసిన ఉన్న ఫైవలైన్ నుంచి ఒక్కసారిగా ప్రమాదకరమైన అమోనియా గ్యాస్ లీకైంది. ఇది వ్యాపించి అక్కడ పనిచేస్తున్న సిబ్బందిపై తీవ్ర ప్రభావం చూపింది. లీకైన గ్యాస్ పరిశ్రమ దక్షిణ దిశగా 1.5 కిలో మీటర్ల దూరంలోని చోడమ్మ అగ్రహారం వైపు ప్రయాణించింది. గ్యాస్ లీకైన వెంటనే దీనిని గుర్తించిన భద్రతా పరికరాలు సిబ్బందిని హెచ్చరిస్తూ అలారం మోగించాయి. అంతే ఒక్కసారిగా కార్మికులు భయభ్రాంతులకు గురై పరుగులు తీయడంతో పరిశ్రమలో ఆందోళన నెలకొంది.

ఈ నేపథ్యంలో ఫ్యాక్టరీ భద్రతా విభాగం హుటాహుటిన రంగంలోకి దిగి ప్రమాద సైరన్ మోగిస్తూ సిబ్బందిని హెచ్చరించారు. మాస్కులు, సేఫ్టీ సూట్లు ధరించి సంఘటనా స్థలానికి చేరుకుని ప్రమాదాన్ని అదుపుచేసే చర్యలు ప్రారంభించారు. చుట్టుపక్కల చెలరేగిన మంటలను నీటి ట్యాంకర్లతో ఆర్పివేశారు. ప్రమాదానికి గురైన కార్మికులను అంబులెన్సులో ఆస్పత్రికి తరలించారు. ప్రమాదం జరిగిన విషయాన్ని జిల్లా అధికారులకు, ఫ్యాక్టరీ భద్రతా విభాగం అధికారులకు సమాచారం ఇచ్చారు. **అప్రమత్తమైన జిల్లా యంత్రాంగం** ప్రమాదవార్త తెలిసిన వెంటనే జిల్లా యంత్రాంగం అప్రమత్తమైంది. రెవెన్యూ, ఫ్యాక్టరీస్, విపత్తుల నిర్వహణ సంస్థ, ఎన్ డీఆర్ ఎఫ్, కాలవ్యవస్థ నియంత్రణమండలి, అగ్నిమాపకశాఖ అధికారులు ఫ్యాక్టరీ వద్దకు చేరుకుని శాఖా పరమైన విధులు నిర్వహించారు. గేటు బయట ఏర్పాటు చేసిన స్టాంప్ ఏరియా నుంచి సహాయక చర్యలను సమీక్షించారు. ఫ్యాక్టరీ బయట ప్రథమ చికిత్స కేంద్రం, సహాయ శిబిరాలను ఏర్పాటు చేశారు.

స్వల్పంగా గాయపడిన వారిని వలం టీర్లు శిబిరానికి తరలించి చికిత్స అందించారు. కొద్దిసేపటికి పరిస్థితిని అదుపులోకి తీసుకువచ్చారు. సమీప గ్రామం చోడమ్మ అగ్రహారం ప్రజలను ఈ ప్రమాదకరమైన గ్యాస్ బారిన పడకుండా, గ్రామ సమీపంలోని పునరావాస కేంద్రానికి తరలించారు. అయితే ఇదంతా నిజమైన ప్రమాదం కాదు. ఒక వేళ ఇలాంటి ఉపద్రవం సంభవిస్తే, దానిని సమర్థవంతంగా ఎదుర్కోవడానికి జిల్లా యంత్రాంగాన్ని సన్నద్ధం చేసే చర్యల్లో భాగంగా పూసపాటిదేగ మండలంలోని గైతులచోడవరం సమీపంలో గల మైలాన్ ల్యాబొరేటరీస్ లో నిర్వహించిన మాక్ డ్రిల్ ఇది.



అంబులెన్సులో క్షతగాతులను తరలిస్తున్న దృశ్యం

West Godavari

సాక్షి

రాకెట్ ఇంధన పరిశ్రమలో హై అలర్ట్

- ఎన్ డీఆర్ ఎఫ్, ఫైర్ శాఖల అధికారుల అప్రమత్తం
- మాక్ డ్రిల్ కావడంతో ఊపిరి పీల్చుకున్న జనం

తణుకు: ఎప్పుడూ ప్రశాంతంగా ఉండే ఆంధ్రాసు గర్బ్ అనుబంధ రాకెట్ ఇంధనం తయారీ ప్లాంట్ గురువారం ఉదయం ఒక్కసారిగా నిరంతరాయంగా మోగిన సైరన్ తో అధికారులు అప్రమత్తమయ్యారు. తణుకు-వేల్పూరు రోడ్డుపై రాకెట్ కలు నిలిపివేశారు. ప్లాంట్ లో సుమారు 25 మంది స్పృహ కోల్పోయారు. ఫైరింగ్లు, అంబులెన్సులు రావడంతో ఒక్కసారిగా కలకలం రేగింది... ఏం జరిగిందో తెలియని అలజడి రేగడంతో చుట్టుపక్కల గ్రామాలకు చెందిన ప్రజలు ఆందోళన చెందారు. చివరికి మాక్ డ్రిల్ అని తేలడంతో అంతా ఊపిరి పీల్చుకున్నారు. ఆంధ్రాసుగర్బ్ కు అనుబంధంగా ఉన్న రాకెట్ ఇంధన పరిశ్రమలో ఉపయోగించే బుటాడైన్ అనే ముడిపదార్థం అనుకోని పరిస్థితుల్లో ట్యాంకు నుంచి లీకై ప్రమాదం సంభవించినప్పుడు తీసుకువచ్చిన చర్యలను మాక్ డ్రిల్ ద్వారా వివరించారు. ఆర్ డీవో చెన్నయ్య ఆధ్వర్యంలో డిప్యూటీ చీఫ్ ఇన్ స్పెక్టర్ ఆఫ్ ఫ్యాక్టరీస్ ఆర్. త్రినాధరావు పర్యవేక్షణలో ఈ కార్యక్రమం నిర్వహించారు.

దంతో ఒక్కసారిగా కలకలం రేగింది... ఏం జరిగిందో తెలియని అలజడి రేగడంతో చుట్టుపక్కల గ్రామాలకు చెందిన ప్రజలు ఆందోళన చెందారు. చివరికి మాక్ డ్రిల్ అని తేలడంతో అంతా ఊపిరి పీల్చుకున్నారు. ఆంధ్రాసుగర్బ్ కు అనుబంధంగా ఉన్న రాకెట్ ఇంధన పరిశ్రమలో ఉపయోగించే బుటాడైన్ అనే ముడిపదార్థం అనుకోని పరిస్థితుల్లో ట్యాంకు నుంచి లీకై ప్రమాదం సంభవించినప్పుడు తీసుకువచ్చిన చర్యలను మాక్ డ్రిల్ ద్వారా వివరించారు. ఆర్ డీవో చెన్నయ్య ఆధ్వర్యంలో డిప్యూటీ చీఫ్ ఇన్ స్పెక్టర్ ఆఫ్ ఫ్యాక్టరీస్ ఆర్. త్రినాధరావు పర్యవేక్షణలో ఈ కార్యక్రమం నిర్వహించారు.



సహాయక చర్యలు చేపట్టిన ఎన్ డీఆర్ ఎఫ్, ఫైర్ సిబ్బంది

చారు. ఈ కార్యక్రమంలో తణుకు మున్సిపల్ కమిషనర్ బీవీ రమణ, జిల్లా ఫైర్ ఆఫీసర్ డి. శ్రీనివాసరావు, మోటార్ వెహికల్ ఇన్ స్పెక్టర్ సంజీవ్ మూర్తి, ఆంధ్రాసుగర్బ్ మేనేజర్ పాతూరి విశ్వనాధకుమార్ తదితరులు పాల్గొన్నారు.

సాక్షి

హెచ్పీసీఎల్లో ఎమర్జెన్సీ మార్క్ డ్రిల్

ఆయిల్ లీక్ ఘటనతో అప్రమత్తమైన కార్మికులు

సిద్ధపటం : మండలంలోని భాకరాపేట సమీపం లోని హిందూస్థాన్ పెట్రోలియం కార్పొరేషన్ లిమిటెడ్లోని ఎమర్జెన్సీ-1లోని పెట్రోల్ ట్యాంకర్లో గురువారం ఆయిల్ తీస్తుండగా లోపల రూప్ తిరగబడి ఆయిల్ లీక్ అయింది. మంటలు చెలరేగడంతో అక్కడ వర్కర్ ఫైర్ అని గట్టిగా అరిచారు. హెచ్ పీసీఎల్ సిబ్బంది సైరస్ మ్రోగించారు. సిబ్బంది అప్రమత్తమై ఆటోమెటిక్ పరికరాలతో ఆ మంటలను ఆర్పేందుకు ప్రయత్నించారు. అదుపులోకి రాకపోవడంతో ఐఓసీ, ఏజిపి, ఎన్డీఆర్ఎఫ్, ఎస్డీఆర్ఎఫ్, ఫైర్ సిబ్బంది సహకారంతో పోమ్తో వాటర్తో మంటలను అదుపుచేశారు. పది మంది వర్కర్లకు ప్రమాదం జరగడంతో వారిని స్టెచ్చర్పై మెడికల్ క్యాంపు వద్దకు తీసుకొచ్చారు. వైద్యుడు డాక్టర్ శివకుమార్ పరీక్షించి ఆరుగురిని రిమ్స్ ఆసుపత్రికి 108 వాహనంలో తరలించారు. ఇదంతా సంస్థ ఆధ్వర్యంలో జరిగిన మార్క్ డ్రిల్. అధికారులు కార్మికుల అప్రమత్తతను పరీక్షించారని, అందరూ స్పందించడం సంతృప్తికరంగా ఉందని కర్మాగారాల డిప్యూటీ చీఫ్ ఇన్స్పెక్టర్ క్రిష్ణ



గాయపడిన వర్కర్ను స్టెచ్చర్లో తీసుకెలుతున్న సిబ్బంది

మూర్తి తెలిపారు. సిబ్బంది అప్రమత్తతపై ఆయన సంతృప్తి వ్యక్తం చేశారు. ఈ కార్యక్రమంలో జిల్లా ప్రాజెక్టు మేనేజర్ అనూరాధ(ఏపీఎస్డిఎంఏ), హెచ్పీసీఎల్ డిపో చీఫ్ రీజనల్ మేనేజర్ మూలనాగసతీష్, డిపో మేనేజర్ బి.మన్మథరావు, అధికారులు ధర్మారావు, వై. ప్రసాద్, ఓబియ్య, సునీల్కుమార్పాండే, గోపాలక్రిష్ణ, వై.వెంకటేశ్వర్లు, ఏజీపీ రాజీవ్ రాజన్, ధర్మారావు, రామచంద్ర, బాబయ్య, తదితరులు పాల్గొన్నారు.

ఆకట్టుకున్న మార్క్ డ్రిల్

కాకినాడ రూరల్: పరిశ్రమల్లో ఊహించని విధంగా ఏవైనా విపత్తులు ఎదురైతే వాటిని సమర్థంగా ఎదుర్కొని ప్రజలు ప్రాణాలు, విలువైన ఆస్తులను ఏవిధంగా కాపాడుతారనే అంశంపై కేంద్ర, రాష్ట్ర, జిల్లా విపత్తుల నియంత్రణ సంస్థలు గురువారం మార్క్ డ్రిల్ నిర్వహించాయి. ముఖ్యంగా రసాయనిక పరిశ్రమల్లో ప్రమాదాలు జరిగినప్పుడు తక్షణ స్పందన, సంసిద్ధతలపై చేసిన ప్రదర్శన ఆకట్టుకుంది. కాకినాడ రూరల్ సూర్యారావుపేట లైట్ హౌస్ వద్ద ఎస్సీఎస్ ఇండస్ట్రీస్లో పెట్రోల్ ట్యాంకుల వద్ద మోటారు స్పిరిట్ ఓవర్ ఫ్లో ద్వారా ప్రమాదం జరిగి, వ్యాపించే మంటలను నియంత్రించడం.. సామర్లకోట మండలం పనసపాడు వద్ద దేవీ ఫిషరీస్ రొయ్యల శుద్ధి పరిశ్రమలో ఆమ్లనియా గ్యాస్ లీకేజీ విపత్తును ఎదుర్కొనడంపై ఈ మార్క్ డ్రిల్ విజయవంతంగా నిర్వహించారు. విపత్తుల నియంత్రణ చర్యల్లో భాగంగా రెండు పరిశ్రమల వద్ద సమీప ప్రజలను తరలించడం, కార్మికులు, ఉద్యోగులను కాపాడటం, గాయపడిన వారికి వైద్య



మార్క్ డ్రిల్లో భాగంగా కార్మికులను, స్థానిక ప్రజలను అప్రమత్తం చేస్తున్న డిప్యూటీ ఇన్స్పెక్టర్ ఆఫ్ ఫ్యాక్టరీస్ రాధాకృష్ణ

సేవలు, అంబులెన్స్లో తరలించడం వంటి అంశాలను ప్రదర్శించారు. అనంతరం అచ్చంపేట జంక్షన్ వద్ద డిప్యూటీ ఇన్స్పెక్టర్ ఆఫ్ ఫ్యాక్టరీస్ రాధాకృష్ణ మీడియాతో మాట్లాడుతూ, పరిశ్రమల్లో రసాయనిక ప్రమాదాలు జరిగినప్పుడు విపత్తు నియంత్రణపై యంత్రాంగంలో తక్షణ స్పందన, సంసిద్ధత పెంపొందించేందుకు ఈ మార్క్ డ్రిల్ చేపట్టామ



పెట్రోల్ ట్యాంకల వద్ద వాటర్ క్యాన్లతో నియంత్రణ చర్యలు

న్నారు. కార్యక్రమంలో ఏపీ ఎన్డీఆర్ఎఫ్ కమాండెంట్ కట్టా సాంబయ్య, సామర్లకోట తహసీల్దార్ ఏడీ శ్రీనివాస్, అగ్నిమాపక అధికారి సురేంద్ర ఆనంద్, జిల్లా వైద్య, ఆరోగ్య అధికారి సరసింహనాయక్, కాలుష్య నియంత్రణ మండలి ఈఈ సందీప్ రెడ్డి, చలం, ఎస్సీఎస్ పరిశ్రమ మురళి, దేవీ ఫిషరీస్ ప్రతినిధి రంగా తదితరులు పాల్గొన్నారు.

సాక్షి

కెమికల్ లీకేజీపై మాక్డ్రీల్



పొదలకూరు (ముత్తుకూరు) : ఫ్యాక్టరీలో ఊహించని విధంగా కెమికల్ లీకేజీ జరిగితే ఎటువంటి చర్యలు తీసుకోవాలన్న అంశంపై గురువారం మాక్డ్రీల్ నిర్వహించారు. అదానీ కృష్ణపట్నంపోర్టులోని బీపీసీఎల్ వద్ద డీజిల్ ట్యాంక్ లీకేజీ నుండి ఉద్భవించిన ఆధారంగా ఆఫ్ సైట్ మాక్డ్రీల్ నిర్వహించారు. డీజిల్ లీకేజీ వెంటనే ముందు జాగ్రత్తగా చుట్టుపక్కల వారు 50 మందిని సురక్షిత ప్రాంతానికి తరలించారు. క్షతగాత్రులైన ఐదుగురిని ముత్తుకూరు పీహెచ్సీకి, మరో ఐదుగురిని అదానీ మెడికల్ ఆస్పత్రికి తరలించారు. కార్యక్రమంలో నెల్లూరు ఆర్డీఓ మలోల, ఫ్యాక్టరీస్ ఇన్ స్పెక్టర్ శైలేంద్రకుమార్, డీఎఫ్ఓ శ్రీనివాసులు, ఫ్యాక్టరీస్ డీపీఐఎం వీరశేఖర్, సేఫ్టీ ఆఫీసర్లు విజయకుమార్, అనిల్కుమార్ పాల్గొన్నారు.

ప్రమాదాల నివారణపై మాక్ డ్రిల్

మద్దిపాడు: మండలంలోని గుండ్లాపల్లి గ్రోత్ సెంటర్ లో గురువారం ఉదయం స్టేట్ డిజాస్టర్ మేనేజ్మెంట్ టీం వారు మాక్ డ్రిల్ నిర్వహించారు. ఫ్యాక్టరీలలో పలు కెమికల్స్ సరఫరా చేసే క్రమంలో లీక్ అయితే వెంటనే ఏవి



గుండ్లాపల్లి గ్రోత్ సెంటర్ లో మాట్లాడుతున్న రూరల్ సీఐ టీఎక్స్ అజయ్ కుమార్

ధమైన చర్యలు తీసుకోవాలన్న అంశాలను ప్రదర్శించారు. రూరల్ సీఐ టీఎక్స్ అజయ్ కుమార్ మాట్లాడుతూ కెమికల్ ఫ్యాక్టరీలలో జరిగే ప్రమాదాలు వాటిని నివారించే విధానం ప్రతి ఒక్కరూ నేర్చుకోవాలన్నారు. యాజమాన్యం ప్రభుత్వ నిబంధనల మేరకు ఫ్యాక్టరీలలో కచ్చితంగా ప్రమాణాలు పాటిస్తూ జాగ్రత్తలు తీసుకోవాలన్నారు. డిప్యూటీ చీఫ్ ఇన్ స్పెక్టర్ ఫ్యాక్టరీస్ మాక్ డ్రిల్ నోడల్ ఆఫీసర్ కె. పరమేశ్వరరావు, ఇన్స్పెక్టర్ కంట్రోల్ కమాండెంట్ ఆర్డీఓ విశ్వేశ్వరరావు, ఆసుపత్రి డాక్టర్ ఆనందమోహన ఆసుపత్రి సిబ్బంది, ఎస్ఐ వి. మహేష్, అసిస్టెంట్ డిస్ట్రిక్ట్ ఫైర్ ఆఫీసర్ శ్రీనివాసరెడ్డి, ఎన్ఫోర్స్ మెంట్ అధికారి భాస్కరవర్మ, ఐలా కమిషనర్ సత్యన్నారాయణ, ఎంపీడీఓ శ్రీహరి, తహసీల్దార్ అనురాధ, విజయవాడ నుంచి ఎస్డీఆర్ఎఫ్, గ్లోసెల్, కెవిస్, జేసీ బయోటెక్ ఫ్యాక్టరీ భగీరథ, ఐఓసీఎల్, బీపీ సీల్, హెపీసీఎల్, ఐటీసీ పెరల్ డిస్టలరీస్, ఫ్రాన్ ఫ్యాక్టరీల ప్రతినిధులు, ఉద్యోగులు పలువురు పాల్గొన్నారు.

సాక్షి

పరిశ్రమల్లో ప్రమాదాల నివారణపై మాక్డ్రీల్

కొండపల్లి(ఇబ్రహీంపట్నం): కొండపల్లి ఐడిఎల్ ఆర్ప్ లేబొరేటరీస్ సంస్థలో ప్రమాదాల నివారణపై మాక్డ్రీల్ గురువారం నిర్వహించారు. నేషనల్ డిజాస్టర్ మేనేజ్మెంట్ అథారిటీ, ఆంధ్రప్రదేశ్ రాష్ట్ర డిజాస్టర్ మేనేజ్మెంట్ ఆదేశాల మేరకు మాక్డ్రీల్ జరిగింది. లేబొరేటరీ ట్యాంకర్లో అమ్మోనియా గ్యాస్ లీకేజీ అయిన వెంటనే సైరన్ మోగించి కార్మికులను అప్రమత్తం చేశారు. ఫైర్ సిబ్బంది ఫోమ్ వాటర్తో అమ్మోనియా లీకేజీ అరికట్టారు. సెర్పింగ్, రెస్క్యూ టీమ్, ఏపీ ఎస్డిఆర్ఎఫ్ సిబ్బంది రంగంలోకి దిగారు. గాయపడిన 60మంది కార్మికులను నిచ్చెన ద్వారా కిందకు దించి 108, ఇతర అంబులెన్స్ల ద్వారా ప్రాథమిక చికిత్స కేంద్రానికి తరలించారు. తీవ్రంగా గాయపడిన 20మందికి పీహెచ్సీ వైద్యురాలు పద్మావతి, వైద్య సిబ్బంది ప్రాథమిక చికిత్స అందించారు. మాక్డ్రీల్ ప్రదర్శన ఆధ్వర్యం ఉత్కంఠ రేకెత్తించింది. 53వ జాతీయ భద్రతా వారోత్సవాల్లో భాగంగా జరిగిన సమావేశంలో పరిశ్రమల శాఖ డెప్యూటీ చీఫ్ ఇన్స్పెక్టర్ కె.శ్రీనివాస రావు మాట్లాడుతూ పరిశ్రమల్లో ప్రమాదాల నివారణకు పటిష్ట చర్యలు తీసుకోవాలన్నారు. ప్రమాదాలు జీరో స్థాయికి చేర్చాలన్నారు.



కొండపల్లి ఆర్డ్ లేబొరేటరీలో మాక్డ్రీల్ నిర్వహిస్తున్న అగ్నిమాపక సిబ్బంది

