

**EAST COAST RAILWAY**

**Office of the  
Chief safety officer,  
Bhubaneswar.**

**No:- ECoR/SFY/Alert advice/2023/401**

**Date: 20.07.2023**

**To  
The Divisional Railway Manager  
KUR, SBP & WAT**

**ALERT MESSAGE-27**

**Sub:- Lesson learnt from recent Indicative train accidents: SPAD;**

'Signal Passing At Danger' is a potential threat to safe train operation. Many a times SPAD leads to accidents of Consequential in nature in terms of collisions (side/rear/head on) & derailments incurs heavy damage to railway property, cause injuries/death & huge loss due to interruption to train services. Some recent SPAD cases with cause, responsibility & lesson learnt are compiled and enclosed in annexure-A to take necessary precautions and prevent recurrence. This may be circulated down the line to inculcate safety awareness among the field staff & may be discussed in safety seminars/safety meetings & during counselling by officers/supervisors. At training centres the same may be discussed among the trainees.

**Encl: As above in 03 pages.**

  
**Chief Safety Officer  
Bhubaneswar**

**Copy to-**

1. Secy. to GM for kind information of GM.
2. Secy. to AGM for kind information of AGM.
3. PCE, PCME, PCOM, PCEE, PCCM, PCSTE, PCSC & CAO (Con) for information.
4. Sr.DSO/ KUR, SBP & WAT for information & necessary action.
5. Principal MDTC/VSKP & MDZTI/BBS for information & necessary action.



## ANNEXURE-A

### CASE: 1- Rear end Collision of Goods Trains on Bilaspur Division of SECR

- **Date & Time:** 19.04.23 at 06.45 hrs.
- **Section:** Bilaspur - Shahdol (BG, Triple Line, Elec. MACLS; Absolute Block working system).
- **Location:** At Singhpur station (KM 1008).

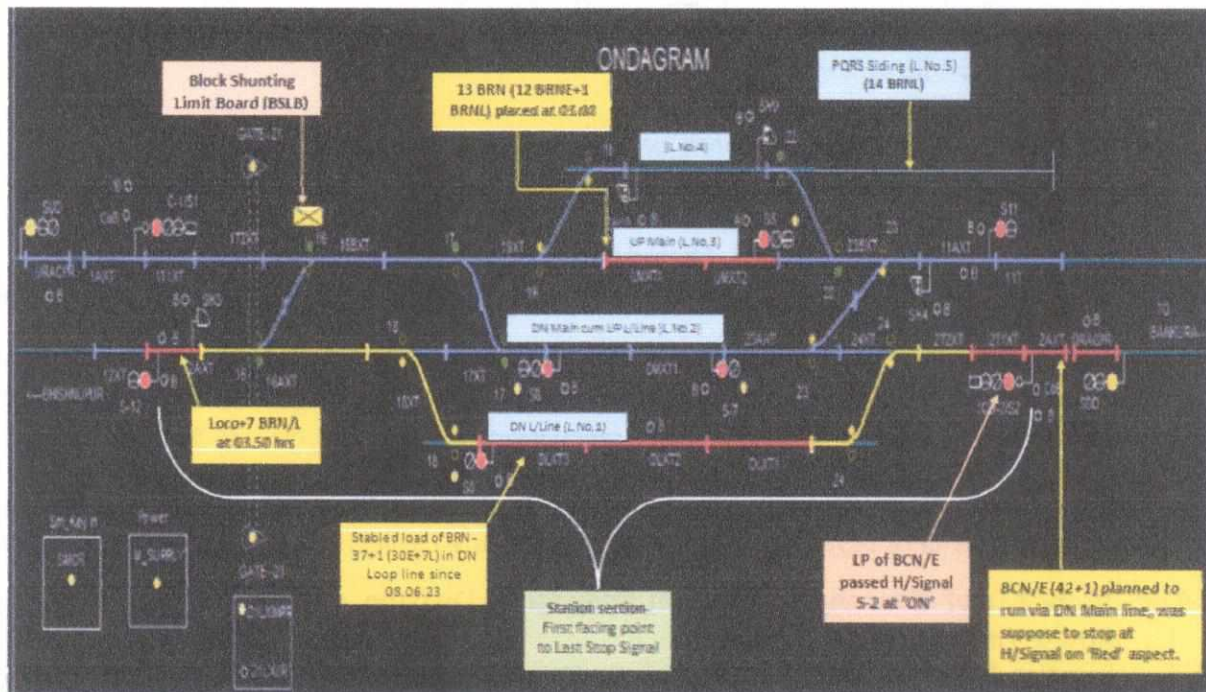
SN	Train No.	Engine No.	Load
1	Up BOBRN/BRS Goods (Push & Pull train)	34067 (Leading) + 34077 (Rear) WAG9/BIA	60 BOBRN
2	Up N/NPSB Goods (Crew continued >14 hrs duty)	43256+33888 WAG9/BSP + Dead loco 32723 WAG9/SRE	58+1 BOXNHL (BMBS-46 (79.3%) & Conventional-12)
3	Up N/NPSSS Goods (Crew continued 22/23 hrs duty)	41499+43060 WAG9/BKSC	58+1 BOXNHL

1. **Brief Particulars:** At 6.25 hrs, Train No. Up BOBRN/BRS arrived on Line No. 03 (Main line) of Singhpur station and controlled as section ahead is not clear. Meanwhile, another Train No. Up N/NPSB, which was approaching Home signal of Singhpur station in the same direction, overshot Up Home Signal of Singhpur station and collided from rear with Train No. Up BOBRN/BRS. As a result, 03 locos (02 working and 01 dead loco) capsized & 11 wagons of Train No. Up N/NPSB derailed; 01 loco (Rear loco) & 05 wagons of Train No. Up BOBRN/BRS derailed. These derailed wagons collided with Train no. N/PSSS which was on line no. 04 and about to leave the yard was derailed by 07 wagons. Up and Down lines movement affected. Total 4 locos and 23 wagons derailed/capsized.
2. **Casualty/Injury:** Killed 1(LP of banker of BOBRN/BRS) + Injured 5 (Rly staff)
3. **Cost of damage:** Rs 65,12,87,412/-
4. **Factors responsible for accident (CRS/SE Circle Preliminary Report):**
  - a. Crew performing more than 14 hrs duty.
  - b. The train passed home signal at a speed of 63 Km/h, applied SA-9 brake 15 second & Emergency brake at 12 seconds prior to the collision and finally collided at a speed of 56 Km/h.
  - c. Lack of alertness of crew may be due to experiencing chronic fatigue or drowsiness which may have played a major role in the accident. LP was most likely in a daze or micro sleep, and made no conscious effort to apply brakes for stopping the train before the UP- Home signal of SNGP resulting in overshooting of the Home Signal at "ON", and rear end collision with Train No. BOBRN/BRS.
5. **Corrective action to be taken:**
  - a. The practice of asking crew to work longer hours by giving permission to return back to their Head Quarters as pilot, indicates a system that prizes itself on more throughput over safety. This needs to be stopped.
  - b. The accident underscores the need for technological intervention to prevent SPAD; a faster roll out of the automatic track-protection system may be considered.
  - c. Control Office application should get an input from Crew management system with regard to crew-sign-on particulars so that section controller is aware of crew working for longer hours.



## CASE: 2 - Rear end Collision of Goods Train on Adra Division / SER

1. **Date & Time :** 25.06.2023 at 04.02 hrs.
2. **Location & Section:** At Ondagram Station, Km 214/5 in Adra - Kharagpur Section, BG, Electrified
3. **Trains Involved:** DN BCN/E (42+1), Engine No. & Stabled BRN- E (37+1) on DN Loop line.
4. **Engine No:** 31798 WAG 9/ Tughlakabad.
5. **Brief Particulars:** While approaching Ondagram station; LP of train No. DN BCN Empty passed DN Home signal No. S-2 of Ondagram station at 'ON' position and dashed in rear of BRN rake (PQRS) which was stabled on DN Loop line resulting derailment of Loco and 8 wagons of train No. DN BCN/E and 06 BRN/E wagons obstructing both up & DN line. No Causality/Injury occurred. Sign On 21:25; Duty hrs 6 Hrs 35 Min; HQ Rest 30 Hrs; Periodic Rest 26 Hrs 5 Min;
6. **Cause:** LP failed to stop the train at DN Home signal for admission into main line after shunting movement which was going on involving DN Main & DN loop line & dashed with stable BRN/E.



## CASE:-3 SPAD of Goods Train on Khurda Road Division / ECOR:

1. **Date & Time:** 05.07.23 at 05.20 hrs.
2. **Location & Section:** Charbatia Station (BG, Q- line, Elect., Absolute) in ANGL-KUR
3. **Train No:** Lotus MP-114 Goods (Talcher to Paradeep), Load: 60 BOBRN +1 (Coal load)
4. **Engine No:** 41184/WAG9/VSKP
5. **Brief Particulars:** While admitted on Road No. 06 of Charbatia station to give precedence to train No 18117 (Rourkela - Gunupur) Rajya Rani Express, Loco Pilot could not control the train and overshot Starter Signal No-S-27 at 'On' position by 21 wagons/240 meters. Train backed to R/6 after clamping & padlocking. No Casualty & Injury.
6. **Cause:** The LP passed the home signal of CBT station Lunar with Yellow at a speed of 20 Kmph, found starter signal in danger for R-6 & while approaching starter signal both got a Micro sleep & failed to stop the train. The train passed starter signal at a speed of 09 Kmph. Emergency brake was applied at a speed of 03 Kmph after passing starter danger prior to 5 seconds of final stop. The speed of train reduced gradually might be due to application of VCD.
7. **Corrective action to be taken:**
  - a. Regular counseling, seminars, ambush checks & proper road learning to be ensured.
  - b. Two consecutive night working to both crew to be avoided.



#### **CASE- 4: Side Collision of Passenger & Goods train in Howrah Division / ER**

- a. **Date & Time:** 10.05.2023 at 21.14 hrs.
- b. **Location & Section:** Saktigarh station; at KM 96/1B-96/01A Barddhaman-Bandel (BG, ML, Elect., Absolute)
- c. **Train No.:** 37784 (Barddhaman - Bandel) EMU Local; Load: 12 Coaches, DPC : 13189 (3rd phase)
- d. **Brief Particulars:** Dn. LP of DN HBC EMU No. 37784 (Barddhaman - Bandel Local), while moving on Dn HBC (Howrah - Barddhaman Chord) line of Saktigarh station, overshot the Dn Home Signal No. S-42 of Dn HBC line in 'Danger' & collided/hit Dn goods train No. BTPN/HLZ left GRP at 21.08 hrs on down line; received from DN main line to DN Chord line by S-48 (Dn Home in single yellow) & diverted to HBC and Dn HBC Routing Home Signal S-32 with single yellow & both starter & Advanced starter signal in 'OFF' position; resulting derailment of two coaches of the EMU Local (1<sup>st</sup> & 2<sup>nd</sup> from leading Driving Power Car) & two wagons of the goods train (8<sup>th</sup> and 9<sup>th</sup> from engine). No Casualty/ Injury.
- e. **Observations:** The Home signal S-42 was located on extreme left side of DN Main line obstructed by DN running goods trains BTPN/HLZ having height of 4265mm. However, the loco pilot was pre warned by Advanced starter cum gate distant signal double yellow & gate distant signal of LC Gate No. 47/E in Single yellow.

#### **CASE- 5: SPAD of Passenger train on Moradabad Division / NR**

1. **Date & Time:** 06.07.2023 at 14.30 hrs.
2. **Location & Section:** Muazzampur Narain station; Dn Home Signal No.S-20 in Saharanpur - Moradabad (BG, DL, Electrified, Absolute)
3. **Train No.:** Dn 14618 (Amritsar - Banmankhi) Jan Seva Express **Engine No.:** 30590/WAP-7/TKD **Load:** 19 coaches (ICF)
4. **Brief Particulars:** Train No. 14618 DN (Amritsar - Banmankhi) Jan Seva Express passed Chandok station at 14.23 hrs. While the train was approaching Muazzampur Narain station, its DN Home Signal was kept at 'On' position due to cross movement of train No. UP SRE Pilot from line no. 4. When the goods train cleared the route and on duty SM was about to take the Home Signal 'Off' for T. No. 14618, the passenger train overshot the Home Signal. The train stopped, after passing approx. 20 meters distance beyond the Home Signal due to late application of brake. No **Casualty/ Injury**.

#### **CASE-6: SPAD of Passenger train on Prayagraj Division / NCR**

1. **Date & Time:** 06.05.2023 at 13.31 hrs
2. **Location & Section:** Meja Road station; Dn Main line Starter Signal No.S-18 in Prayagraj - Mirzapur (BG, DL, Electric, Absolute)
3. **Train No.:** 18201 Dn (Durg-Nautanwa) Exp., Load: 22 coaches (LHB), Engine No.: 30310/WAP-7/Ajni
4. **Brief Particular:** While train No.18201 Dn (Durg-Nautanwa) Exp. was entering Meja Road station on main line, its loco pilot failed to stop the train at Starter Signal No.18 and overshoot the Starter Signal by 92 meters. No causality & Injury reported.

#### **CASE-7: SPAD of Goods train on Prayagraj Division / NCR**

1. **Date & Time:** 17.05.2023 at 14.13 hrs.
2. **Location & Section:** Birohi station; Up Home Signal No.S-3 in Mughalsarai - Allahabad (BG, DL, Electrified, A-Route, Absolute)
3. **Train No.:** 12505 Up (Kamakhya - Anand Vihar Terminal) North East Exp. Load: 23 coaches (LHB) Engine No.: 33331/WAP-7/Ghaziabad
4. **Brief Particulars:** While train No.12505 North East Express was entering Birohi station on up Main line, LP failed to stop the train and overshoot the UP Home Signal No.S-3 in danger position by engine and 02 coaches length (about 70 meters). Casualty/ Injury: NIL



### **CASE-8: SPAD of Passenger Train on Nagpur Division / SECR**

1. **Date & Time:** 21.06.23 at 01.03 hrs
2. **Location & Section:** Kachewani Station, UP Main Line Starter(B Class, Automatic, Signalling, Std-III) in Gondia - Nagpur
3. **Train No:** UP 20843 (Bilaspur - Bhagat Ki Kothi) Super Fast Express; Load: 21 Coaches (LHB); Engine No: 37479 WAP7/Ajni
4. **Brief Particulars:** Train No. UP 20843 was planned to stop at Kachewani Station at Starter Signal for detraining the Crew on Main Line. UP Home signal of Kachewani Station was given on approach. Loco Pilot found Advanced Starter Signal/Auto signal ahead of starter signal 'Green', proceeded and passed UP Main Line Starter signal at 'ON' position by 40 meter distance. Casualty/ Injury: Nil.

### **CASE-9: SPAD AT BAM Station of KUR Division:**

- 22.04.2023 at 10.08 hrs Crew of Train No JNP/BCN while admitting in line no.1 at BAM station of KUR division (R-2 was blocked by stable load); over shoot starter signal No:16 by one engine and one bogie(67 Meter) and stopped. After consultation with SCR the same was backed to R-1 at 10:30 hrs. The train passed Home signal in single yellow with Lunar at 33 Kmph & overshoot starter signal in danger at a speed of 24 Kmph. TO was given at 01:15 hrs at PSA and was not cancelled though the train arrived late at 06:45 Hrs as the destination was within 02 hrs journey. Train left at 07:45 hrs, i.e PDD 06:30 hrs.

### **CASE-10: SPAD at PKU station of HWH-KGP section:**

- On 14.07.2023 Train No. 12834 through passed BOP station over Middle line at 01:31 hrs. and stopped outside PKU Middle Line Home Signal due to Red aspect at 01:37 hrs. After getting Calling on Signal train started from Home Signal at 01:38 hrs. and passed PKU UP Middle Line starter signal at Red and stopped after passing Engine with 11 LHB coaches bursting Point No. 125B at about 01:42 hrs. Officer on Footplate - DFM/KGP. The LP confessed during preliminary inquiry that he mistook the Auto signal ahead of starter signal in 'Green' as signal for his train.

**The above accidents occurred due to non observance/ casual approach on the following:**

1. Presuming signal aspect by LP: in some cases it was found LP passed signal at yellow assumes the next approaching signal 'OFF'. Even in some cases signal is not visible due to obstruction or movement of train alongside; no effort to control the train till signal aspect is visible.
2. Observing Green aspect of Auto signal ahead of starter signal and expecting 'OFF' aspect of starter signal on approach.
3. Poor braking skill of LP & late application of Emergency brake by ALP.
4. ALP failed to apply Emergency brake by opening RS valve quickly without any hesitation in case he found lack of alertness of LP while approaching signals in danger. Functioning of RS Valve also not ensured before run.
5. Use of **personal mobile** during run keeping the CUG in off which distract the crew.
6. Poor road learning.
7. Inadequate rest at home/ running room resulting sleep/Micro sleep.
8. Inadequate knowledge on action to be taken after SPAD. In many cases after SPAD the LP backed the train resulting derailment & damage to points.
9. Acquaintance with new technology/ modifications in loco & working system of different Locos.
10. Proper calling out of signal aspect between LP & ALP in loud voice and hand gesture.

11. Non observance of signal aspect till passing the signal & in many cases during yard shunting; guided by verbal instruction over WT without verification of signal aspect ahead.
12. Not conducting brake feel test as per guidelines & not ensuring brake continuity & brake power.
13. Not following the speed after passing an Auto signal/IBS/Gate stop signal in danger.
14. Bag packing short of destination.

To prevent recurrence; the above bad practices need to be eliminated through:

1. Assigned CLIs & inspecting officials need to counsel the same & ensure implementation through ambush checks.
2. Special emphasis to be given to read crew behaviour by random check of CVVRS, speedometer analysis & Family interaction.
3. Functioning of VCD & FSD to be ensured.
4. Long hours working & PDD to be analysed & step to be taken to reduce the same.
5. Two consecutive night working to both crew to be avoided.
6. Regular counseling to crew regarding the fatality of Micro sleep, its cause, pre warning symptoms, how to overcome the same.
7. Action to be taken after SPAD to educate crew not to back the train without permission of Guard & SM.
8. Updating the crew about the modifications made from time to time in Loco, braking system & introduction of new system of working.
9. Monitoring of bad enginmanship of identified LP/ALP.