

F. No. I-11016/04/2025-DGCD(F)  
Government of India  
Ministry of Home Affairs  
Directorate General FS, CD & HG

East Block-7, Level-7  
R. K. Puram, New Delhi-110066

Dated 28 July, 2025

To

All Heads of Fire Services in the States/ UTs  
(As per the standard list)

**Subject: - Nomination for Two day workshop on "Fire & Safety Management in the Oil Industry at NFSC, Nagpur.**

Sir,

The National Fire Service College (NFSC), Nagpur, established in 1956 and functioning under the Disaster Management Division, Ministry of Home Affairs plays a critical role in advancing fire safety and disaster management capacities. NFSC offers B.E. (Fire Engineering) degree and runs wide range of in-service professional training for Central/State Government departments, PSUs, local bodies, and autonomous institutions.

2. Two day workshop on "Fire & Safety Management in the Oil Industry" is being organized in NFSC. This workshop is intended to benefit senior safety professionals and fire officers across India by bringing together technical expertise, regulatory insight, and practical learning's under one platform.

3. The tentative schedule of this workshop is 28<sup>th</sup> – 29<sup>th</sup> August, 2025 at NFSC, Nagpur. The concept note is enclosed at **Annexure-I**. The event is proposed to be conducted as a non-residential program within the college premises.

4. It is requested to submit the details of eligible officers, as per the criteria mentioned at **Annexure-I**, at your earliest convenience (not later than 15 days) to facilitate further necessary actions.

5. Given the priority of this initiative, we request that the matter be treated as urgent.

6. This issues with the approval of the Director General (FS, CD & HG).

Yours faithfully,

  
28/7/25

(Moreshwar Kudkilwar)  
Deputy Fire Adviser



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NO. FC/TRG/71-23/NFSC WORKSHOP/2025 Dated:- 09/07/2025

## Concept Note

### **“Two-Day Workshop on “Fire & Safety Management in the Oil Industry”**

**Dates: 28th – 29th August 2025**

**Venue: National Fire Service College, Nagpur**

#### **1. Introduction**

The oil and gas industry is a cornerstone of India's energy infrastructure, contributing nearly 34% of the country's primary energy demand (BP Statistical Review of World Energy 2023). With over 23 refineries, 25,000 km of crude and product pipelines, and expansive upstream operations both onshore and offshore, the sector is inherently vulnerable to a range of hazards—fire and explosion incidents, oil well fires, blowouts, oil spills including marine oil spills, and large-scale disaster scenarios.

According to the Petroleum and Explosives Safety Organization (PESO) and Oil Industry Safety Directorate (OISD), hydrocarbon fire incidents, though declining with improved safety standards, remain a major concern - especially in refineries, tank farms, and transportation infrastructure.

Between 2018 and 2022, India reported over 110 major fire-related incidents in the oil and gas sector, resulting in significant human, environmental, and financial losses (OISD Annual Safety Performance Reports). Catastrophic events such as the Jaipur IOC terminal fire (2009), ONGC MHIN fire incident (2020), and HPCL Visakh Refinery explosion underscore the persistent vulnerabilities in fire prevention and emergency response mechanisms.

In addition, disaster management of oil well blowouts (such as the 2020 Baghjan incident) and marine oil spills (like the Chennai oil spill) require advanced preparedness, environmental protection measures, and inter-agency coordination. The need to strengthen capacity in control measures, well control operations, and spill mitigation is more critical than ever.

In this context, the National Fire Service College (NFSC), Nagpur, assumes a pivotal role. Established in 1956, NFSC functions as one of the allied organizations under the Disaster Management Division of the Ministry of Home Affairs and operates under the administrative control of the Director General (Fire Services, Civil Defence & Home Guards). NFSC is the premier institution in India offering the B.E. (Fire Engineering) degree and a wide array of in-service professional training courses for personnel of Central Government, State Government Departments, Local Bodies, PSU's (State/Central), and Government Autonomous Bodies. As the only institution of its kind in the country - and perhaps in all of Asia—NFSC is uniquely positioned to lead the national discourse on fire safety, disaster response, and emergency preparedness. This concept note and the upcoming workshop are specifically designed to support and benefit fire service personnel across India, especially those from State Fire Services, by offering them exposure to cutting-edge practices, regulatory frameworks, and real-world case studies relevant to the oil and gas sector. The initiative aligns with NFSC's national mandate to build professional capacity and standardize best practices across jurisdictions in the field of fire and industrial safety.



Recognizing the above, the National Fire Service College (NFSC), Nagpur, is organizing a two day workshop titled "Fire & Safety Management in the Oil Industry" on 28th and 29th August 2025. The initiative aims to promote inter-agency dialogue, deepen practical and regulatory understanding, and strengthen emergency response competencies specific to fire, explosion, oil well incidents, oil spills and disaster management in hydrocarbon environments.

The Oil Industry Safety Directorate (OISD) and Directorate General of Mines Safety (DGMS) will serve as key presenters in this workshop, contributing regulatory insights, safety best practices, and case-based learning relevant to the sector.

## 2. Objectives of the Workshop

- To impart knowledge on fire hazards specific to oil and hydrocarbon operations across upstream, midstream, and downstream sectors.
- To enhance understanding of **disaster management frameworks** for handling large-scale emergencies in oil installations.
- To build technical and operational capacity for addressing **oil well fires, blowouts and oil spill response (including marine oil spills)**.
- To develop proficiency in **control measures**, including well capping, foam systems, containment booms, dispersants, and rapid shutdown protocols.
- To facilitate inter-agency coordination and incident command protocols during major emergencies.
- To explore contemporary technologies and global best practices in hydrocarbon fire and **disaster safety**.
- To deliberate on the regulatory and legal landscape governing **disaster risk reduction, environmental protection, and fire safety** in India's oil industry with the guidance of OISD, DGMS, and related authorities.

## 3. Participants

The workshop is intended for senior/chief fire service officers, safety professionals, industry safety managers, first responders, emergency planners, and personnel from oil PSUs, **disaster management authorities**, and regulatory agencies. Delegates will benefit from expert presentations, panel discussions, case studies, and interactive sessions led by seasoned faculty and domain experts.

In particular, participants involved in **oil well drilling, offshore operations, pipeline transport, refinery safety, environmental protection, oil spill management hydrocarbon storage depots across the country** will find the workshop directly applicable to their professional roles.

OISD, DGMS, PESO, and other key stakeholders will serve as principal presenters, sharing policy updates, regulatory practices, technical guidelines, and real-case insights to enrich the participants' understanding and preparedness in **handling disasters, spills, and blowout scenarios**.

## 4. Eligibility Criteria

The workshop is designed for officers and professionals from Central and State Government Departments, Local Bodies, Public Sector Undertakings (PSUs), Autonomous Bodies, and Private Organizations who are engaged in fire safety, disaster management, emergency response, and industrial operations within the oil and gas sector.

Eligible participants should be holding responsible positions to ensure that the learning's from the workshop are effectively translated into operational practices and policy-level implementation within their respective organizations. As a minimum designation requirement, officers from State Governments or Local Bodies should be of the rank of **Chief Fire Officer or above**, while those from PSUs or Private Organizations should be of the rank of **General Manager (Fire/Safety/Operations) or equivalent and above**.



## 5. Participation Fee

A nominal participation for participants from **Central Government / State Government Departments, PSUs, Local Bodies, and Government Autonomous Bodies**, the fee is ₹ 3,380/- For participants from **Private Organizations**, the fee is ₹ 4,320/-. Participants are requested to make their own accommodation arrangements.

## 6. Workshop Structure

The two-day workshop will follow a thematic structure, covering both technical and strategic aspects of fire and **disaster safety** in the oil industry. It includes expert-led presentations, sector-specific insights, panel discussions, and interactive Q&A sessions.

### Brief of Provisional Schedule

#### Day 1 – August 28, 2025:

- Fundamentals of hydrocarbon operations and terminology
- Sector-specific fire risks, hazard identification, fire behaviour of hydrocarbons
- **Oil well fire scenarios, blowout prevention and well control systems**
- **Disaster management planning and upstream emergency command systems**
- Presentations and panel discussions with sectoral experts

#### Day 2 – August 29, 2025:

- Downstream fire scenarios and tank fire strategies
- **Oil spill incidents—preparedness, control measures, and marine spill response tools**
- **Containment systems (booms, skimmers), dispersant application, shoreline protection**
- Emergency shutdown systems, pipeline incidents, and ESD protocols
- Legal and regulatory framework: OISD, EPA, Marine Pollution Control rules
- Interactive panel with OISD, DGMS, PESO, and disaster management agencies

## 7. Expected Outcomes

- Strengthened domain knowledge and emergency preparedness among fire professionals and industry safety officers.
- Enhanced ability to manage **disaster situations**, including **oil well blowouts, oil well fires, and marine oil spills**.
- Greater clarity on sector-specific hazards and **coordinated control measures** for complex emergency scenarios.
- Improved inter-agency understanding and regulatory compliance.
- Exposure to **real-world case studies**, innovative disaster control technologies, and field level best practices.
- Enhanced policy and environmental awareness through direct interaction with OISD, DGMS, PESO, and disaster experts.

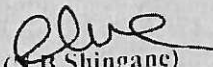
## 8. Conclusion

The National Fire Service College remains committed to building national capacity in **fire safety and disaster management**. This workshop is envisioned as a significant step toward that objective by engaging key stakeholders from the oil sector in a structured and meaningful learning experience.

With specific focus on **oil well fires, blowouts, oil spills including marine spills, and integrated control measures**, the program will provide actionable knowledge aligned with regulatory frameworks. The active involvement of OISD, DGMS, PESO, and allied experts will ensure the workshop's relevance, depth, and practical utility for disaster preparedness.



This concept note is submitted for kind consideration and necessary approval.

  
(N.B Shingane)

*Director*

**National Fire Service College, Nagpur**  
*Ministry of Home Affairs*  
*Government of India*

**Enclosures:**

1. Proposed Tentative Program Schedule of 28th and 29th August 2025.



**"Two Day Workshop on "Fire & Safety Management in the Oil Industry"**

Dates: 28th - 29th August 2025

Venue: National Fire Service College, Nagpur

**Proposed Tentative Program Schedule**

S. No.	Time Slot	Topic	Category
<b>DAY ONE</b>			
	10:00	<b>"Fundamentals of Hydrocarbon Operations and Fire Risk Landscape for Emergency Responders"</b>	General (All Sectors)
	10:10	Overview of Hydrocarbon Operations for Emergency Response	
	10:40	Brief explanation of upstream (drilling, production, offshore platforms)	<b>Upstream</b>
	10:50	Brief explanation of downstream (refineries, petrochemical plants, pipelines, depots)	<b>Downstream + Midstream (pipelines, depots)</b>
	10:50	Key terminology for fire services (crude, LPG, LNG, naphtha, etc.)	General (All Sectors)
	11:10	Understanding process flows, potential failure points, hazard zones	General / Cross-Sectoral
	11:30	Tea Break	
	11:45	Panel Discussion:	Cross-Sectoral
	13:15	Lunch	
	14:00	<b>"Hazard Recognition and Fire Behaviour Assessment in Hydrocarbon Emergencies for First Responders"</b>	General (All Sectors)
	14:10	Hazard Identification & Assessment for First Responders	
	14:15	Understanding fire behaviour of various hydrocarbons	General
	14:30	Identifying ignition sources in upstream environments	<b>Upstream</b>
	14:45	Risk assessment methods: hazmat, SDS, pre-incident planning	General / All Sectors
	14:55	Indicators of BLEVEs and flashovers	General / All Sectors
	15:00		
	15:15		



S. No.	Time Slot		Topic	Category
14	15:15 – 15:30		Tea Break	
15	15:30 – 15:45	"Incident Command & Inter-Agency Coordination for Emergency Response in Upstream Hydrocarbon Operations"	ICS & Coordination for Upstream Scenarios	Upstream
16	15:45 – 16:00		Unified Command with Fire Brigades and Agencies	Upstream / Cross-Sectoral
17	16:00 – 16:15		Communication, logistics in complex upstream scenarios	Upstream
18	16:15 – 17:00		Q&A, Strategic Brief, Takeaways	General
DAY TWO				
19	10:00 – 10:05	"Comprehensive Fire Hazard Management in Downstream Hydrocarbon Operations: Practices, Systems, and Case Insights"	Hydrocarbon Incident Management & Modern Fire Safety Practices	General
20	10:05 – 10:20		Blowout Incident Management	Upstream
21	10:20 – 10:35		Fire Hazards in Downstream Operations (refineries, tanks, etc.)	Downstream
22	10:35 – 10:45		Tank fire strategies (rim seal, boilover, etc.)	Downstream
23	10:45 – 11:00		Emergency Shutdown Systems (ESD) & downstream case studies	Downstream
24	11:00 – 11:15		Pipeline fire considerations, transport incidents	Midstream + Transport
25	11:15 – 11:30		Case studies: Jaipur, Hazira	Downstream
26	11:30 – 11:45		Tea Break	
27	11:45 – 13:15		Panel Discussion: <b>Advanced Firefighting in Downstream Sector</b>	Downstream
28	13:15 – 14:00		Lunch	—
29	14:00 – 14:20	"Regulatory Framework and Legal Landscape of Fire Safety in the Indian Hydrocarbon	Indian Fire Safety Regulatory Framework	Regulatory / All Sectors
30	14:20 – 14:40		Key Regulations: OISD, Petroleum Rules, PNGRB, etc.	Regulatory / All Sectors
31	14:40 – 15:00		State Fire Services: Role in inspections & post-incident	Regulatory / Downstream Focus



S. No.	Time Slot	Topic	Category
32	15:00 - 15:15	Industry"	Compliance violations & common lapses
33	15:15 - 15:30		Regulatory
34	15:30 - 15:45		Legal liabilities for industry & responders
35	15:45 - 16:30		Regulatory / All Sectors
36	16:30 - 17:30		Tea Break
			Panel Discussion: New Technologies & Future Trends
			Cross-Sectoral / Technology
			Workshop Recap, Strategic Planning, Q&A
			General / All Sectors

