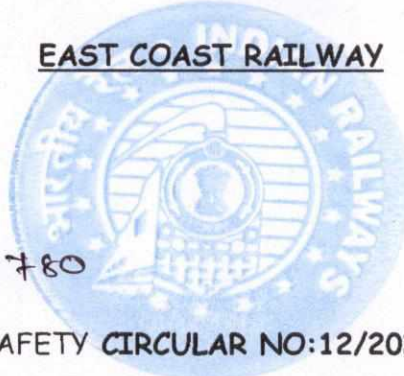


EAST COAST RAILWAY



Office of the
Pr. Chief Safety Officer
Bhubaneswar

No: ECoR/SFY/67/2024-25 | 780

Dt.22.10.2024

(SAFETY CIRCULAR NO:12/2024)

Sub:- Precautions during cyclone, heavy storm or strong wind.

The coastal divisions of ECoR situated along the Bay of Bengal is very often ravaged heavily by storms, cyclones and heavy intensity of rainfall, which affect the safety of traveling public/Passenger and also result in disruption to traffic and communication. The cyclonic storm is categorized on the basis of expected wind speed during land fall:

1. **Severe Cyclonic Storm:** Wind speed is expected to be 120 kmph.
2. **Very Severe Cyclonic Storm:** Wind speed is expected to be 180 kmph.
3. **Super Cyclonic Storm:** Wind speed is expected to be 220 kmph.

In order to sensitize the staff regarding precautionary measures to be taken in such situation; the following are reiterated below for strict adherence.

A. ACTION BY OPERATING, LOCO & COMMERCIAL DEPARTMENT:

1. Ensure flow of information on weather warning message to all concerned & station as & when received from HQ or IMD/RMD maintain weather warning register. SCR to ensure all stations acknowledgement.
2. **SR.2.11.04 (a):** Whenever a weather warning message forecasting cyclone, heavy storm or strong wind has been received and/or there is a reasonable doubt that sever storm is going to break out endangering passengers etc. The Station Master shall detain the train and also refuse to grant line clear to a train coming to his station until the storm abates and considered that the movement of train is safe.
(b) Should a train be caught on the run in a cyclone, storm or strong wind of an intensity which in the opinion of the Loco Pilot, is likely to endanger the safety of the train, he shall immediately control the speed of his train and bring it to stop at the first convenient place taking care as far as possible to avoid stoppage of the train at places like sharp curve, high embankments and bridges (including approaches thereof). In controlling the speed and bringing the train to a halt, the Loco Pilot shall take care to avoid jerk. He shall re-start the train, in consultation with the guard only after the cyclone, storm or strong wind abates and it is considered safe for the train to proceed.
(c) The station staff as well as train staff shall try to see that doors and windows of the coaches are kept open by the passengers to allow free passage of wind through the coaches.

3. As per **SR.2.11.05(a)** Station Master shall take the following steps, if the anemometer is indicating the critical limit of wind velocity 39 Knots(72Kmph).
 - a. Inform SCR & SM of adjacent station regarding need to control train movement, shall not start or allow the movement of trains from his station and also shall not grant line clear to adjacent station.
 - b. Normal working can be resumed when storm abates in consultation with SCR & adjacent stations.
 - c. If the anemometer fails to operate; Station Master may use his judgment, if there is any apprehension of a severe storm or gale, and take the precautions as mentioned above.
4. **SR 5.23.01 (d) (vi)**- As storm may arise while shunting is being performed special care must be taken to secure the vehicles which might be left unsecured during shunting. This shall be ensured during stormy weather by supply of wedges and skids being placed near the entrance points of each pair of lines on which the shunting is being conducted.
5. An emergency control and manned by one officer and assisted by a Dy. Ch. Control in each shift to be opened. A log book has to be opened and chronological events are to be maintained.
6. Ensure proper securing of stable loads/vehicles at stations supported by Private number. Loose vehicles to be coupled and secured. Sectional DTIs are to ensure the same also.
7. Ensure availability and functioning of safety equipments, Emergency lights, generator set with adequate fuel at the station, storage of adequate drinking water, functioning of LED hurricane lamps, match box, functioning of VHF sets & WTs, charging of stand by batteries. Any discrepancy should be brought into light for immediate action.
8. Ensure availability of update telephone numbers of Civil and Medical Authorities, Hospitals, NGOs and Voluntary organizations, Disaster Management Cell etc. and keep them informed to be alert on the ensuing cyclone. SCR to ensure the same from each station supported by PN and record in station diary.
9. Availability of proper refilled first aid Box at each station is to be ensured.
10. Ensure availability of sectional CDs on topography, track record and functioning of Audio Video system in the control room.
11. Ensure readiness of ART, ARME, SPARMV, Monsoon special (with carriage fitness) with all its equipments for emergency call.
12. Ensure proper functioning of Anemometer and accordingly take precautionary measure towards train movement. In no case a coaching train is to be allowed to enter into a cyclone hit area unless the cyclone abates and track fit, OHE fit received from concerned departments.
13. Normal and diverted trains are to be controlled at such a station where drinking water and fooding facility are available and necessary publicity has to be made accordingly.

14. Keep LPs, ALPs, TMRs and SMs informed of system status and instruct them to make appropriate announcement to passengers through PAS.
15. LC Gate booms to be kept down under lock during the cyclone.
16. Ensure wide public address announcement at stations to share with update information on terminated, Diverted, delayed trains concerning rail system status.
17. Alert voluntary organizations, security department for help if required in the closed vicinity.
18. Co-ordinate various departments as and when required.
19. All station staffs of the Division are to remain at their Head quarters during the Cyclonic weather to work during abnormal situations.
20. Diesel light engines with Crews to be made available round the clock at strategic locations as identified by the divisions.
21. All stations In-charges will keep some basic essential eatables, portable water and candle with match box for use of staff during cyclone.
22. CHC (P) to draw the Imprest cash and basic essential eatables and portable water for use in control office during the cyclone.
23. All other officers and supervisors will remain alert for movement as per the requirement.
24. Help line No to be issued by Commercial department and circulated through print/electronic/social media.
25. Division to issue working instructions on action plan well ahead of cyclone to start.

B. ACTION BY SIGNAL AND TELECOM:

1. Adequate number of walkie talkie set and 25 watt VHF set to be kept functioning with fully charged battery.
2. Satellite phones wherever available should be tested and accompanying staff identified along with battery charging arrangement.
3. Generator with adequate fuel (for at least 72 hrs) in proper functioning condition to be ensured.
4. During cyclone, both Up & Down mainlines will be kept set for emergency movements and Emergency Crank handle Key will be released once order is issued.
5. Telecom channel, by alternative routes should be lined up and kept terminated for administrative trunks and control working.
6. Manning of stations shift-wise in affected Zones to be ensured by S&T staff.
7. Any communication equipment provided at stations to be ensured functioning.
8. Keep all the Block Instruments and their Batteries in good and healthy condition.
9. Extend power supply from emergency generator set to IPS or Block Battery charger.
10. Spare materials for outdoor and indoor gears shall be kept ready for the emergency in each nodal stations.

C. ACTION BY ELECTRICAL (G) AND TRD DEPARTMENT:

1. Emergency portable telephone supplied to LPs, TWs should be tested for its functionality at different locations.
2. Ensure functioning of TPC/TLC phones at OHE Depots, TSSs, SPs, SSPs and other station locations after switching off the power supplies at these locations, so that these phones should be functional even when supply is not there during/after cyclone.
3. The Tower Wagons where ever stabled during cyclone should be properly secured by providing 4 wedges at either side. Preferably they should be kept inside the Tower Wagon Shed, so that toppling/rolling down because of heavy rain & wind does not take place. All brakes should also be in applied condition.
4. Tower Wagons should be ready in all respect with material, diesel and fully charged battery. Additional Tower Wagon at other non affecting locations should also be kept ready. Each TW should have portable emergency search light of two numbers.
5. The tree cutting machines should be available with Tower Wagons in working order. Removal of tree is joint effort by SSE/P.Way and SSE/OHE staff. All SSE/P.Way and SSE(Works) should be asked to take measures for removal of tree and other destroyed materials/structures etc.
6. OHE supply should be switched off after heavy wind starts in consultations with control staff.
7. Full fuelled Diesel Loco with crew should be kept at different strategic locations as decided by division/HQ.
8. Road vehicles should be kept in readiness at all important locations where Tower Wagons are stationed.
9. Sufficient cable, light fittings, meggered insulators, different Aluminum sockets, switches, MCBs should be kept available with the concerned depots.
10. The TRD staff and general power supply staff who are not housed in Railway quarters should be asked to stay in OHE depot so that after cyclone, they are available for restoration work. It should be ensured that they should remain inside the concrete roof building and not in asbestos roof. Adequate food and water should be arranged for staffs to meet the emergency during cyclone.
11. At all important stations DG sets should be made available to give supply to the station buildings as well as the water pumping area. If the existing DG set supply to station building as well as the pumping station is through underground cable and no overhead cable then additional DG sets need not be kept there and if the supply to station building and pumping station is overhead cable then additional portable DG sets should kept ready.
12. All Supervisors/staff should be counseled that immediately after wind speed comes down, they should report to TPC for necessary instructions.
13. Ensure shifting of solar panels to a safer place or follow as per Power Purchase Agreement.

14. Sufficient HSD oil should be stocked at general power supply control for DG sets to supply power to residential quarters and service buildings.
15. Lights of High mast to be kept down.

D. RUNNING ROOM :-

1. Sufficient ration to be kept in the Running Room for at least 7 days. The ration should be safely kept in the room on a height place and the room is safe from water ingress. All the water inlet point should be blocked.
2. Suitable drinking water arrangement should be made in all Running Rooms. Filtered water may be kept in sufficient quantity or water cans should be kept in the running room for drinking water supply. IOW should be asked to provide water tanks for other requirements.
3. The contractual staff working at RR and Crew lobbies may be asked to stay back in case of need as they are likely to be engaged after cyclone.

E. CREW LOBBY:

1. Ch. CC should keep the address of all the crews working under him so that they may be called in case of communication fails.
2. All the crew vehicles should be fully fuelled as well as additional fuel stock may also be kept in the lobby so that crew vehicle service are not hampered.
3. Ch. CCs should plan to ensure availability of adequate electrical/diesel crew for train operations post cyclone.
4. The walkie-talkie sets and batteries should be kept fully charged. Crew should also be advised to keep their mobile phones and battery banks fully charged.
5. CLIs are to counsel running staff regarding train operations in case of storm weather, heavy rains as given in GR & SR.
6. CTLC & Chief DPC are to ensure all Diesel locos including interior service should be fuelled to maximum to keep them ready for operations required post cyclone. All diesel locos to be moved and kept at strategic locations as desired by operating department of division/HQ. Placing CLIs & crew at advance locations, if required.
7. List of Auto phones of various Lobbies, Running rooms, Station Managers/Masters, TLC, DPC, Area Control etc may be kept ready. The defects may be shared in whatsapp CLI and Ch.CC group too.

F. ACTION BY RCD:

1. Sufficient fuel stock for 7-10 days should be maintained at all the RCDs before cyclone so that there will not be fuel crisis.
2. The diesel pump at all the RCDs should be checked for their functioning and should be rectified before cyclone.

G. ACTION BY ENGINEERING DEPARTMENT:

1. **SR 15.05.02:-** In case of exceptionally heavy rain or abnormal floods occurring during the monsoons or a sudden severe storm during the non-monsoon period, the JE/SE/SSE (P.Way), Permanent Way Supervisors and Gang mates shall, on their own initiative, organize patrolling by the gangs of those portions of the line which are likely to be affected thereby, until the danger passes. This shall be done

irrespective of whether regular monsoon patrolling by patrolmen is in force or not. In case of heavy rainfall and floods, the gang patrols shall pay special attention to known vulnerable locations, such as banks and cuttings which are liable to slips or subside, bridges and their approach banks likely to be affected by floods and portions of the line which may be endangered by railway affecting tanks. In case of cyclone or heavy gale, the patrol man shall also inspect the lengths of track which are likely to be fouled by falling of trees etc.

2. Two light motor trolleys should be arranged & kept in readiness at strategic stations which should be away from the likely affected zone. At least one Officer & a few staff should be nominated for each. They should be provided with VHF sets & 01 satellite phone each so that they can accomplish the mission of physically covering the entire affected zone & give "First information on damage" through this equipment to the control after passage of the cyclone.
3. Water logging area, Colony to be identified and arrangement to shifting the staff to safe place.
4. Standing arrangements on 'whenever required' basis should exist for supply of adequate rake loads of dust, boulders and sand with ballast contractors at Engineering sidings.
5. As restoration of traffic often requires heavy handling of earth, availability of heavy earth moving machinery viz., Poclains, JCBs, Pay-loaders; Road Water Tankers (Drinking Water), etc. should be identified in the coastal towns along with firm's/owner's names, addresses and telephone numbers so as to hire and mobilize them whenever as the necessity arises.
6. Adequate man power with supervisors to be deputed at strategic locations for restoration work with Manila ropes, Axe, Chain Saw etc.
7. Relieving span and CC cribs to be kept ready in loaded BRNs.
8. Flat wagons to be kept at specified locations for loading of JCB & other earth movers with man and material.
9. Standing contracts with 100% option clause may be entered into on annual basis from strategic quarry dust and boulder supply locations viz Tapang, Niligiri, Chandikhole (near Dhanmandal) and at other nominated stations on East Coast Railway.
10. Pool of multiple skilled trained volunteers from various departmental staff should be formed to involve themselves in immediate rescue and relief.
11. Identification of locations in Railway area or within the nearby vicinity with co-ordination of state Govt. for use as cyclone shelters for affected people & animals.
12. Overhead tanks for supply of water to colonies and other area of Railway infrastructure should be filled in advance to its full capacity.
13. Railway property which is prone to damage should be removed/relocated/covered before cyclone and to be placed at safe place and safe custody.
14. During pre-cyclone Engineering Department will arrange for provision of water through Road tankers.

15. All track machines should be coupled and secured as per stipulated guidelines.
16. Big Hoardings, advertisement boards etc likely to be a threat for public/passengers may be suitably removed.

H. ACTION BY MEDICAL DEPARTMENT:

1. Medical Department will procure sufficient Chlorine tablets & Bleaching power as per demand before to handle the cyclone.
2. Streamlining of ambulance system.
3. Mobilize mobile health team.
4. Special care to children, pregnant women, lactating mother, aged and differently-able persons.

I. ACTION BY MECHANICAL DEPARTMENT:

1. ARTs, SPARMEs and BD Cranes and their staff must be in complete readiness during the period of cyclone.
2. All the equipment and machinery of Disaster Management Assets must be test-run and should be ready for swift deployment.
3. Supplies required for running of Disaster Management Assets like diesel, kerosene, etc should be recouped.
4. Provision of adequate dry ration should be ensured in Disaster Management Assets.
5. Walkie-Talkies under direct control of C&W Break Down supervisors to be kept fully charged.
6. Mobile phones of C&W Break Down supervisors and staff to be kept fully charged.
7. Any preparation that enables faster and efficient response should be ensured.
8. Cash Imprest to be checked and recouped for emergency response.
9. All stable coaches and wagons to be secured properly to avoid their roll-down.
10. All M&P like EOT cranes, compressors, etc to be secured properly.
11. Power cars to be attached to all originating coaching trains from ECoR.

Basing on the above, HQ & Division should prepare a detail action plan with available resources, their proper mobilization and execution in cyclone preparedness as well as post cyclone activity as per time base requirement. Resources of non affected locations of other division/railway may also be planned and deployed at strategic locations.

Pr. Chief Safety Officer
East Coast Railway

Copy to :

1. Secy. to GM for kind information of GM.
2. Secy to AGM for kind information of AGM.
3. PCOM, PCSTE, PCE, PCEE, PCME, PCCM & CPRO for information and necessary action.
4. DRMs- KUR/WAT/SBP for information and necessary action.
5. Sr. DSOs- KUR/WAT/SBP for information and necessary action

22.10.24