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2007

GOVERNMENT OF INDIA  
MINISTRY OF RAILWAYS  
(RAILWAY BOARD)

2004/Sig/SF/2/PL1

2-1-2006  
New Delhi, dated 12-2005-

The GM(S&T),  
All Zonal Railways.

Sub: Recommendations of task force to study the issues concerning asset failure and asset maintenance for establishing of a near "Zero defect regime".

Ministry of Railways (Railway Board) had constituted a multidisciplinary task force to study the entire gamut of issues concerning asset failure and asset maintenance and make recommendations for establishing of a near "Zero defect regime". The terms of reference assigned to the task force to conduct the above study are as under:-

- (i) To study the entire gamut of issues concerning asset failures, maintenance and make recommendations for establishment of near "zero defect regime".
- (ii) To make *inter-alia* inter-zonal and inter-country comparisons of asset failure and maintenance norms, procurement procedures and stores management and reporting, monitoring, decentralization and accountability norms.

Task force had submitted the report and recommendation to Board. Board has desired that the recommendations of the multidisciplinary task force should be communicated to the Railways. Accordingly the recommendations of the task force pertaining to Signalling and Telecommunication are as given below for implementation:

Recd. No.	Recommendation	Remarks of Signal Directorate
8.1	Asset failures and maintenance norms	
8.1.1	Asset maintenance through AMCs as a general policy need to be discouraged and it should be resorted to only under the following situations  (a) Where there is no in-house expertise readily available to maintain new technology assets, AMC can be considered. Procurement contracts in such cases should have an inbuilt AMC clause so as to ensure maintenance for a period of 2-3 years by the supplier of the equipment beyond the warranty period. During this AMC period, expertise for in-house maintenance should be created by rigorous and appropriate training of staff and creation of necessary infrastructure.  (b) Where it is considered uneconomical to maintain assets in remote areas departmentally, AMC can be considered.	Railways to note these recommendations for compliance. Railways have been advised vide letter no. 2005/SIG/SEM/8 dt. 4.10.2005 for entering into AMC for repairs of electronic modules/cards.

246

8.1.5	<p>Since technology in all spheres of railway working is changing fast, often the existing skilled manpower is unable to maintain the new technology assets. This problem is further compounded by the existence of large number of vacancies against direct recruitment quota, both under skilled artisan category as well supervisory category. RRB should be asked to fill up the existing vacancies in the next six months. Besides, a flexible system whereby qualified manpower can be inducted from the open market at the shortest possible time should also be devised. To combat the problem of maintenance of fast changing technology with no matching manpower to maintain them, a system of recruitment on temporary basis similar to what is being followed in the armed services (Short Service Commission) can also be tried. This will facilitate intake of qualified manpower at periodical intervals.</p>	<p>Yardsticks for Signal and Telecom staff has been issued vide Railway Board's letter no. 94/E&amp;RT/700/9(Pl.) dt. 27.4.2005 and letter No. 2000/Tele/MW/7/RCIL/Vpt. Dtd. 6.9.04. Staff should be sanctioned as per the yardstick.</p> <p>The yardstick for Gazetted cadre is under consideration of the Board.</p> <p>Railways should closely monitor filling up of Direct Recruitment(DR) quota of vacancies through RRB's.</p>
8.1.7	<p>Miscreant activities as the cause for asset failure should not be accepted on a routine manner unless and otherwise it is established without any doubt through a proper investigation. In all such cases an FIR should be lodged with RPF and the RPF inspector should thoroughly investigate and give a report.</p> <p>Technological solutions to prevent miscreant from tampering with railway assets should be found out.</p>	<p>Northern railway has issued instructions for "Train logging on Law &amp; Order" vide letter no. 51/SIB/Punctuality/2001 dt. 14.3.2001 (Copy enclosed). Whenever failures due to miscreant activities take place, the matter should be reported to RPF through control. RPF will in turn handover the memos to concerned GRP for proper registration of the cases. If RPF staff is headquartered at the station, S&amp;T staff shall issue memo to RPF if available at station.</p> <p>Specific anti-theft and anti-interference measures like providing cages, perforated pipe protection for exposed cables at bridges, extra AIS straps at location</p>

		boxes. centralisation of field equipment, providing reliable and secure track leads similar to "exothermic weld", replacing metallic cable markers by RCC/electronic type, ensuring laying of cables as per JPO No.1/Sig/2004 issued by Board and also as per chapter 4 of the Quality handbook.
8.1.13	Training modules for all categories of staff should be finalized for each department at Board's level and shortfall of training infrastructure should be made good on time bound programme basis. Training Instructors should be picked from the best available staff who have aptitude for imparting training. Monetary incentive to such trainers should be very attractive to draw them into training schools. A comprehensive training action plan should be drawn by each division and adequate cushion should be provided by creating trainee posts.	Railways to implement the Comprehensive Action Plan for Training prepared by them as per Board's directives contained in letter no. 2005/Sig/Trg/3 dt. 25.8.2005. Staff to be trained on working equipment which they are maintaining or are required to maintain in the near future. Training programme should be finalised before the commencement of the year and training content and utilisation of seats to be specifically monitored by CSTEs.
8.1.14	Requisite tools and machinery for ease of maintenance should be made available in all work spots without fail.	Railway to standardise the tool list and tool bag design for both Signal & Telecom staff and issue it as stipulated in para 11.10 of SEM Pt-II, GM (S&T) to ensure compliance.
8.1.15	Gazetted and non-gazetted organization for maintenance of newly created infrastructure should be sanctioned as per norms along with creation of new assets.	Yardsticks for Signal and Telecom staff has been issued vide Railway Board's letter no. 94/E&R/1700.9(PL) dt. 27.4.2005 and letter No. 2000/Tele/MW/7/RCH/A/pt Dtd. 6.9.01.

		Staff should be created as per the yardstick.  The yardstick for Gazetted cadre is under consideration of the Board.
8.1.18	Attendance of staff in all the workshops and open line should be tightened up. Once this is done, not only manpower shortage in most areas will come down but quality of maintenance of assets will also improve.	GM (S&T) to ensure compliance.
8.3	<b>Reporting, monitoring, decentralization and accountability norms</b>	
8.3.1	The existing system of Monitoring of asset failures and analysis needs to be modernized. IT based systems for monitoring of asset performance and feedback between the line staff and depots should be introduced early. The software that is being developed by the MIS directorate now for this purpose should be robust and versatile enough to take care of this need comprehensively. The proposed system, inter alia, should provide connectivity among various zones, divisional control offices and field units and be capable of generating exception reports required at various levels of management viz. Railway Board, zonal HQs, departmental heads and so on.	Railways to note these recommendations for compliance. Railways have been advised vide letter no. 2005/SIG/SEM/8 dt. 4.10.2005 for computerization of Signal incidences, analysis of signal failures utilising software developed by CAMTECH Gwalior and computerized monitoring of maintenance etc.
8.3.2	Asset failures should be classified under one of the following broad categories:- (i) Defective design. (ii) Defective material (a) failure arising out of prolonged use of unserviceable material due to non-availability of stores. (b) premature failure due to poor quality of stores. (iii) Bad workmanship by the field maintenance unit. (iv) Bad workmanship by workshop. (v) Mismanagement by the Operator. (vi) Failure due to extraneous causes. (vii) Failure due to over usage of asset.	Action plan for improvement in maintenance practices has been issued vide Railway Board's letter no. 2005/SIG/SEM/8 dt. 4.10.2005.
8.3.3	The Individuals officers controlling the field units should be encouraged to report failures truthfully and correctly so that all the failures get registered and analyzed. Non-reporting of an asset failure should be viewed very seriously and the individuals involved in hiding of failures be dealt with severely.	CSTE's have been advised during the meeting held on 29/30.09.2005 to report failures as per station records.

8.3.4	<p>Every failure affecting train operation should be reported to the zonal railway headquarters office and Railway Board under the following category.</p> <p>(a) Train operations affected upto 10 minutes          (b) Train operations affected upto 11-30 minutes          (c) Train operations affected upto 31-60 minutes          (d) Train operations affected more than 60 minutes.</p>	Railways to note these recommendations for compliance.
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- Consolidated targets for Signal defects/failures: As per the para 6.12 of the Corporate Safety Action Plan, the consolidated target of all types of Signal defects is laid down as follows:

Reduction of incidents per thousand workload of Zonal Integrated Signal And Telecom Units (ZISTUs) to 7.91 by 31.3.2008 and 5.28 by 31.3.2013.

The targets should be achieved in the following manner:

S.N	YEAR	Target of incidents per thousand workload of Zonal Integrated Signal And Telecom Units (ZISTUS)
1	2006-2007	8.43
2	2007-2008	7.91
3	2008-2009	7.38

- Consolidated targets for failure of telecom assets: As per the para 6.13 of the Corporate Safety Action Plan, the efficiency of Safety and operation-related Telecom circuits should be improved to 99% by 31.3.2008 and to 99.5% by 31.3.2013. In respect of control, LC gate & block circuits' working on OFC-cum-Quad cable, the targets should be achieved in the following manner:

Within one year from the date of commissioning of the OFC-cum-Quad cable system - 97%, 2<sup>nd</sup> year of commissioning - 98%, and 3<sup>rd</sup> year of commissioning - 99%.

The above action plan should be implemented w.e.f. 1.2.2006.

This issues with the approval of Board (ML).

*(Signature)*  
 2.1.2006  
 (P.K.GUPTA)  
 Director(Signal)  
 Railway Board.

- Copy to: 1. Director General(Signal & Telecom)/RDSO.  
 2. Director/IRISSET

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