
CHAPTER IV

***RESULTS OF AUDIT OF
URBAN LOCAL BODIES
(PERFORMANCE AUDIT)***

CHAPTER IV PERFORMANCE AUDIT

URBAN DEVELOPMENT DEPARTMENT

4.1 Prevention and control of fire by selected Municipal Corporations

Executive Summary

The Municipal Corporations in Maharashtra under the Urban Development Department are responsible for handling fire incidents in residential buildings, Government offices and other establishments in their respective jurisdictions and ensure that the owners/occupiers of buildings/offices/establishments adhere to the fire safety norms prescribed by the State Government.

A performance audit of 'Prevention and control of fire by selected Municipal Corporations' for the period 2010-15 revealed that eight of 26 Municipal Corporations could not spend 78 per cent of their capital budget during 2010-15 for purchase of specialized fire appliances, equipment, vehicles etc. There was acute shortage of fire stations in the State as well as in eight Municipal Corporations. The fire stations were also ill-equipped and deficient in basic infrastructure such as, land, permanent building, drill towers, water sources, fire hydrants, fire tenders, specialized fire appliances etc. There was significant shortage of key personnel in the Fire Departments in the State as well as in eight Municipal Corporations. Many buildings and hazardous premises such as, petrol pumps, LPG stations, fire cracker shops, saw mills etc. in the local area jurisdiction of the eight Municipal Corporations were operating without final fire NOC from the Fire Departments. While there was shortfall in imparting training to fire personnel, no outreach activities were conducted by the Fire Departments to educate and train the community to respond to fire emergencies during 2010-15. There were deficiencies in filing of fire investigation reports by the Chief Fire Officers. In some Municipal Corporations, fire stations were being commanded by firemen and leading firemen instead of Station Officers. Form-A and Form-B certificates issued by the licensed agencies to ensure compliance to fire prevention and life safety measures in buildings and premises were deficient and not effectively monitored by the Chief Fire Officers. The Fire Department of Municipal Corporation of Greater Mumbai did not conduct periodical inspections of high-rise and dilapidated buildings leading to major fire accidents during 2010-15 and loss of lives and property.

4.1.1 Introduction

Fire prevention and related safety measures are integral part of town planning and building construction. Fire services in India come under the 12th Schedule of the Constitution of India under the provisions of Article 243W and the performance of functions listed in the 12th Schedule comes under the domain of municipalities. To combat any odd situation arising out of fire related calamities, fire services are organized as first respondent to save life and property by the municipalities under local self-Government of the States. It is

for the State Government to ensure that Municipalities fulfill their functions effectively and efficiently.

There are 26 Municipal Corporations (MCs) in Maharashtra under the Urban Development Department (UDD), Government of Maharashtra (GoM). The MCs are responsible for handling fire incidents in residential buildings, Government offices and other establishments in their respective jurisdictions and ensure that the owners/occupiers of buildings/offices/establishments adhere to the fire safety norms prescribed by the State Government.

4.1.2 Organizational set up

The Director of Fire Services (DFS), Mumbai, under the administrative control of the UDD, controls the entire fire force and is responsible to the State for the efficient functioning of the fire service. The Chief Fire Officer (CFO) heads the Fire Department of the MC and reports to the Municipal Commissioner. The fire stations, which are under the overall control of CFO, are headed by Station Officers. The DFS works in close liaison with the Central/State Government and frames policies for strengthening the fire services in the State.

4.1.3 Audit objectives

The objectives of the performance audit were to ascertain whether:

- the MCs had adequate infrastructure and fire-fighting equipment, fire/rescue tender¹ and other specialized vehicles to tackle emergencies;
- the MCs had the wherewithal and skilled manpower to carry out its services effectively and efficiently; and
- inspection and monitoring mechanism were effective.

4.1.4 Scope and methodology of audit

The performance audit commenced with an entry conference held in April 2015 with the Secretary, UDD in which the audit scope and methodology of audit were explained. The audit was conducted during April to July 2015 covering the period 2010-15 through test check of records of UDD; DFS; and CFOs of eight² of 26 MCs. Besides, joint physical inspection of 24 of 71 fire stations and 53 Government buildings/hospitals/educational institutions/commercial establishments in eight selected MCs was also conducted by audit along with the fire officials of MCs. The audit findings were discussed with the Secretary, UDD in an exit conference held in December 2015.

¹ A traditional water and rescue tender is most often used by city and municipal fire brigades. The vehicle normally has a water tank capacity of 1,000 to 4,000 litres. A small quantity of foam mixed, up to 1,000 litres, can be carried. Besides fire-fighting equipment, they are often equipped with ladders and rescue equipment such as cutting tools and mobile power generators

² Municipal Corporation of Greater Mumbai (MCGM), Thane, Navi Mumbai, Nashik, Pune, Aurangabad, Amravati and Nagpur

4.1.5 Audit criteria

The audit criteria were derived from the following documents:

- The Maharashtra Fire Prevention and Life Safety Measures Act, 2006 and Rules (2009) made there under;
- National Disaster Management guidelines of April 2012;
- Compendium of recommendations of the Standing Fire Advisory Committee of 2011;
- Norms for fire services laid down by the Standing Fire Advisory Council, Ministry of Home Affairs, Government of India;
- Government Resolutions and Circulars issued by GoI/GoM from time to time; and
- RMSI (a global IT services company) Report of December 2011.

Audit findings

4.1.6 Financial management

4.1.6.1 Non-utilization of capital budget by Fire Departments

The MCs allocate funds to the Fire Departments from their own budget. During 2010-15, a budget of ₹ 1,091.20 crore (revenue and establishment expenditure only) was allocated to the Fire Departments of eight selected MCs of which, ₹ 854.85 crore (78 *per cent*) was expended, leaving an unspent balance of ₹ 236.35 crore.

The MCs also prepare every year separate capital budget for procurement of plant and machinery, equipment, vehicles, specialized fire appliances etc. and submit the same to the Standing Committees for approval. Audit observed that against the total budget provision of ₹ 702.95 crore made during 2010-15, the eight selected MCs spent only ₹ 154.71 crore (22 *per cent*). Of the unspent balance of ₹ 548.24 crore, the Municipal Corporation of Greater Mumbai (MCGM) had the highest share of ₹ 429.59 crore (78 *per cent*) followed by MC, Nashik (eight *per cent*); MC, Nagpur (seven *per cent*); and MC, Pune (three *per cent*).

The MCGM stated (April 2016) that appropriate Bharat Stage IV emission norms compliant chassis for fire-fighting and rescue vehicles were not available during 2010-15 despite repeated follow up with various chassis manufacturers such as, TATA and Ashok Leyland. Consequently, the Fire Department placed import orders for procurement of custom-made specialized vehicles and equipment from foreign countries. However, as the delivery period of the imported vehicles/equipment was significantly longer, a substantial portion of the budget grant remained unutilized during 2010-15.

The MC, Nashik stated (December 2015) that budget grant of ₹ 15 crore on procurement of aerial ladder platform (ALP) and turn table ladder (TTL) could not be utilized during 2013-14 and therefore, carried forward to 2014-15. However, due to heavy work load on account of 'Kumbh Mela' preparations scheduled to be held from July 2015, tenders for ALP and TTL could not be processed.

The CFO, Nagpur stated (February 2016) that a provision of ₹ 7.08 crore was made for procurement of TTL from Austria every year during 2010-15 but, it was not approved by the Standing Committee.

The CFO, Pune stated (June 2015) that due to election code of conduct and various other reasons, the budget of ₹ 8.40 crore for purchase of fire equipment could not be carried out.

4.1.6.2 Non-constitution of fire protection fund

As per Section 25 (1) of the Maharashtra Fire Prevention and Life Safety Measures Act, 2006, there shall be a fire protection fund (FPF) to which shall be credited fees³ to be imposed and collected by the Fire Department of the MCs from the owners and occupiers of all buildings. The amounts in the fund was to be applied for the purpose of maintaining fire stations in general (which would also include the expenditure on salaries, allowances and other incidental expenses on the fire officers and staff) and for providing sophisticated equipment and appliances, in particular, for the purpose of preventing and extinguishing fire on any land and in any building within or without the limits of the Corporations.

Audit observed that only three⁴ of eight selected MCs constituted and collected FPF totaling ₹ 32.07 crore during 2010-15. Further, MC, Nagpur irregularly utilized ₹ 10 crore from the FPF for payment of pension benefits to its staff. At the end of December 2015, ₹ 41.74 crore was available in the FPF account of these three MCs. The remaining four MCs⁵ did not constitute the FPF but collected FPF fees totaling ₹ 449.97 crore during 2010-15 and deposited the same in their General Fund where other internal receipts of MCs are credited. The amount so collected (₹ 449.97 crore) during 2010-15 was not used by four MCs for improving the fire services infrastructure.

4.1.6.3 Irregular expenditure from personal ledger account

As per Government Resolution (GR) issued (August 2011) by the UDD, all fees collected⁶ by the DFS was to be deposited in the personal ledger account (PLA) to be operated by the DFS himself. The fees so collected were to be utilized for strengthening of fire services only.

Audit observed that contrary to the provisions contained in the GR, the DFS incurred (2012-15) an irregular expenditure of ₹ 83.49 lakh from the PLA for payment of electricity bills and to meet other miscellaneous expenses. As of July 2015, the DFS had a balance of ₹ 30.57 crore in the PLA.

During exit conference, the DFS stated (December 2015) that the balance available in the PLA would be utilized for construction of an advance fire training academy.

³ Fire service fee and Annual fee

⁴Nashik, Aurangabad and Nagpur (excluding Amravati). The FPF in MC, Amravati is being collected by Town Planning Department hence, this information was not available with CFO, Amravati

⁵ MCGM, Thane, Navi Mumbai and Pune

⁶ The DFS collects fees from the developers for issuance of provisional/final NOCs to buildings beyond the jurisdictional area of the urban local bodies and special planning authorities

4.1.6.4 Non-levy of annual fees

As per Section 13 (1) of the Maharashtra Fire Prevention and Life Safety Measures Act, 2006, an annual fee shall be levied by the CFOs of MCs at one *per cent* of the fire service fee⁷ to defray the expenses for the purpose of maintaining fire stations in general and for providing sophisticated equipment and appliances, in particular, for the purpose of preventing and extinguishing fire on any land and in any building.

Scrutiny of records of eight selected MCs revealed that except MC, Pune which collected ₹ 26.35 lakh as annual fee during 2010-15, none of the remaining seven MCs levied any annual fee which could have been used for improving the fire services infrastructure.

The MCGM stated (April 2016) that appropriate steps would be taken to impose annual fee as per provisions of the Act in due course. The remaining six MCs did not furnish any specific reply.

4.1.6.5 Non-implementation of a Scheme funded by the State Government

The UDD, GoM decided to implement (August 2009) a Scheme namely, 'Agnisuraksha Abhiyan' in D-Class⁸ MCs in Maharashtra to wipe-out the gaps in fire services in urban local bodies. The Scheme envisaged procurement of fire engines and construction of fire stations in D-Class MCs through funding from the State Government (35 *per cent*) and contribution by the MCs (65 *per cent*).

The MC, Aurangabad (a D-Class MC) received ₹ 1.785 crore from UDD (Government's share) in March 2012 under the Scheme. Audit observed that the MC did not use the funds for implementation of the Scheme but, invested it in fixed deposits between June 2012 and March 2015. Further, the MC withdrew ₹ 78.50 lakh from the fixed deposits prematurely between August 2014 and January 2015 and diverted the same for clearing its payment liabilities towards construction of a disaster management building. As of June 2015, the MC had an unspent balance of ₹ one crore.

Recommendation 1: The Chief Fire Officers of the eight selected Municipal Corporations may ensure that the accumulated capital grants of ₹ 548.24 crore are utilized at the earliest for the purpose these were sanctioned by the Standing Committees during 2010-15. Further, Municipal Corporations which are yet to constitute the fire protection fund and levy and collect annual fees under the provisions contained in The Maharashtra Fire Prevention and Life Safety Measures Act, 2006 should do so without further delay for strengthening the fire services and improving the fire-fighting capabilities.

⁷ It is one-time fee imposed on the developer which is calculated by the CFO on the gross built-up area of the building at the time of approval of the building plan

⁸ Municipal Corporations having population between three and 10 lakh

4.1.7 Adequacy of infrastructure

4.1.7.1 Inadequate number of fire stations

The Standing Fire Advisory Council (SFAC), an apex body set up by the Ministry of Home Affairs (MHA), Government of India (GoI) laid down (August 2006) the norms for fire services based on response time, risk and population. As per norms, urban areas should have one fire station per 10 sqkm and rural areas should have one fire station per 50 sqkm.

The Directorate General NDRF and Civil Defence (Fire), MHA, GoI appointed (June 2011) RMSI (a global IT services company) to conduct fire hazard and risk analysis in the country for revamping the fire services. In its report of December 2011, RMSI indicated a requirement of 1,231 fire stations⁹ in the State of Maharashtra based on the criteria of population (11.23 crore)¹⁰ and area (3.08 lakh sqkm) against which, there were only 154 fire stations in the urban areas of the State (shortfall of 73 *per cent*). Audit scrutiny of Comprehensive Plans and Mitigation Plans prepared by the eight selected MCs during 2010-15 for revamping the fire services revealed a shortfall of 105 fire stations (60 *per cent*) based on the criteria of population (2.67 crore) and area (1,836 sqkm) of the MCs. Acute shortage of fire stations would only burden the existing fire stations and increase the response time to fire calls, and possibly more incidences of deaths and loss of property. Further, audit scrutiny of documents in eight selected MCs revealed the following:

- Except for MCGM where one fire station was available per 13.51 sqkm, in the remaining seven MCs, one fire station was available per 36.57 sqkm, against the norm of 10 sqkm for the urban areas. No fire station was available in the rural areas in seven MCs, against the norm of one fire station per 50 sqkm.
- In its Comprehensive Plan of September 2014, MCGM proposed to construct 26 new fire stations, in addition to existing 33 fire stations. However, no construction could commence as of March 2016 due to non-availability of land (18 cases), land identified but found to be reserved for other purposes (seven cases) and litigation (one case). Considering that MCGM had logged some of the highest/longest¹¹ emergency response times to major fire incidents¹² that broke out in the past, delay in construction of new fire stations would further hamper the capabilities of MCGM to negotiate the fire calls in a timely and effective manner.

4.1.7.2 Under-equipped fire stations

Efficient and well-equipped fire services are essential to respond to fire hazards. Joint physical inspection of 24 fire stations in seven of eight selected MCs (except MCGM) revealed the following shortcomings:

⁹ Urban areas: 565 fire stations and Rural areas: 666 fire stations

¹⁰ Urban: 5.08 crore and Rural: 6.15 crore

¹¹Response time was 10 to 44 minutes against the norm of three to five minutes for urban areas

¹²Mantralaya, Mumbai; Lotus Neelkamal, Andheri; Monte Blanc, Mumbai; Garib Nagar Slums, Bandra; Gokul Niwas, Kalbadevi; and Tarangana Complex, Thane

- In two¹³ of 24 fire stations, the approach road from the main road to the fire station was found to be extremely congested. In 11 fire stations¹⁴, sufficient space was not available to move the fire vehicles. Further, mock drill towers are essentially required in the fire stations to enable the firemen to practice/perform rescue drills. However, in 15 fire stations¹⁵, no mock drill towers were available.
- As per Annexure-1 to National Disaster Management guidelines of April 2012 (Chapter 7), every fire station should have permanent building to house fire vehicles, appliances and equipment for their safe custody. In seven fire stations of six¹⁶ of eight selected MCs, fire tenders were parked in roadside tin sheds instead of permanent building. This arrangement exposed the vehicles to vagaries of weather and risk of accident and damage.



Jawaharbaug fire station, Thane

- Water sources, fire hydrants¹⁷ and pumping machines were not available in 11¹⁸ of 24 fire stations. Consequently, water had to be drawn from distant sources on jumbo water tankers and transported to fire accident sites. Further, external fire hydrants adjacent to public streets and other locations in cities and towns of seven MCs were either not installed or non-functional.
- Audit did not find any significant shortcomings in five fire stations under MCGM. However, as of December 2015, only 1,260 of 10,637 fire hydrants (12 *per cent*) were functional under the local area jurisdiction of MCGM. But, the Fire Department of MCGM did not take any action to make the remaining 9,377 fire hydrants functional. Incidentally, non-functional court-yard fire hydrants was one of the reasons that severely impaired the fire-fighting capabilities of the Fire Department of MCGM to tackle three major fire accidents that broke out in Garib Nagar slums, Bandra (04 March 2011), Mantralaya

¹³ Under MC, Nagpur

¹⁴ One in Thane, two in Nashik, three in Pune, three in Aurangabad and two in Nagpur

¹⁵ Two in Thane, three in Nashik, three in Pune, three in Aurangabad and four in Nagpur

¹⁶ Thane, Navi Mumbai, Nashik, Amravati, Pune and Nagpur

¹⁷ A fire hydrant is an active fire protection measure, and a connection point by which fire fighters can tap into a water supply

¹⁸ One in Nashik, six in Nagpur, two in Pune and two in Aurangabad

building (21 June 2012) and Lotus Neelkamal Business Park Condominium, Andheri (18 July 2014).

- The SFAC norms of August 2006 provides for one fire tender per 50,000 population and one rescue tender per three to 10 lakh population. Based on the population criterion, RMSI in its report of December 2011 highlighted a shortfall of 1,268 fire tenders (81 *per cent*) and 37 rescue tenders (64 *per cent*) in the State. Audit scrutiny of Comprehensive Plans and Mitigation Plans prepared by the eight selected MCs also revealed shortfalls of fire and rescue tenders to the extent of 76 *per cent* and 73 *per cent* respectively.
- Specialized appliances used by the fire services are technologically advanced machines/equipment capable of carrying a multitude of equipment and firefighting media such as, water and foam, turn-table ladders/hydraulic platforms/sky lifts, breathing apparatus, apart from dry chemical powder tenders and separate breathing apparatus vans to deal with different types of emergencies in industrial and hazardous areas under the local jurisdiction of MCs. The RMSI report of December 2011 however, estimated shortfalls in availability of foam tenders (91 *per cent*), dry chemical powder tenders (100 *per cent*), turn-table ladders/sky lifts (43 *per cent*) and breathing apparatus vans (92 *per cent*) in the State. Audit scrutiny of Comprehensive Plans and Mitigation Plans prepared by the eight selected MCs also revealed shortfalls in availability of foam tenders (79 *per cent*), dry chemical powder tenders (100 *per cent*), turn table ladders/sky lifts (63 *per cent*) and breathing apparatus vans (80 *per cent*).

The gaps in infrastructure facilities (fire stations and equipment/specialized appliances) was a matter of grave concern as it would continue to affect the fire-fighting capabilities of the Fire Departments of MCs and put more lives and property at risk.

Recommendation 2: Since widening shortfalls in the availability of fire services infrastructure and equipment increase the vulnerability of the fire-fighting staff and the community to fire hazards, the State Government should review the current infrastructure of fire services in the State and reduce these shortfalls through sustainable funding of new capital assets and replacement/renewal of older assets.

4.1.8 Shortfall of manpower

In a Fire Department (at MC level), there should be a CFO (the overall in-charge of fire services) who is to be assisted by Deputy CFO, Divisional Officers (DOs) and Assistant Divisional Officers (ADOs). At the field level, a typical fire station is to be manned by a number of key personnel such as, Station Officer, leading firemen, firemen, drivers for fire engines, ambulance drivers, radio/wireless operators, technicians, mechanics *etc.* The RMSI report of December 2011 showed a manpower shortage of 12,159 personnel (including key personnel) in the State while the shortage was pegged at 1,731 personnel in eight selected MCs as per Comprehensive/Mitigation Plans. Thus, even after lapse of more than four years since the RMSI report was

made public, the State Government and the respective MCs did not take any action to reduce the manpower gaps in fire services.

Audit also observed that the DFS, Mumbai submitted (April 2014) a proposal to UDD, GoM for creation of 1,167 additional posts for strengthening of fire services in the State. Though a High Power Committee headed by the Chief Secretary of the State accorded (June 2014) its approval for creation of 131 of 1,167 posts, it was not considered by the State Government as of March 2016.

Recommendation 3: Since shortage of manpower affects the fire-fighting capabilities of Fire Departments, the issue must be addressed by the State Government on priority.

4.1.9 Non-compliance to fire safety norms

As per The Maharashtra Fire Prevention and Life Safety Measures Act, 2006, one of the key functions of the Fire Department is to enforce fire safety norms and create awareness among the citizens about fire prevention measures, especially in hazard-prone premises, so that the risk of fire is minimized. The Fire Departments of MCs also issue no objection certificates (NOCs) to all types of buildings and hazardous business activities such as, petrol pumps, liquefied petroleum gas (LPG) refilling stations or distribution centres, fire cracker shops and saw mills. Audit scrutiny revealed a number of deficiencies in enforcement of the fire safety norms provided for in the Act.

4.1.9.1 Inadequacies in issue of No Objection Certificates

Provisional fire NOCs are issued by the Fire Departments of MCs at the time of commencement of the construction of buildings under their territorial jurisdiction. The final fire NOCs are issued by the Fire Departments before grant of occupation certificates (OCs) by the Town Planning Department of MCs. Audit scrutiny of registers of Commencement Certificates/NOCs/OCs and the related building proposal files revealed the following:

- The Town Planning Department of MC, Amravati issued OCs to 28 buildings during 2010-15 without final fire NOCs from the Fire Department. Thus, it was difficult to ascertain in audit whether fire safety norms were adhered to by these buildings.
- Between 1968 and 2015, the Fire Department of MC, Nagpur issued provisional fire NOCs to 92 petrol pumps subject to installation of necessary fire-fighting equipment¹⁹. However, none of the 92 petrol pumps came forward to obtain final fire NOCs as of December 2015. No action was taken by the Fire Department against these errant petrol pumps. Also, 27 fire cracker shops, 322 saw mills and 41 LPG distribution centres (two refilling stations and 39 distributors) had been conducting business since 1994-2014 without obtaining fire NOCs from the Fire Department.

Further joint physical inspection by audit of two of 92 petrol pumps and one of 27 fire cracker shops under MC, Nagpur revealed that (i) against the mandatory requirement of underground water storage of 50,000 litres, the petrol pumps had storage capacity of only

¹⁹ Dry Chemical Powder extinguishers, foam extinguishers, underground water storage of 50,000 litres, yard hydrants, alarm systems *etc.*

2,000 litres, (ii) other than normal CO₂ fire extinguishers, no foam/dry chemical powder extinguishers were available in the petrol pumps, (iii) no fire hydrants were found installed in the petrol pumps, (iv) though 1,500 kg fire crackers/sparklers was stored in the fire cracker shop, only four CO₂ fire extinguishers were kept in the shop which was located on the ground floor of a three-storied building. The CFO confirmed to audit that for storage of fire crackers of this magnitude, dry chemical powder extinguishers were necessary.

- The Mitigation Plan prepared by MC, Thane in 2011 only indicated existence of 14 fire cracker shops in its jurisdictional area but, no details of other hazardous premises such as, petrol pumps, saw mills and LPG filling stations were mentioned either in the Mitigation Plan or available with the CFO as of March 2016.
- In MC, Nashik, nine fire cracker shops, 47 petrol pumps and 62 saw mills were running business without any final NOCs from the Fire Department (April 2016).
- Information on NOCs granted to the exact number of petrol pumps, fire cracker shops and LPG filling stations was not available with the Fire Departments of MCGM and Amravati. Further, while MC, Amravati did not prepare any Mitigation Plans, the one prepared by MCGM in 2011 did not show any mapping of such hazardous business being run in the city of Mumbai.
- During 2010-2015, MC, Navi Mumbai granted fire cracker licenses to two dealers for sale of 450 kg explosives without ensuring that they were having fire NOCs. Similarly, 12 LPG distributors were running business since 2014-2015 without fire NOCs.
- Twenty eight old Government buildings under the local area jurisdiction of three MCs (Aurangabad, Nagpur and Amravati) were not granted final fire NOCs by the respective Fire Departments as the required fire-fighting equipment were not installed in these buildings. However, the CFOs of the Fire Departments of three MCs did not issue notices to the owners of the buildings for inspection as required under Section 5 (1) of The Maharashtra Fire Prevention and Life Safety Measures Act, 2006. These buildings were thus, not only vulnerable, the lives of Government officials working in these buildings were at perpetual risk.
- As per Model Building Bye-laws (November 2004) of Town & Country Planning Organization, Ministry of Urban Development, GoI, the use of LPG is not permitted in high-rise buildings except residential/hotels/hostels/kitchen/pantries. The CFO, MCGM conducted (August 2012) an inspection of the 'New Administrative Building' in Mantralaya, Mumbai and observed that two canteens on 5th and 12th floors were being run using four and two numbers of LPG cylinders respectively for preparations of eatables, without any fire safety measures or permission from competent authorities. Further, the lift lobby on 13th floor was found to be encroached by half wooden partition with arrangements of sofas for the visitors. The common passage/lift lobbies at various floors were also found to be blocked by steel/wooden cupboards. However, physical inspection of Mantralaya building by audit and reply of CFO, MCGM revealed (April 2016) that

despite lapse of more than three years, the deficiencies pointed out by the CFO have not been rectified by UDD/MCGM in the interest of safety of occupants and property.

- As per Schedule I of the Maharashtra Fire Prevention and Life Safety Measures Act, 2006, minimum fire-fighting installations such as, fire extinguishers, yard hydrants, water storage tanks, hose reels, sprinklers, automatic detection and alarm systems are required to be installed in Government buildings/hospitals/educational institutions/commercial establishments. Joint physical inspection by audit of 53²⁰ Government buildings/hospitals/educational institutions/commercial establishments in eight selected MCs revealed that only fire extinguishers were installed in 11²¹ of 53 buildings and the remaining 42²² buildings were not equipped with any of the fire-fighting installations mentioned above. The occupiers of 53 buildings as well as the concerned MCs under which these buildings fall could not produce final fire NOC to audit for verification.

Thus, fire vulnerabilities in the State were not being adequately dealt with despite provision of a legal regime for mandatory clearance from the Fire Department for building and hazardous premises.

Recommendation 4: The State Government may enforce the provisions of The Maharashtra Fire Prevention and Life Safety Measures Act, 2006 more effectively to ensure that all hazardous business, commercial, Government and institutional buildings were complying with the State fire safety regulations and that they were self-sufficient in fire-fighting capabilities.

4.1.10 Shortfalls in capacity building

In order to improve the capabilities of the fire staff to effectively deal with the fire emergencies, various attributes such as, knowledge, skills, attitude, physical fitness, vision and mental alertness of fire staff needs to be constantly monitored and improved through regular training, mock drills, workshops and community awareness programmes.

4.1.10.1 Shortfalls in training

The GoM has established one State fire training centre (SFTC) at Kalina (Santacruz), Mumbai. As per GR of March 1990, basic technical fire-fighting training was to be imparted to fire personnel (new recruits and junior cadre staff) for six months during a year in SFTC. Audit observed that of 1,250 fire personnel to be trained in the State during 2010-15, only 401 personnel

²⁰Seven hospitals, seven educational institutions, 36 Government buildings and three commercial establishments

²¹One Government building in MCGM; three Government hospitals-one each in MC, Nashik, Aurangabad and Amravati; six educational institutions-four in MC, Nashik, one each in Aurangabad and Amravati; and one commercial building in MC, Amravati

²²Thirty five Government buildings-four in MCGM, one each in MC, Navi Mumbai, Nashik and Pune, eight in Aurangabad, 10 each in Amravati and Nagpur; four Government hospitals-one each in MCGM, Thane, Navi Mumbai and Pune; one educational institution in MC, Thane; and two commercial buildings-one each in MC, Navi Mumbai and Pune

(32 per cent) were imparted training (except MCGM)²³ in SFTC. In two²⁴ of eight selected MCs, none of the fire personnel was imparted training in SFTC during 2010-15. Further, only one fire personnel each from MC, Amravati and Nagpur (from total strength 377) was imparted training during the same period.

4.1.10.2 Delay in construction of an advance fire training academy

As per National Disaster Management guidelines of April 2012 (Chapter 6), the States should set up modern training centres with adequate infrastructure, faculty and facilities with modern training aids like simulators and other sophisticated equipment. The existing SFTC at Kalina in 1.25 acres of land does not have enough open space for practical demonstrations and advance training facilities. Therefore, the DFS, Mumbai submitted (July 2008) a proposal to UDD, GoM for establishment of an advance fire training academy (AFTA) in 50 acres of land in which outdoor training activities/facilities along with different fire and rescue modules would be available. For this purpose, the UDD vide Resolution of August 2009 sanctioned ₹ 50 crore. However, even after a lapse of more than seven years, the land for AFTA was not acquired (July 2015).

The DFS, Mumbai stated (October 2015) that the Revenue Department had agreed to transfer 18 acres of land in Bhiwandi Taluka (district Thane) for setting up AFTA and the status of land (whether free from reservation) was being ascertained.

4.1.10.3 Non-conducting of physical fitness camps

Fire rescue activities being a specialized task need high degree of physical fitness of the operational staff. As per Appendix 11-G to Compendium of recommendations of the Standing Fire Advisory Committee of 2011, physical assessment tests are to be held every six months to ensure that fire-fighting personnel remain fit for their duties. Audit observed that except for CFO, MCGM, none of the seven selected MCs organized any physical fitness camps to check the physical fitness of the operational staff during 2010-15.

4.1.10.4 Inadequate community preparedness and awareness

The National Disaster Management guidelines of April 2012 envisages a proper platform which would keep the community organized and trained on a regular/permanent basis through conducting mock exercises and awareness programmes to enable them to respond in an effective and organized manner during fire emergencies.

Audit observed that the Fire Departments of six²⁵ of eight selected MCs had been conducting only fire prevention week between 14 and 20 April every year and no events were conducted on a regular basis throughout the year to outreach and educate the community. Further, none of the eight selected MCs

²³ MCGM has its own training centre at Wadala, Mumbai and no shortfalls in training was noticed

²⁴ Navi Mumbai and Aurangabad

²⁵ Except MCGM and MC, Nagpur

had conducted community awareness programmes during 2010-15 by inviting industry experts in fire prevention and life safety measures.

Recommendation 5: In order to handle all types of fire emergencies and respond to other disasters efficiently and effectively, the State Government should (i) monitor the training needs of the firemen and sub-officers and ensure that there are no gaps/shortfalls in training, (ii) speed-up the establishment of advance fire training academy, and (iii) organize physical fitness camps on a regular basis to ensure that the front-line operational staff are in a high state of preparedness at all times.

4.1.11 Inadequate inspection and monitoring mechanism

4.1.11.1 Deficiencies in preparation of fire investigation reports

As per Section 289 of The Maharashtra Municipal Corporation Act, 1949 (amended June 2014), a report of every fire which occurs in the city shall be submitted by the Chief or other officer-in-charge of the fire station not later than the day following the fire to the Municipal Commissioner, who shall make such further inquiry, if any, as he may deem necessary and shall furnish a weekly return of all fires which occur in the city to the Standing Committee of the MC. The above Act is applicable to all the MCs, except MCGM. The same provisions are also applicable to MCGM under Section 364 of The Mumbai Municipal Corporation Act, 1888 (amended December 2011).

During 2010-15, total 2,822 fire incidents (major and minor) occurred in the local area jurisdiction of six²⁶ of the eight selected MCs with 1,187 casualties. Under MCGM area, 24,332 fire incidents (major and minor) were reported during the same period with 1,144 casualties. Audit observed that no uniform format had been prescribed for documenting/filing the fire investigation reports by the CFOs. As such, all the CFOs of MCs had been filing the details of fire incidents in different ways and manner. Two MCs (Amravati and Nagpur) were not even recording the complete details on the format they were using to file the reports. Further, except MCGM, the fire investigation reports were not being sent regularly by the CFOs to the concerned Municipal Commissioners and Standing Committees.

Such gaps in reporting of fire incidents would not allow the higher authorities to evaluate and monitor the situations arising out of fire emergencies in a sustained manner and suggest timely remedial measures.

4.1.11.2 Non-conducting of inspection of the buildings

As per Section 5(1) of The Maharashtra Fire Prevention and Life Safety Measures Act, 2006, the DFS or the CFO or any nominated officer may, after giving three hours prior notice to the occupier of a building, inspect any place or building at any time between sunrise and sunset where inspection appear necessary for ascertaining the adequacy or contravention of fire prevention and life safety measures.

Audit observed that except two MCs (MCGM and Thane), none of the CFOs of six selected MCs conducted inspection of any buildings, educational

²⁶ MC, Amravati did not maintain any details of fire incidents for the period 2010-15

institutions, hospitals, malls, multiplexes, industries, public gathering places, hotels *etc.* during 2010-15. Further, during inspection (June 2012) of the Central Excise Office, Regional Transport Office and office of the Superintendent of Police in Thane district, the CFO observed that no fire prevention and life safety measures²⁷ were installed in these three buildings. Though notices were issued to these offices in July 2012, the observations made by the CFO on lack of fire safety measures were not complied with as of December 2015.

4.1.11.3 Non-creation of fire act cell

For effective implementation and monitoring of the provisions of The Maharashtra Fire Prevention and Life Safety Measures Act, 2006, the MCGM proposed (October 2012) to create a separate dedicated cell namely, fire act cell consisting of 99 officers (33 Station Officers and 66 Assistant Station Officers). However, the fire act cell was not created as of March 2016. The CFO, MCGM confirmed (April 2016) to audit that due to non-creation of fire act cell, works of regular inspection of buildings, issue of notices, follow up action, prosecutions *etc.* were being carried out by the existing operational staff/officers of MCGM which adversely affected the day-to-day handling of emergency services.

The MCGM stated (April 2016) that for effective inspection and compliance to the Act, it has developed an IT-based system called 'fire management system' to monitor and keep proper records of those buildings not complying with the provisions of the Act.

4.1.11.4 Fire stations commanded by lower grade staff

The Station Officer in-charge of a fire station is a crucial functionary who keeps himself and his men at all times in a state of readiness to attend to fire calls. He is also responsible for proper custody and upkeep of all fire appliances, stores and equipment issued to the station and maintenance of log books, occurrence books, attendance rolls *etc.* and submission of all returns and statements to his superiors.

Audit observed that there are eight fire stations under MC, Nagpur of which, only two fire stations were headed by Station Officers while the remaining six were headed by leading firemen, due to non-filling of vacant post of Station Officers since October 2010. Of the two Station Officers, one Station Officer was holding the additional charge of CFO. In MC, Amravati, there were two fire stations of which, one was being headed by a fireman and the second by a leading fireman, who was also holding the additional charge of Fire Superintendent²⁸ since August 2012.

Given the multitudes of tasks and responsibilities of a Station Officer, commanding of fire stations by lower grade staff (firemen and leading firemen) may not be an ideal situation to deal with fire emergencies and for decision-making at critical moments.

²⁷Fire extinguishers, court-yard fire hydrants, water storage tanks, hose reels, sprinklers, automatic detection, fire alarm systems *etc.*

²⁸ In MC, Amravati the Fire Superintendent held the charge of Fire Department

4.1.11.5 Non-monitoring of certificates issued by licensed agencies

As per Section 9 (1) and (3) of the Maharashtra Fire Prevention and Life Safety Measures Act, 2006, the CFOs of MCs may grant any person or association of persons a license to act as a licensed agency to carry out the work of providing fire prevention and life safety measures in a building or part thereof. The license so granted shall remain valid for a period of one year which may be renewed for a like period or refused for reasons to be recorded in writing. Further, as per Rule 4 (1) and (2) of the Maharashtra Fire Prevention and Life Safety Measures Rules, 2009, a licensed agency shall issue a certificate in Form-A regarding compliance of the fire prevention and life safety measures in a building, followed by a certificate in Form-B to be issued by the licensed agency twice a year (January and July) regarding maintenance of fire prevention and life safety measures in a building or premises being in good repair and efficient condition. As of March 2016, there were 290 licensed agencies in the State holding valid licenses.

Audit scrutiny of documents in eight selected MCs revealed the following:

- In four²⁹ of eight selected MCs, only 459 Form-B certificates (three *per cent*) were issued by the licensed agencies out of 15,338 buildings which were granted final fire NOCs during 2010-15. Of the 15,338 buildings, 11,925 buildings were under MCGM jurisdiction of which, only 205 Form-B certificates (two *per cent*) were issued by the licensed agencies during the same period. Further, joint physical inspection by audit of 53 Government buildings/hospitals/educational institutions/commercial establishments in eight selected MCs revealed that the licensed agencies did not conduct any inspection of these premises during 2010-15 and therefore, no certificates in Form-B were issued.
- In MC, Nashik, a licensed agency³⁰ issued certificate in Form-A to Sahyadri Hospitals after expiry of validity of license period, which was irregular. The hospital submitted the certificate to the Fire Department on the basis of which, fire NOC was issued to the hospital.
- In three³¹ MCs, the licensed agencies issued certificates in Form-B to three establishments for one year period instead of twice during the months of January and July. In another three cases, no periods were mentioned in the certificates issued by the licensed agencies. Further, in MC, Pune, the licensed agency³² issued certificates in Form-B to 10 establishments for four months period (March to June 2015) instead of six months. The incorrect certificates were however, accepted by the CFO, Pune and no action was taken against the licensed agency.

In the all cases mentioned above, no show cause notices were issued by the CFOs to the defaulting licensed agencies under Rule 17 of The Maharashtra Fire Prevention and Life Safety Measures Rules, 2009 for their failure to comply with the conditions of the license by reason of incompetency, misconduct or any other grave reason.

²⁹ MCGM, Thane, Nagpur and Nashik

³⁰ Indo Fire Safety Solutions, Pune

³¹ Aurangabad, Amravati and Nagpur

³² Disnyr Fire Enterprises, Pune

The Secretary accepted the facts and stated that fire safety is a joint effort where the residents/occupiers of the buildings must also be involved, duly supplemented by the services of the Fire Department.

4.1.11.6 Non-conducting of periodical inspections of high-rise and dilapidated buildings leading to major fire accidents

During 2010-15, 12 major fire accidents (also termed ‘brigade fire calls’ where 20 or more fire tenders are deployed for fire-fighting) occurred in MCGM’s jurisdictional area. Three such accidents involving two high-rise and one dilapidated building are discussed below where fire prevention and life safety measures as enunciated in The Maharashtra Fire Prevention and Life Safety Measures Act, 2006 were compromised due to non-conducting of periodical inspections of buildings by the CFO, Mumbai.

- A major fire broke out in Mantralaya (a high-rise building) on 21 June 2012 due to defective electric circuit which claimed five lives and caused massive damage to property. At the time of accident, the building did not have final fire NOC from the Fire Department of MCGM. Fire investigation report submitted by CFO, Mumbai in August 2012 *inter alia* revealed that (i) the internal approach road to the building was blocked due to parking of vehicles and thus, caused inordinate delay in arrival of fire tenders (response time was 16 minutes), (ii) though an underground water storage tank (2.34 lakh litre capacity) was available in the building yet water could not be drawn through the court-yard fire hydrants and wet risers, as these were found to be non-functional, (iii) open spaces were not adequate for jacking and operating the fire engines due to landscaping and porch, and (iv) fire extinguishers were not functional.

The final fire NOC was issued by the Fire Department in October 2015. The State Government incurred an expenditure of ₹ 202 crore as of March 2016 on renovations of Mantralaya building.



- Lotus Neelkamal Business Condominium, a 20-storied building with glass facade, was granted final fire NOC by the Fire Department in November 2006. A major fire broke out in the building on 18 July 2014 due to defective electric circuit in the server room and it took 30

hours to control the fire. One fireman lost his life during fire-fighting operations. The CFO, Mumbai in its investigation report (August 2014) observed that though the building was having an underground water storage tank of one lakh litre capacity yet hardly 10 *per cent* water was available in the tank when the fire broke out and therefore, water could not be drawn through the court-yard fire hydrants and wet risers, as these were found to be non-functional. The fire NOC issued to the building was revoked in July 2014.

- Gokul Niwas, a commercial-cum-residential building more than 30 years old, is situated in the densely populated Kalbadevi Road. The traders were using this building to stock various types of inflammable items/material such as, silk and cotton sarees, chemicals, processing solvents, acids, LPG cylinders, mobile accessories and batteries, plastic and paper packing material, material for processing and treatment of precious metals including gold ornaments *etc.* A major fire broke out in the building on 09 May 2015 due to defective electric circuit which took more than 80 hours to control. The entire building (ground plus four floors with attic) collapsed and four fire officers including CFO, Mumbai lost their lives during action. A fact-finding Committee³³ constituted by MCGM *inter alia* recommended (May 2015) that (i) list of all dilapidated buildings in Mumbai should be kept by the Fire Disaster Management Department of MCGM/Maharashtra Housing and Area Development Authority, (ii) electrical wiring and meter boxes of buildings more than 30 year old should be checked by Brihanmumbai Electric Supply and Transport (BEST) Undertaking and yearly electric audit should also be done by BEST, (iii) storing of chemicals and gold making process should be banned in old buildings, and (iv) Global Positioning System should be installed on all fire vehicles.



Collapsed Gokul Niwas Building at Kalbadevi

The MCGM stated (April 2016) that recommendations made by the fact-finding Committee were in different stages of implementation. However, the fact remained that the building in question did not have fire NOC and no periodical inspections were conducted by the Fire Department which might have averted catastrophe of this magnitude.

³³ Chief of Disaster Management, New CFO of Fire Department, DFS, Additional Commissioner of MCGM and Chief Engineer of MCGM

Recommendation 6: (i) The State Government may carry out vulnerability analysis of all the densely populated, important and hazardous locations in the State and increase awareness amongst the people regarding do's and don'ts in fire incidents, and (ii) Monitoring of Form-A and Form-B certificates issued by the licensed agencies should be made more effective to ensure compliance to fire prevention and life safety measures in buildings and premises.

4.1.12 Conclusion

Fire prevention and control measures taken up by the Fire Departments of eight selected Municipal Corporations were not satisfactory. The eight Municipal Corporations could spend only 22 *per cent* of their capital budget during 2010-15 which was meant to be utilized for purchase of specialized fire appliances, equipment, vehicles *etc.* While four of eight Municipal Corporations did not constitute the fire protection fund, seven of eight Municipal Corporations did not collect and levy any annual fees for strengthening the fire services. There was acute shortage of fire stations in the State as well as in eight Municipal Corporations. The fire stations were also grossly under-equipped and deficient in basic infrastructure such as, land, permanent building, drill towers, water sources, fire hydrants, fire tenders, specialized fire appliances *etc.* There was significant shortage of key personnel in the Fire Departments in the State as well as in eight Municipal Corporations. Many buildings and hazardous premises such as, petrol pumps, LPG stations, fire cracker shops, saw mills *etc.* in the local area jurisdiction of the eight Municipal Corporations were operating without final fire NOC from the Fire Departments. There was significant shortfall in imparting training to fire personnel during 2010-15, and construction of an advance fire training academy was pending even after a lapse of more than seven years from the date the proposal was first mooted. There were deficiencies in documenting fire investigation reports by the Chief Fire Officers. In some Municipal Corporations, fire stations were being commanded by firemen and leading firemen instead of Station Officers. Form-A and Form-B certificates issued by the licensed agencies to ensure compliance to fire prevention and life safety measures in buildings and premises were deficient and not effectively monitored by the Chief Fire Officers. The Fire Department of Municipal Corporation of Greater Mumbai did not conduct periodical inspections of high-rise and dilapidated buildings leading to major fire accidents in Mumbai during 2010-15 and loss of lives and property.

The matter was referred to the Government in September 2015; their reply was awaited as of April 2016.