

Sl. No. SWR/BMCK/34

EAST COAST RAILWAY
SAMBALPUR DIVISION

STATION WORKING RULES OF BISSAM CUTTACK STATION (CODE: BMCK)

BG/MG/NG - BROAD GAUGE

Date of issue.02.03.2011 .

Date brought into force: 03.03.2011 .

NOTE: - The Station Working Rule (SWR) must be read in conjunction with General and Subsidiary Rules and Block Working Manual. These rules do not in any way supersede any rule in the above books.

1. STATION WORKING RULE; -

1.1 **STATION WORKING RULE DIAGRAM NO.** 22016 Alt 'A'

1.2 **SIGNAL INTERLOCKING PLAN NO.:** - S.I – 22016 Alt 'A'

2. DESCRIPTION OF STATION: -

BISSAM CUTTACK is a four line station situated in VZM-Raipur section at KM 305.364 from Raipur. It is Standard – (III)R interlocked, Class 'B' station with central panel and block proving axle counters are provided at either end of the station for last vehicle check.

2.1 GENERAL LOCATION: -

2.1.1 **NAME OF STATION:** - BISSAM CUTTACK

2.1.2 **CLASSIFICATION OF STATION:** - 'B' class

2.1.3 **NAME OF THE SECTION:** - Vizianagaram -Raipur, Double Line, Non-RE, BG section

2.1.4 **ROUTE:** - D Spl.

2.1.5 **LOCATION:** - 305.364 from Raipur.

2.2 BLOCK STATIONS, IBH, IBS ON EITHER SIDE AND THEIR DISTANCE AND OUTLYING SIDINGS: -

- i) Raipur end - Muniguda (Code: MNGD) inter distance 16.90 K.M.
- ii) Vizianagaram end - Theruvali (Code: THV) inter distance 18.50 K.M.
- iii) Passenger halt: - Sansarthali (Code SNRL), situated at KM 299.5 between BMCK & MNGD.
- iv) Flag station: - Nil
- v) Outlying siding: - Nil
- vi) **D.K. station:** - Nil

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- vii) **IBS:** - Intermediate Block signaling is provided on both Up and Dn lines between Bissamcuttack and Theruvali stations. DN IBS is provided at Km 312/13-14 on Dn line between BMCK and THV. UP IBS is provided at Km 313/7-8 between BMCK and THV on Up line.

2.3 **BLOCK SECTION LIMITS: -**

Sl. No	Between Stations	The point from which “Block Section” commences	The point at which “Block Section” ends
1.	BMCK-MNGD (UP LINE)	BSLB of BMCK station on UP line.	UP Advanced starter Signal No. 13 of MNGD
2.	BMCK-MNGD (DN LINE)	DN Advanced starter signal No. 14 of BMCK Station	Point No. 22A of MNGD station on DN line.
3..	BMCK-THV (UP LINE)	a) From UP Advanced starter signal No 13 of BMCK. b) From UP IB Home signal No15 of BMCK.	a) To a point of 400 Mtrs beyond Up IB Home signal No15 of BMCK. b) To Outermost facing point of THV on UP line.
4..	BMCK-THV (DN LINE)	a)From DN Advanced starter signal No 36 of THV. b)From IB Home signal No 36 of THV.	a) To a point of 400 Mtrs beyond Dn IB Home signal No 38 of THV. b) To BSLB of BMCK station.

2.3.1 **STATION SECTION:**

- i) UP Line: Between BSLB to UP Advanced starter Signal No. 13
ii) DN line: Between BSLB to DN Advanced Starter Signal No. 14

2.3.2 **STATION LIMIT:**

- i) UP line – Between UP Inner Distant signal to UP Advanced starter signal No.13
ii) DN line - Between DN Inner Distant signal to DN Advanced starter signal No.14

2.4: **GRADIENT: -**

(a) **FROM THE CENTER OF STATION BUILDING TOWARDS MUNIGUDA**

i)

CHAINAGE IN METER		INTER DISTANCE	GRADIENT	
FROM	TO			REMARKS
0	370.00m	370.00 m	1 in 650 F	UP&DN LINE.
370.00m	683.00m	313.00m	1 in 400 F	DN LINE.
370.00m	527.00m	157.00m	1 in 400 F	UP LINE
527.00m	2274.16m	1747.16m	1 in 150 F	UP LINE
683.00m	1392.59m	709.59m	1 in 100 F	DN LINE.
1392.59m	1787.41m	394.82m	1 in 125 F	DN LINE.
1787.41m	2449.91m	625.50m	LEVEL	DN LINE
2449.91m	Block Section	---	1 in 125 F	DN LINE
2274.16m	Block Section	---	LEVEL	UP LINE

(b) **FROM THE CENTER OF STATION BUILDING TOWARDS THERUVALI**

CHAINAGE IN METER		INTER DISTANCE in (m)	GRADIENT	
FROM in (m)	TO in (m)			REMARKS
0	617.0m	617.0m	1 in 651 R	UP&DN line.
617.0m	698.193m	81.193m	1 in 100 F	FOR SLIP SIDING
698.193m	762.00m	63.807m	LEVEL	FOR SLIP SIDING
617.0m	1328.3m	711.3m	1in 101 F	UP & DN line.
1328.3m	Block Section	---	LEVEL	UP & DN line.

2.5 LAY OUT: -

- i) No. of running lines :- 04 (Four)
- ii) No. of sidings :- 04 (Four). (Hot Axle Siding , CSL-50M, One Goods Siding, CSL 85M and Two Slip Sidings).
- iii) No. of Passenger platform :- 02 (Two)
 - a) Low level Platform on Line no.-1 (343.876m long)
 - b) Rail level Platform on Line no.-4 (350.52mX 6.09m)
- iv) No. of goods shed platform :- 01 (One).
- v) FOB :- 01, One at CH 30m from CSB.

2.5.1 RUNNING LINES, DIRECTION OF MOVEMENTS AND HOLDING CAPACITY IN CSL: -

DESCRIPTION	CSL	ISOLATION PROVIDED	
		TOWARDS MNGD	TOWARDS THV
Line No.1 (1 st Loop) (Common Loop)	696 mtrs. (Str. To Str)	Overrun line	Over run line
Line No.2 (UP Main line)	729.7 mtrs. (Str. To SB)	...	...
Line No. 3 (DN Main Line)	748.2 mtrs.(SB To Str.)	...	...
Line No.4 (DN Loop)	693.70 mtrs. (Str. to BJ)	Sand Hump	Derailing Switch

(II) **DIRECTION OF MOVEMENTS: -**

- a. Trains arriving from MUNIGUDA end are UP trains.
- b. Trains arriving from THERUVALI end are DN trains.

2.5.2 NON-RUNNING LINES AND CSL.: -

Sl. No	Description	CAL	Takes off	Exit	Operation
1.	Goods Siding	85 m	Line No. 1	Both way	Key Transmission.
2	Hot Axle Siding	50 m	Line No. 4	Both way	Key Transmission.
3	Slip Siding	---	Up Main Line	One way	Operating Panel
4	Slip Siding	----	Dn Main Line	One way	Operating Panel

2.5.3 ANY SPECIAL FEATURES IN THE LAYOUT: -

Slip siding on both UP and DN Lines are provided at THV end of the Yard beyond the outermost facing points. The slip siding points shall normally be kept set to slip siding except for reception/despatch of trains or for shunting purpose at THV end of the yard. The slip siding points are interlocked with the block instrument pertaining to the section.

LEVEL CROSSINGS: (STATION LIMIT)

Sl. No.	Location	K.m.	Normal position	Class	Type	Operation	Communication
1.	DN Advanced Starter and Dn Starter Signals	304/11-12	Open	'C'	Inter locked	Winch operated Lifting barrier	Magneto telephone with SM/BMCK
2.	UP Home signal and UP Inner Distant signal	304/7-8	---	'C'	Un manned	---	---

2.5.4 LEVEL CROSSINGS: (IN BLOCK SECTION)

SL No.	Location	K.M.	Normal Position	Class	Type	Operation	Communication
1.	Between BMCK-MNGD.	292/2	Open	'C'	Inter locked	Winch operated Lifting barrier	Magneto telephone with SM/MNGD
2.	Between DN Inner Distant and DN Distant cum Gate Home signal	308/2-3	Open	'A'	Inter locked	Winch operated Lifting barrier	Magneto telephone with SM/BMCK

Train Actuated Warning Device is not provided for all the above Level Crossing Gates.
(Working of Level Crossing Gate is detailed in appendix 'A')

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3. **SYSTEM AND MEANS OF WORKING:-**

(Rule no.: - Chapter XIV of GR & SR, Chapter III A & V of BWM)

- i) **System of working** : - Absolute Block system on double line.
- ii) **Type of block instrument:** - SGE type Double Line lock and Block Instrument with adjacent stn.
- iii) **Instrument** : - Non Co-operative type.
- iv) **Block Telephone** : Connected with adjacent stations MNGD and THV Station.
- v) **Staff responsible for their operations:** - S.M. on duty.
- vi) **Custodian of keys** : - S.M. on duty.

4. **SYSTEM OF SIGNALLING AND INTERLOCKING: -**

4.1.1 **STANDARD OF INTERLOCKING AND TYPE OF SIGNALLING: -**

The station is provided with Standard (III)R interlocking, central panel with Multiple Aspect Colour Light Signalling and block proving Axle Counters. All the points are centrally operated from central panel by on duty Station Master. The Home signals and Advanced Starter signals are interlocked with respective double line lock and block instruments. UP Adv. Starter of station is combined with UP gate Distant signal of L.C.Gate at KM 308/2-3 and DN Distant signal of station is combined with DN gate stop signal of L.C.Gate at KM 308/2-3 vide CRS/Kolkatta's letter No.484 of Date 24.05.2007. GR 3.08(4) (b) governs the aspect and indications of the signals. The station has no end cabins.

Maximum equipment of signal – Distant, Inner distant, Home, Starter and Advanced starter in either direction.

4.1.2 **STATION MASTER'S CONTROL PANEL: -**

- (i) A push button type electrical control apparatus (operation cum indication panel) is provided in the Station Master's office to operate electrically UP and DOWN points and signals. The control apparatus is provided with a lock up key named (SM's Key) which shall always remain in the personal custody of the SS/Dy.SS/SM/ASM on duty in terms of GR 5.08. The position of all points, signals and running lines are available in the Station Master's illuminated panel diagram. Reminder collars are provided for use on push buttons, which will be placed on point button, route button, signal button or on any other button to prevent operation of the button in case of concerned line is blocked; or to prevent inadvertent operation of a particular button as and when required.
- (ii) All 'emergency operation buttons' on the Station Master's control panel shall be kept sealed in normal condition by S&T staff. Whenever any emergency operation is initiated. SS/SM on duty shall break open the seal of the concerned button to make the button operative. Immediately after completion of emergency operation SS/SM on duty shall inform concerned S&T staff for sealing of the concerned button.

4.1.3 **TRACK CIRCUIT: -**

All the lines including point zone between Home and Advanced starter signal on either direction is track circuited. The position of the running lines including point zones i.e. occupied/clear is indicated in the illuminated diagram at the Station Master's office. Normally there will be no indication of track circuits. It shows 'RED' when the line is occupied and 'WHITE' when the track is clear provided the route is set. Calling-On Track circuits are provided 7RL beyond Home signal in either side of the station.

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4.1.3.1 **AXLE COUNTER:-**

Entire Block Section between BMCK-THV is provided with Digital axle counters.

For section BMCK-THV A pair of Axle counter is provided between **BMCK-THV** (UP IBS BMCK-THV) on UP line, one just beyond UP advanced starter No. 13 of BMCK and another one on 15T2 track circuit beyond UP IB Home Signal No15 of BMCK. A pair of Digital axle counter is provided between **BMCK-THV** (UP LVV **BMCK-THV**) on UP line, one beyond Up IB Home signal No.15 of BMCK and another in 3BT track circuit beyond Up Home signal No 3/4/5/7 of THV Similarly a pair of Axle counter is provided between **BMCK-THV** (Dn IBS **BMCK-THV**) on Dn line, one just beyond Dn advanced starter No.36 of THV and another one on 38T2 track circuit beyond DN IB Home Signal No 38 of THV. A pair of Digital axle counter is provided between **BMCK-THV** (DN LVV **BMCK-THV**) on DN line, one beyond DN IB Home signal No.38 of THV and another in 2T2 track circuit beyond DN Home signal No 2 A/B/C of BMCK

GR.14.13 is to be followed. The axle counters are interlocked with the respective block instruments for that section. If axle counter fails, Advanced Starter signal shall not come to OFF for section **BMCK-THV** and IB Home signals can not be taken OFF for section **BMCK-THV** and the concerned instrument shall remain locked in last operated position.

A resetting arrangement for resumption of the system in case of failure of axle counter has been provided in the SM office of the adjacent Block stations after being assured by both the SM that the last vehicle has arrived complete at the receiving station by exchanging Private Number then resetting to be complied with

NOTE:

Before taking off reception and dispatch signals for Up and Down directions the SM on duty should ensure that the entire route including overlap and berthing portion is clear of all obstructions by observing the Track indication/Axle counter indication. The indication of track Axle counter will exhibit Red Light when track is occupied and White light when track is clear. There will be no track indication when any route is not set.

Both side block sections are monitored by axle counter system. Digital axle counters are provided at both end of the station for Up and Down sections to check the complete arrival of trains. This is also interlocked with Block Instruments of the stations at either side to prove the clearance and occupation of Block sections. Advanced starter signals cannot be taken off if axle counter, pertaining to that section fails. Block handle of the SGE Block instrument remains locked in case of failure of Axle Counter pertaining to that section.

[Details are given in Appendix-'B']

4.1.4 **POSITION AND OPERATION OF POINTS: -**

The positions of all points are shown in station Working Rule Diagram and also on operating panel. All points are power operated through Station Master's control panel apparatus. All cross over points on running line are independently worked by electric point machine and have built in locking and detection arrangement.

4.1.4 **IBS:** -

Intermediate Block signaling is provided on both Up and Dn lines between Bissam Cuttack and Therubali stations. DN IBS is provided at Km 312/13-14 on Dn line between BMCK and THV. UP IBS is provided at Km 313/7-8 between BMCK and THV on Up line.

4.1.6 **POINT AND TRAP INDICATOR:** - Provided on DS point of line no. 4 at THV end

4.1.7 **REPEATER (BANNER TYPE):** - Nil

4.1.8. **ELECTRICAL KEY TRANSMITTER (EKT):**-

EKT's with crank handle keys are provided at both end locations for the operation of points in case of failure of point motors and also for the LC gate Goomty at KM 304/11-12 & 308/2-3 for opening and closing of the gate. The keys for the crank handles are transmitted electrically to the crank handle locations for operating the points by crank handles. Details of the working of Crank handle keys are mentioned in Appendix 'B' and that L.C. gates are mentioned in Appendix 'A'.

4.1.9 **CALLING ON SIGNALS:**-

'Calling on' signals have been provided below UP and DN home signals. It shows no light when 'ON' and 'YELLOW' light when taken off.

4.1.10 **SHUNTS SIGNALS:**-

Independent shunt signals are provided on top point at either end for back shunting movement.

4.1.11 **ANTI COLLOISION DEVICE:** - Nil

4.2 **CUSTODY OF RELAY ROOM KEY AND PROCEDURE FOR ITS HANDING OVER AND TAKING OVER BETWEEN STATION MASTER AND S&T MAINTENANCE STAFF:** -

As per Para 1.14(b) of Operating manual the relay room should be kept locked with two separate locks, the arrangement should such that one key is kept with the on duty SM in his custody and the other key with the signal maintainer. Whenever required, the Station Master shall hand over the key to the maintainer with proper arrangement with proper acknowledgement in the basement/Relay room key register. The maintainer on receipt of the key from the station master may use the same and the key in his custody to open the relay room by inserting the keys one after another separately into the earmarked locks.

After completion of work, the relay room is to be locked using both the keys separately and designated key should be handed over to the SS/SM on duty. The details of the transaction should be properly recorded in the relevant register at the Station duly signed by SS/SM on duty and the signal staff concerned vide SR 3.51.05. If the relay room key is handed over to the Sgnal staff regarding the interference in safety gears, the train shall be piloted in and piloted out.

NOTE: Details of signalling and interlocking are given in Appendix 'B' of the SWR.

4.3 POWER SUPPLY: -

Normally for signaling and interlocking installation power supply is drawn from State Electricity Board (230V, 50Hz) but when this source fails D-G set for standby is installed at the station to feed the S&T equipment. The SM however maintains the records of the power failures and promptly report the failure immediately to the controller and to the concerned Electrical and S&T staff. In addition to this the station is provided with solar power System.

5.0 TELECOMMUNICATION FACILITIES: -

- Telephone with Double line Lock & Block Instrument for either side Block Section.
- Station to Station fixed telephone (hot line) is provided
- Station is provided with Auto telephone connected with Railway Exchange
- BSNL telephone is provided.
- The station is connected to TIG-SPRD control circuit by a control telephone.
- Station to station VHF communication is provided.
- Telephone is provided between Station and both end crank handle locations.
- Magneto telephone connection is provided between station and LC gate at Km. 304/10-11 and at Km 308/2-3.
- Telephone communication is provided between station and Up IBS
(Details are mentioned in Appendix 'B' of the SWR.)

NOTE: -

1. For obtaining Line Clear, VHF should be used as a last alternative and not as a sole means of communication.
2. VHF and Walkie-Talkie sets should not be used for unnecessary discussions with Drivers, Guards or any other staff.

6.0 SYSTEM OF TRAIN WORKING: -

The movement of trains is controlled by Section Controller on duty whose orders shall be complied with, provided they do not contravene any General Rules, Subsidiary Rules, Station Working Rules, Block Working Manual and other safe working instructions issued from time to time. In the event of suspension of control working, the Station Master on duty shall work independently in conjunction with the Station Master of adjoining block station and shall be responsible to ensure that there is no undue delay to train operation in general.

6.1 DUTIES OF TRAIN WORKING STAFF: -

Details of duties of operating staff are mentioned in Appendix 'D' of the SWR.

6.1.1 TRAIN WORKING STAFF: -

The following is the complement of train working and operating staff provided at this station to work in each shift.

SL NO.	Designation	Roster	No. of staff in each shift	Hrs. of Duty
1.	Station Manager-II (In-charge)----- Dy. SS/SM/ASM-----	Continuous	01	-----09 hrs. -----08 hrs.
2	TP/Sr.TP/TPM-B/TPM-A	Continuous	01	08 hrs.
3	GK/ Sr. GK	E.I	01	12hrs
4	SCLM/LCS	E.I	01	12hrs(In broken roster).

The above staff shall work as per the rosters issued by DPO/SBP from time to time and these rosters shall be displayed in the SM office.

6.1.2 RESPONSIBILITY OF ASCERTAINING CLEARANCE OF THE LINE: -

The SS/SM on duty is responsible to ascertain the clearance of the nominated line between outer most facing points of concerned line as per SR.3.40.02 (b) 3rd Para.

6.1.3 ASSURANCE OF STAFF IN ASSURANCE REGISTER: -

All staff before taking up independent charge of their duties at this station, shall make a written declaration in the assurance register that they have read and thoroughly understood the system in force and must sign such declaration.

No Railway servant shall be entrusted with any duty involving safety of the public unless the station in-charge is satisfied that the concerned staff is competent for the post. No Railway servant unless duly examined and certified shall be allowed to work the points and signals. The SS is responsible to see that all the staff are conversant with the Station Working Rules and their signature obtained in the Assurance register after he is satisfied that they have thoroughly understood the working rules of the station. In case of Group 'D' staff, their signature/thumb impression must be obtained after explaining fully about their duties and responsibilities.

The station superintendent is responsible personally for maintaining the Assurance Register and for obtaining declaration of the staff working under him. The Assurance Register must be maintained in two parts, one for Group 'C' and the other for Group 'D' staff. A duplicate copy of the Assurance Register must be maintained and kept in personal custody of the Station Superintendent.

The declaration shall be renewed in the following cases: -

- (i) Whenever there is a change in the Station Working Rules.
- (iii) For any staff who have not worked at the station or were away from the station for a period of 15 days or more.

6.2 (A) CONDITIONS FOR GRANTING LINE CLEAR: -

The conditions laid down in GR 8.01 (1) (a), (b), 8.01(2) (b), 8.03 (1) (a), (b), (c) (ii) shall be complied with before the line is considered clear and 'Line Clear' is granted for a train by on duty SS/SM. The line shall not be considered clear and 'Line Clear' shall not be given unless:

- (i) The whole of the last proceeding train has arrived complete.
- (ii) All the necessary signals are put back to 'ON' behind the said train.
- (iii) The line is clear upto the BSLB on DN line for DN trains and upto BSLB on UP line for UP trains.

NOTE: if the light of the reception signal is fused/ not burning, 'Line Clear' shall not be granted for a train till such time it is ensured that the concerned Loco Pilot is notified of the fact in writing by the SS/SM on duty of the station to which such line clear is granted.

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(B) **OUTLYING SIDING: - NIL**

6.2.1 **ANY SPECIAL CONDITION TO BE OBSERVED WHILE RECEIVING OR DESPATCHING A TRAIN: -**

- (i) For receiving a train on loop lines Station Master on duty shall ensure that the ORL/Sand Hump is clear of all obstructions even when the ORL/Sand Hump falls in the trailing direction.
- (ii) After reception of a DN train, dispatch of an UP train or after shunting operation at VZM end of the yard the slip siding points should be set to slip siding.

6.2.1.1 **SETTING OF POINTS AGAINST BLOCKED LINE: -**

All Points shall normally be set for the straight except when otherwise authorised by special instruction. When a running line is blocked by stable load, wagon, vehicle or by train which is to cross or give precedence to another train or immediately after arrival of a train at the station, the points at either end should immediately be set against the blocked line except when shunting or for any other movement towards the blocked line is required to be done vide SR 3.51.06(a). if all the lines at the station happen to be blocked then SR.3.51.06(b) will be followed.

6.2.1.2 **RECEPTION OF TRAIN ON BLOCKED LINE: -**

In case reception of a train on an obstructed line SM shall follow GR 5.09 & SR 5.09.01.

6.2.1.3 **RECEPTION OF A TRAIN ON NON –SIGNAL LINE: -**

In case of reception of train on non-signal line SM shall follow GR 5.10 and SR thereto.

6.2.1.4 **DESPATCH OF TRAINS ON NON-SIGNALLED LINE: -**

In case of dispatch of a train from non-signal line, SM shall follow GR 5.11 and SRs thereto.

6.2.1.5 **DESPATCH OF TRAIN FROM LINE PROVIDED WITH COMMON STARTER SIGNAL:- NA**

6.2.1.6 **SPECIAL RESTRICTIONS: -**

- (i) The Over run line shall not be obstructed for stabling vehicles or harboring engine If it is obstructed through any accident or for any cause it ceases to be substitute for the adequate distance, in that case the train shall be passed over loop line as per Subsidiary Rules 3.40.02(a).
- (ii) Shunting shall not be permitted at either end of the yard unless the engine is leading towards falling gradient.
- (iii) Hand shunting and fly shunting is not permitted at both end of the yard.
- (iv) Shunting in the face of an approaching train is prohibited.
- (v) When trains are intended to pass through over loop line the respective departure signals shall not be taken OFF in advance unless the said train has arrived complete into the station yard.
- (vi) SR 5.20.01(a) and SR 4.48.01 shall apply at the station.
- (vii) Speed is raised to 30 KMPH on first directional loop lines on either side of main lines and over its turnouts. However, no train shall be allowed to negotiate at a speed more than 15 KMPH, if it involves negotiating more than one crossover at a time.

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SPECIAL INSTRUCTIONS: -

- (i) After any non-signal movement has taken place over point (s) operated by an electric point machine, whether in the facing or trailing direction the SM on duty shall operate point(s) to normal and reverse setting for the purpose of testing the point. After the SM has ensured that indication regarding the normal and reverse setting are correctly available on the panel, further movement may be permitted over such point(s).
- (iii) For receiving a train on loop lines Station Master on duty shall ensure that the ORL/Sand Hump is clear of all obstructions even when the ORL/Sand Hump falls in the trailing direction.
- (iv) Ballast/Material train shall not be allowed to be pushed into the block section BMCK-THV as per SR 4.62.06(f)
- (v) Motor trolleys on following line clear shall not be allowed between BMCK-THV vide SR 15.25.03(b)(xiii).
- (vi) Material trolley working on Form-B shall not be allowed between BMCK-THV due to sharp curves and steep gradients.

6.3 CONDITIONS FOR TAKING 'OFF' APPROACH SIGNAL: -

Reception of trains is governed by General Rule 3.36,3.38,3.40 and SRs. 3.40(1), (a), (2)(a) and SR 3.40.01 and other relevant provisions of General and Subsidiary Rules, Block Working Manual and Station Working Rules of the station to be followed.

Adequate distances to be kept clear vide General Rule 3.40(3) (b) for reception of trains.

A. CLEARANCE OF ADEQUATE DISTANCE: -

To take off the home signal for admission of a train the adequate distance (signal overlap) as mentioned below shall be kept clear: -

LINE NO.	UP TRAIN		DN TRAIN		
	FROM	TO	FROM	TO	
1.	Line No 1 (Common Loop)	Foot of the UP starter signal No.7	Up advanced starter No.13 Or Up to the end of overrun line	Foot of the Starter Signal No. 10	DN advanced starter signal No.14 Or Up to the dead end of over run line
2.	Line no. 2 (UP Main line)	Foot of the Up main line starter No.11	UP Advanced starter signal No.13	....	....
3.	Line No. 3 (DN Main line)	....	....	Foot of the starter signal No.12.	DN advanced starter signal No.14.
4.	Line No. 4 (DN Loop)	....	....	Foot of the Starter Signal No. 8	DN advanced starter signal No.14 Or Up to the end of sand hump

Before admitting a train on any line, it must be ensured that the track indication for the respective line indicates 'WHITE' indication in the illuminated panel diagram. To receive a train, for which line clear is granted, the SS/SM on duty shall

nominate a clear line in consultation with the Section Controller on duty. SS/SM shall personally satisfy himself that the nominated line is clear and free from all obstruction by seeing the track circuit indication on panel or by physical verification of the nominated route in case of failure of track circuit. He shall suspend all non-isolated shunting and thereafter set the points of the nominated route by means of push button switch provided on the control panel. He shall then verify from the visual indication available in the panel that points are set to the desired route.

In case any of the track circuit on the concerned route shows occupied by RED indication even though the other conditions are satisfied, the operation of panel control buttons by the SS/SM on duty will not permit the concerned signal to be taken off. However, reception of train will be possible in such cases with the “ Calling On” signal fixed below Home signal at either end provided the first track circuit in advance of home signal (Home signal replacement track circuit) does not show ‘RED’ indication.

Miniature colour light calling on signal is provided below the home signals in terms of GR 3.13(6)(b). A calling-on signal shows no light in the ‘ON’ position. The calling on signal is taken off for reception of a train when the home signal above it cannot be taken off due to failure of track circuits or for admission of a train on blocked line.

B. TAKING OFF CALLING ON SIGNAL

To take off calling on signal, the train must come to a stop at the foot of the Home signal, occupying track circuit in rear of the signal. When train occupies the track circuit, RED light strip will appear on the panel. The particular route on which the train is intended to be received shall be set by individual point operation by operating point button & point group buttons or by setting route by pressing route button & signal button or by crank handling in the event of failure of operation of point through panel. After the route is set, the calling-on signal button C1/C2 (Red with white dot), as the case may be, shall be pressed simultaneously along with concerned route button for 2-3 seconds and released. After a lapse of 120 sec, the calling-on signal clears and a yellow light indication appears on the panel for the concerned calling-on signal.

6.3.1 RESPONSIBILITY OF STATION MASTER FOR RESTORATION OF SIGNALS TO ‘ON’: -

If for any reason after taking off signals, it is required to put back the signal and alter the route, in terms of Subsidiary Rules 3.36.02(a), (b)(ii), a time delay of 2 minutes shall be observed before the points can be altered.

6.3.2 SIMULTANEOUS RECEPTION, DESPATCH, CROSSING & PRECEDENCE OF TRAINS: -

1.	While Receiving of an Up train on line No.1 (common loop) set to overrun line.	Dispatching an Up train from the line No.2.
2.	While Receiving a DN train on line No.4 (DN loop) set to sand hump.	Dispatching a DN train from the line No.3 or dispatching a DN train from the line No.1.
3.	While Receiving of a DN train on line No.1 (common loop) set to ORL	Dispatching a Dn train from the line No.3 or 4.

Rules laid down in GR3.47 and GR 3.47.01(b), (c), (d) shall be followed.

6.4 COMPLETE ARRIVAL OF TRAIN: (Rule no. GR 4.16 SR4.16.01, 4.160.2.4.16.03, 4.16.04, 4.16.05 GR 4.17 & SR 4.17.01,SR4.17.02, GR 14.10)**a) STAFF RESPONSIBLE TO VERIFY COMPLETE ARRIVAL: -**

SM on duty.

b) MODE OF VERIFICATION:

Through AXLE COUNTER or through physical verification incase of failure of Axle Counter.

6.5.1 L.V. VERIFICATION THROUGH AXLE COUNTER: -

Entire block section at both sides of the station is monitored by axle counter system and the position of block section whether clear or occupied is indicated in the axle counter indication panel. As soon as a train enters in to the block section, the 'RED' indication appears in the axle counter indication panel. After the whole train clears the block section, 'GREEN' indication appears on the axle counter indication panel. This confirms the complete arrival of train and the SS/SM on duty shall give train out of section report on seeing the section clear (GREEN) indication at the panel.

6.5.2 L.V. VERIFICATION WHEN AXLE COUNTER FAILS:-

In case of failure of axle counter, the Station Master on duty shall obtain complete arrival certificate from the Guard of the train in the complete arrival register (T/1410) maintained at the station for stopping train. For through passing train the station master on duty shall satisfy himself about complete arrival of train by verification of the last vehicle indicator vide SR 4.16.05 that the train is complete. In case a train arrives/passes incomplete, action shall be taken as per Subsidiary Rules 4.17.02. 'The train out of block section signal' shall be withheld to the station in rear until complete arrival certificate is received from the station in advance supported by a Private Number.

6.5.3 L.V. VERIFICATION WHEN MOTOR TROLLEY FOLLOWING:-

Motor trolleys on following line clear shall not be allowed between BMCK-THV. In case of section BMCK-MNGD, when motor trolley follows a train, the points shall not be altered until the following motor trolley is admitted on the same line. In the event of motor trolley is delayed in the section the Station Master on duty shall take action in terms of Subsidiary Rule 15.25.03 (b)(vi).

6.6 DESPATCHING OF TRAINS: -

Despatch of trains are governed by General Rules 3.36, 3.38, 3.39, 3.42, 5.11 & 8.01 Subsidiary Rule 3.36.04(b), 3.42.04 and Block Working Manual 2.07(5)(a)(c) to (e) and other provision of General Rules, Subsidiary Rules, Block Working Manual and Station Working Rules of the station.

To despatch a train, the SS/SM on duty, having obtained line clear for that train, shall set the route for the out going train correctly and satisfy himself by observing the visual indication on the panel board. He shall suspend all non-isolated shunting, and then shall take off the concerned route starter and advanced starter signal by operating concerned push button. After observing the 'OFF' aspect of the route starter and advanced starter signals the Driver shall start his train.

The Station Master on duty shall watch the safe passage of the train with its last vehicle indicator. After the train passes the Advanced starter complete, he shall send the train entering block section signal to the station in advance

If a train worked without Guard or Brake Van the instruction laid down in Subsidiary Rules 4.23.02 and 4.25.02 shall be followed

6.6.1 PUTTING BACK SIGNALS TO 'ON' IN CASE OF EMERGENCY: -

If a signal once taken 'Off' for reception/despatch of a train has to be, in an emergency, put back to 'ON', the procedure laid down in General Rules 3.36.02 shall be followed. In case of reception of train, route shall not be altered until the train has come to a stand outside Home signal. In case of departure signal before changing route, the line clear authority is to be withdrawn from the Driver with a memo, taking his acknowledgement thereof.

6.7 TRAINS RUNNING THROUGH: -

The procedure detailed in Para 6.6 above and General Rules 4.17, 4.42 and Subsidiary Rules 3.36.04(b)(i) 3.42.02(a)(iv), shall be observed. When trains are to run through over the loop line the advanced starter and starter signal shall be taken off when the train actually enters the loop lines.

The SS/SM is responsible to observe/watch the condition of the vehicles on a train and shall wave green hand signal horizontally as per Subsidiary Rule 4.42.02.(b) until anything wrong is noticed on train. For this purpose the SS/SM on duty shall stand in such a position that he sees a clear view of the passing train and that the Driver and Guard of the train can clearly see his hand signals. He shall depute his points man with hand signal to the other side of the passing train who shall exhibit hand danger signal to draw the attention of the guard/driver of the train in case of observing any unsafe condition/abnormalities of the train. He shall also report to the SS/SM on duty for taking further suitable action in terms of SR 4.42.02(d).

The Station Master on duty is responsible to see that a train passes complete with its last vehicle indicator. If a train passes without last vehicle indicator or its authorized substitute, action shall be taken as per General Rules 4.17 and Subsidiary Rules 4.17.02.

6.8 WORKING IN CASE OF FAILURE: - In case of failure of S&T equipments on duty Station Master shall work in accordance to GR 3.68, 3.69 and 3.70 and SRs thereto.

- 6.8.1 **PROCEDURE TO BE FOLLOWED INCASE OF FAILURE OF A SIGNAL & INTERLOCKING INSTALLATIONS:** -Whenever there is a failure of points, signals, track circuits or any other interlocking gear at the station that includes level crossing gate (s). if any etc. the SM on duty shall follow the procedure detailed in GR 3.68, 3.72, 3.74 and SRs thereto. In case of defective approach signals, the trains will be piloted in vide SR 3.69.02, 3.69.03 & 3.69.05. In case of defective departure signals, trains will be piloted out vide GR 3.70 & SR 3.70.01. & 3.70.02.

The responsibility of correct setting of points, clamping and padlocking of the facing and trailing points for reception and dispatch of trains rests with SM on duty himself.

When the points, crossings or guardrails are defective/damaged, the Station Master will take action immediately vide GR 3.77, SR 3.77.01 & 3.39.01 (c).

In the event of interlocking becoming defective, the points will be treated as defective. The SM on duty on receipt of this information will immediately introduce non-interlocking system of working at the station. Trains will be piloted In or Out as the case may be.

The failure report should be communicated by the SM on duty through a memo to the Signal Maintainer and the signal inspector of the section as per SR 3.51.04 and 3.68.04 and document all such transactions.

- 6.8.2 **INSPECTION OF POINTS BEFORE DECLARING THEM DEFECTIVE:** - However, before declaring a signal as defective, the setting of the point on the route to which it is applied, shall be inspected by the Station Master irrespective of the position of the switches in terms of SR 3.68.01(c).

- 6.8.3 **ISSUE OF CAUTION ORDER:** -

Whenever in consequence of the line being under repair or for any other reason special precautions are necessary, a caution order detailing the kilometers and speed at which a train shall travel and the reasons for taking such precautions shall be handed over to the driver in terms of GR 4.09 and SR thereto.

- 6.9 **WORKING OF MOTOR TROLLEY, MATERIAL LORRIES ETC:** -

(a) Motor Trolleys are run in accordance with Subsidiary Rules 15.25.03 to 15.25.07.

(b) Material Trolleys will work in accordance with Subsidiary Rules 15.27.05 to 15.27.08

The following precaution must be taken:

- (i) Motor trolleys on following line clear shall not be allowed between BMCK-THV vide SR 15.25.03(b) (xiii).
- (ii) Material trolley working on Form-B shall not be allowed between BMCK-THV due to sharp curves and steep gradients

7.0 BLOCKING OF LINES: -

Whenever a running line is blocked either by loose vehicles or by stabling train or by a train which is to cross or give precedence to another train, the points in rear should immediately be set against the blocked line except during shunting movement and reminder collars shall be placed on the concerned point push button and route button(s) for the blocked lines. A clear remark in 'RED' ink shall be made immediately in the train signal register and a record shall be made in the Station Master's diary also. Stable load register is also to be maintained. The stable load or loose vehicles are to be secured as per General Rules 5.23 and Subsidiary Rules 5.23.01 to prevent rolling down of vehicles.

7.1 USE OF REMINDER COLLARS: -

Whenever a running line is blocked either by loose vehicles or by stabling train or by a train which is to cross or give precedence to another train even for a short while or during shunting operations the reminder collars must be placed on concerned point push button and route button(s) for the blocked lines on the operating panel by SS/SM on duty.

7.2 SECURING OF VEHICLES: -

As far as practicable loose vehicles shall not be allowed to stand on the running line. However, under unavoidable circumstances, if it is necessary to detach vehicles from a train or to stable a train and leave them standing on running line, SS/SM on duty shall be responsible to secure vehicles/stable loads in accordance with GR 5.23 and SR 5.23.01 to prevent rolling down of vehicles and arrest obstruction fouling of line.

NOTE: Special care shall be taken to secure special type vehicles fitted with roller bearings while standing in siding or on running lines A stabled load register to be maintained shift wise as per FORMAT given below: -

1	2	3		4	5	6	7
Date	Name of SM on duty	Duty Hours		Line on which stabled	Total no. of wagons	Time Line blocked	Time Line blocked
		From	To				

8(a)	8(b)	8(c)	8(d)
No. of Hand brakes pinned down	No. of wagons on which wooden wedges used	No. of safety chains with pad lock used	Clamps and pad locks used to set the line against blocked line

8(e)	8(f)	9	10	11	12
Switch nos. on which reminder collars applied	Time Line cleared	Signature of SM on duty	Signature of SM taken over	BPC particulars	Remarks

R.K.Behera
Dy. CSTE(Con)/SBP

Ashok Kumar
Sr. DEN(West)/SBP

M.K.Mishra
Sr.DOM/SBP

	Date	Time			BPC NO.	
					Date of issue	
					Issuing Stn.	

7.3 **ALTERING OF POINTS TO A CLEAR LINE WHEN RUNNING LINE IS BLOCKED:-**

- a) When a running line is blocked by stable load e.g, wagons, vehicles or by a train which is to cross or give precedence to another train or immediately after arrival of a train at the station etc. the points should immediately be set against the blocked line except when shunting or another movement is required to be performed in that direction on the same line.
- b) If all the lines at a station happens to be blocked when line clear has been granted to a train, the points should be set for the line occupied by a stable load or a goods train in that order so that in a case of mishap, the chances of casualties are minimized.
- c) In case all the lines are occupied by passenger carrying trains points should be set for a loop line, to negotiate which the speed of the incoming train would be reduced, which in turn would minimize the consequences of casualties. While doing so, points shall be set for a loop, occupied by a train if any, whose engine is facing the direction of approach of the incoming train rather than a loop line, occupied by a train whose passenger coach will, in case of collision, receive the impact.

7.4 **LOADING AND UNLOADING OF VEHICLES ON RUNNING LINE:-**

Loading and unloading of vehicles on running is prohibited unless permitted by Sr.DOM/SBP vide SR 5.19.01.

8.0 **SHUNTING: -**

8.1 Shunting shall be performed in terms of General Rules 3.46, 3.52 to 3.56, 5.13, 5.14, 5.16, 5.17, 5.19, 5.20 to 5.23, 8.09, 8.14, 8.15 and Subsidiary Rules thereto. The Guard/Asst. Guard/SS/SM/TPM on duty is authorized to supervise shunting operation. The authority for shunting is a shunting order (T-806) to be issued by the SS/SM on duty, which shall be withdrawn after completion of shunting, or in need when train movement is involved to receive/despatch trains on the adjacent line. The same shall be cancelled and pasted to its record foil. The staff supervising shunting shall ensure correct setting of points, clamping and pad locking of points, if necessary. Normally back shunt signals shall be used for shunting operation.

8.2 **SHUNTING IN THE FACE OF APPROACHING TRAIN.** Shunting in the face of approaching train is prohibited

8.3 **PROHIBITION OF SHUNTING AND ANY SPECIAL FEATURE: -**

- (a) Hand Fly & Loose shunting is not permitted at both end of the yard.
- (b) SR 4.48.01 is applicable for this station.

8.4

<u>SHUNTING ZONE</u>	<u>BLOCK SECTION IS CLEARED</u>	<u>BLOCK SECTION IS OCCUPIED</u>
Shunting outside home signal	The concerned section shall be blocked back vide GR 8.06 (2).	Not permitted in face of an approaching train
Shunting within station section	Permitted	Permitted provided the engine is leading towards the block section and all necessary signals are kept at ON vide 8.05 (2).
Shunting in advance block section.	Shunting is permitted, provided the section is blocked forward vide GR 8.06(3)	Shunting in rear of a traveling away train is not permitted taking into consideration the gradient of the block section.

8.5 **SHUNTING IN THE SIDING TAKING OFF FROM STATION YARD: -**

When shunting in the station yard proper shunting authority on T/806 is to be issued to the train staff with clear instruction and limit up to which shunting is to be performed. While performing shunting in the siding relevant GR 5.14 and SRs thereto to be followed.

9. **ABNORMAL CONDITIONS: -**(a) **THE RULES TO BE OBSERVED IN THE EVENT OF ABNORMAL CONDITION: -**[I] **PARTIAL FAILURE OF COMMUNICATION: -**

In the event of suspension of Double line Block Instrument and during partial failure of other available means of communications, trains will be worked in terms of Subsidiary Rule 6.02.06 and Chapter-V of Block Working Manual.

[II] **THE AUTHORITY TO PROCEED IN THE OCCUPIED BLOCK SECTION IN CASE OF OBSTRUCTION OF LINE OR ACCIDENT ETC: -**

In case, it is necessary to allow a train into an obstructed block section due to engine failure, obstruction or accident, a block ticket shall be issued in terms of SR 6.02.05 Absolute Block System on the affected block section shall be suspended and concurrence of the SS/SM at other end shall be obtained and recorded in caution order register and train signal register.

On the block ticket (T/A 602) it shall be mentioned in detail the place of obstruction i.e. Engineering Km., B/Van Km., whether the train is to return or to wait at the place of obstruction for the arrival of another following train(s) or to proceed to next station.

A caution order shall be issued restricting the speed to 15 KMPH. in day light hours when the visibility is good and 10 KMPH at night or whenever clear view of 800 Mtrs. is not available. On arrival at the station the block ticket shall be collected with necessary endorsement from Driver/Guard and cancelled and pasted to its record foil or shall be sent to the issuing station for cancellation. In case of accident/engineering block assurance from SE/P.WAY concerned shall be obtained that the line is safe for movement of trains before resumption of normal

working. When the obstruction is removed and assurance in writing is obtained from SE/P.WAY concerned or Guard/Driver the SS/SM on duty may resume normal working after exchanging proper messages supported by Private Number.

[III] **TRAINS DELAYED IN BLOCK SECTION:** -

In case of train delayed in the block section the Station Master will take action as per GR 6.04 and SRs thereto.

[IV] **FAILURE/PASSING OF INTERMEDIATE BLOCK STOP SIGNAL AT ON:** -

In case of failure/passing of intermediate Block stop signal at 'ON' Station Master will take action as per GR 3.75 and SRs thereto.

[V] **FAILURE OF LV AXLE COUNTER BLOCK/BPAC:** -

Details of the operation are given in Appendix 'B' of SWR.

(b) **PROCEDURE FOR EMERGENCY OPERATION OF POINTS BY CRANK**

HANDLE: -

Details of the operation are given in Appendix 'B' of SWR.

(c) **CERTIFICATION OF CLEARANCE OF TRACK BEFORE CALLING-ON SIGNAL IS OPERATED**

To take 'OFF' a calling on signal during failure of track circuit on the route, the clearance of the track over which the train would pass must be physically checked by the SS/SM on duty. After satisfying himself SS/SM on duty shall initiate the calling on signal operation. The procedure shall be strictly followed.

(d) **REPORTING FAILURE OF POINTS, TRACK CIRCUIT / AXLE COUNTER AND INTERLOCKING:-**

In case of failure of any interlocking gear at the station, the failure report should be communicated by the SS/SM on duty to the sectional Maintainer, the JE/SE/SSE (SIG) of the Section and others through a memo as per G & SR 3.68.04 and document all such transactions.

9.1 TOTAL FAILURE OF COMMUNICATION: -

In the event of total interruption of all communications occurring between BMCK – THV or BMCK -MNGD stations, action is to be taken as per SR 6.02.03.

- i) The train, which is to be despatched to the affected section, will be stopped and the Driver and Guard of the train shall be advised of the circumstances by SS/SM on duty.
- ii) SS/SM on duty shall hand over the following documents to the driver of each train:
 - a) An "Authority to proceed without line clear" on the prescribed form.
 - b) A Caution Order restricting the speed to 25 Kmph over the straight and 10 Kmph when approaching or passing any portion of the line where the view is not clear due to curve, obstruction, rain, fog or any other cause.
 - c) A written authority on Form T 369(3b) to pass the last stop signal at 'ON' position.

- iii) Following train shall not be allowed to enter into the block section until there is a clear interval of 30 minutes.
- iv) Fixed signals except the last stop signals may be taken 'OFF' for the despatch of the train and for the reception of the train at the next block station, the reception signals may be taken 'OFF' only after the train has brought to a stop outside it.
- vi) No train shall be backed. In exceptional circumstances when it may be unavoidable, to back a train, the train shall be backed only after providing protection by placing one detonator at 250 meters and two detonators at 10 meters apart at 500 meters at rear of the point up to which the train shall be backed.
- vii) On arrival at the next block station the driver shall hand over the 'Authority to proceed without line clear' to the SS/SM on duty who shall preserve the same for further inspection.
- vii) Before resuming normal working when any means of communication is established the SS/SM at either end must satisfy that there is no train in the block section and block section clearance is obtained from driver/guard/PWI.

9.2 TEMPORARY SINGLE LINE WORKING ON A DOUBLE LINE SECTION: -

During temporary single line working on a clear line when other line is obstructed either between BMCK - MNGD or BMCK - THV stations, train shall be worked as per the detail procedure in SR 6.02.01, which is summarized as below:

- 9.2.1 Before introducing single line working SS/SM on duty must satisfy that the line on which single line will be introduced is clear and free from all obstructions.
- 9.2.2 Commutators of the Lock And Block Instrument of the concerned section shall be kept in "TRAIN ON LINE" position.
- 9.2.3 SS/SM on duty proposing single line working must issue a message containing the following information under exchange of private numbers to the SS/SM at the other end of the affected section: -
 - a) Cause of introduction of single line working.
 - b) The line on which single line working is proposed.
 - c) Source of information that the said line is clear.
 - d) Place of obstruction.
 - e) Speed restriction if any.
 - f) Names of intermediate stations, if any, which would be out of use.
 - g) Assurance that trap points, if any, clamped and padlocked.
 - h) Assurance that if the train is running on the right line, the last stop signal shall be kept in the 'ON' position. In case the train is running on the wrong line, all fixed signals shall be kept at 'ON' position.

- i) The number and timings of the last train, which arrived, or train left the block station issuing the message.
- 9.2.4 SS/SM on duty at the other end of the block section shall acknowledge the message and confirm the same by a private number.
- 9.2.5 After obtaining line clear from other end of the block station the driver must be given the following documents: -
- Paper Line Clear Ticket (T/D 602).
 - A caution order indicating the line on which single line working is introduced, the Kilometer of obstruction, any other speed restrictions if exist, endorsement to inform all Gangmen, Gatemen about the single line working (for first train only). The speed of the first train to be restricted to 25 KMPH subject to other speed restrictions.
 - A pilot memo T/369(3b) to pass last stop signal at 'ON'.
- 9.2.6 The approach stop signal at the other end station may be taken 'OFF' if the train is on the right track.
- 9.2.6 On being ensured that the obstructed line is clear of all obstructions the SS/SM on duty shall resume the normal working after exchanging messages with SS/SM on duty at the other end station concerned, supported by Private Number in consultation with the section controller on duty when there is no train in the block section.
- 9.3 DESPATCH OF TRAINS UNDER AUTHORITY TO PROCEED WITHOUT LINE CLEAR OR TO ASSIST THE CRIPPLED TRAIN: -**
- The Station Master will take action as per SR 6.02.03 for despatch of trains under authority to proceed without line clear. Actions shall be taken to assist the crippled train as per SR 6.02.05.
- 10 VISIBILITY TEST OBJECT:-** Not Applicable.
- 11 ESSENTIAL EQUIPMENTS AT THE STATION: -**
This is mentioned in the Appendix 'E' of the SWR.
Essential equipment shall be kept ready on hand in good condition with necessary relief stock.
- 12 FOG SIGNAL MEN NOMINATED TO BE CALLED IN CASE OF FOG: -**
The station has been provided with double Distant signals which gives adequate prewarning to the loco pilot. Hence, placing of detonators in case of fog shall be dispensed with vide SR 3.61.01

CERTIFICATE: -

NOTHING IN THESE RULES SHALL BE READ AS CANCELLING, AMENDING AND MODIFYING ANY OF THE GENERAL RULES, SUBSIDIARY RULES, BLOCK WORKING MANUAL AND OPERATING MANUAL. THESE RULES HENCEFORTH CANCEL ALL PREVIOUS STATION WORKING RULES OF BISSAM CUTTACK STATION.

APPENDICES

APPENDIX 'A'	--	WORKING OF L.C. GATE.
APPENDIX 'B'	--	SYSTEM OF SIGNALLING AND INTERLOCKING AND COMMUNICATION ARRANGEMENTS AT THE STATION.
APPENDIX 'C'	--	ANTI COLLOSION DEVICE (RAKSHA KAVACH).
APPENDIX 'D'	--	DUTIES OF TRAIN PASSING STAFF AND STAFF IN EACH SHIFT.
APPENDIX 'E'	--	ESSENTIAL EQUIPMENT OF STATION.
APPENDIX 'F'	--	RULES FOR WORKING OF DK STATIONS, HALTS, IBH, IBS AND OUTLYING SIDINGS.
APPENDIX 'G'	--	WORKING OF TRAINS IN ELECTRIFIED SECTIONS.

APPENDIX – ‘A’

DETAILS OF LEVEL CROSSING GATES TOGETHER WITH INSTRUCTIONS TO THE OPERATING STAFF (INCLUDING LEVEL CROSSING GATE MEN) ABOUT THEIR NORMAL WORKING, THEIR MAINTENANCE AND THEIR WORKING INCASE OF FAILURES EMERGENCIES WITH SPECIAL PROVISIONS, IF ANY.

1.0 GATE WORKING RULES OF “C” CLASS, TRAFFIC INTERLOCKED LEVEL CROSSING GATE AT KM 304/11-12 IN BMCK STATION YARD. (No-RV-235)

GENERAL INSTRUCTIONS: -

1.1 DESCRIPTION OF THE LEVEL CROSSING GATE:-

1	No. of Level Crossing Gate	: RV-235
2	Engineering or Traffic gate	: Traffic
3	Under control of station master or PWI.	: SS/ BMCK
4	Location at Km.	: 304/11-12
5	At station	: BMCK
6	In between station	: BMCK-MNGD
7	BG/MG/NG	: BG
8	Single line/double line/multiple line	: Double line
9	Normal position	: Open to road traffic
10	Interlocked/ Non-Interlocked	: Interlocked
11	Means of Interlocking	: RKT, LC.Gate control Button No. 29.
12	Provision of gate single at Km.	: NIL
13	Signaling arrangement	: MACLS
14	Means of communication Telephone.	: Telephone with SM/ BMCK
15	Width of the level crossing gate	: 5.50m.
16	Type of road	: Others
17	Name of road	: Bissam Cuttack - Korli Road
18	Metalled /Non-Metalled	: Metalled
19	Approach road	: Metalled
20	Width of the road	: 5.5 Mtrs
21	Angle of road crossing (in case of the SKEW gates)	: ---
22	Road gradients (if any)	: [a]North/ East Side. --- : [b] South /West Side. ---
23.	Road alignment (straight/Curve)	: [a] North/ East Side - Straight : [b] South/ West Side - Straight
24.	Provision of height gauges	: Not Provided
25.	Type of barriers	: Lifting barriers
26.	Length of check rails	: 7.5 Mtrs.
27.	Road surface in between level crossing gates.	: Hexagonal Block
28.	Length of rumble strip/ speed breakers.	: 5.5 Mtrs
29.	Road signs	: Available
30.	Speed breakers indication board	: Available
31.	TV U	: 3240 on 09/2010
32.	Census next due on	: 09/2013

33. Demarcation for placement of detonators. : Available
 34. No. of gateman working : Two
 35. Nearest Railway Medical Assistance : Rayagada
 36. Nearest Private Medical Assistance available : Bissam cuttack
 (if any)
 37. List of equipment available (Yes/No) : Yes

1.2. **EQUIPMET:**

ITEMS	QUANTITY/NUMBERS
1. Hand signal Lamp Tri Colour	3(5 on Quadruple/Line or twin single line)
2. Hand signal Flag Green	1 mounted on sticks
3. Hand Signal Flag Red.	3 (6 on Quadruple/line or Twin single line and 7 in case Hexaple section mounted on sticks)
4. Banner Flag Red	3 (5 on Quadruple/Line or twin single line)
5. Posts for exhibiting red banner flag	2 (4 on Q/Twin single line and 5 on Hexaple section)
6. Spares chains with padlocks	2 with stop mark
7. Detonators	10 in tin case
8. Gate Lamps	2
9. Tommy Bar	1
10. Motor Pan	1
11. Spade/Fowrah	1
12. Rammer	1 (in case of asphalted road this may not be provided)
13. Pick Axe	1 (in case of asphalted road this may not be provided)
14. Tin case for flags	1
15. Can for oil	1
16. Water pot/Bucket	1
17. Canister for Muster Roll	1
18. Set of spare spectacles of Gateman Wearing glasses.	1
19. Board demarcating protection of level crossing Gate diagram in case of obstruction on Gate	1
20. Basket	1
21. Whistle	1
22. Wall clock	1
23. Small size chains with padlock to be used in case of failure of Gate boom lock.	2

1.3 **THE GATEMAN SHALL BE PROVIDED WITH FOLLOWING REGISTERS: -**

- i) Gate working instructions in Hindi / English.
- ii) Gate working instructions in local vernacular language.
- iii) General Rules Book in Local vernacular language.

- iv) List for tools and books.
- v) Duty Roster.
- vi) Certificate for working as Gateman.
- vii) Bio–Data particulars of Gateman, including date of passing vision test, initial/refresher course, safety camp etc.
- viii) Accident Register.
- ix) Records of last census of road traffic at level crossing gate.
- x) Public complaint Book.
- xi) Inspection Book.

1.4 **DUTIES OF GATEMAN:**

1. **ALERTNESS:**

The Gateman on duty shall be alert. He should be prepared to take immediate action, when danger is apprehended. Keys of the gate shall be in his personal custody.

2. **POSITION OF GATE KEEPER DURING PASSAGE OF TRAINS:**

During passage of trains, Gateman will stand in the manner indicated below:

- i) Gateman will stand attentively in front of the gate – lodge facing the approaching train.
- ii) In daytime, Gateman shall hold red and green flags furled up on separate sticks in right and left hands respectively.
- iii) In night time, Gateman shall hold lighted hand signal lamp with white light facing the track.
- iv) He shall keep the whistle slung around his neck from a cord and blow the whistle to draw the attention of Driver & Guard of the passing train.

3. **ROUTINE DUTIES OF GATEMAN:**

- i) Gateman shall ensure that red banner flag by day and red lamp by night is placed across the track in case of emergency and obstruction on the track.
- ii) Gateman shall ensure that all gate lamps and hand signal lamps are lighted and kept burning continuously from sunset to sunrise.
- iii) Gateman shall perform his duties strictly according to the duty roster and shall not leave the gate unless his reliever arrives and takes over charge from him. However, if it is necessary to leave the gate in an emergency, he must close and lock the gate against road traffic, before leaving the gate.
- iv) Except where otherwise prescribed under special instructions, he shall observe all passing trains and be prepared to take such action as may be necessary to ensure safety of trains.
- v) Gateman shall watch all passing trains and keep sharp look out for any unusual like hot axle, hanging chains, hanging battery, any vehicle/wagons /trains/battery/box on fire, shifted load, falling material like

brake blocks, brake beams, safety bracket, vacuum cylinder or any other situation endangering safe running of trains.

- vi) Gateman shall also be prepared to repeat any signal which guard may give to driver.
- vii) If lifting barriers get damaged or becomes out of order, the Gateman shall use the spare chain with disc and padlocks for securing the gate against road traffic.
- viii) Gateman shall report to the nearest Station Master, Gangmate or Permanent Way Inspector any defect in his gate or apparatus pertaining to it, as soon as possible.
- ix) Gateman shall wear badge and prescribed uniform while on duty at level crossing gate.
- x) Gateman shall ensure that he is having competency certificate in his possession while on duty.
- xi) Gateman shall work the gate as per gate working instructions and remain well conversant with these instructions.
- xii) Gateman shall ensure that equipment supplied at the gate is in good order and ready for immediate use.
- xiii) Gateman shall see that the channel for the flange of the wheel is kept clear.
- xiv) Gateman must keep the road surface well-watered and rammed in case of unmetalled roads.
- xv) Gateman must be vigilant to see that inconvenience to road users due to closure of gates should be to the minimum possible extent.
- xvi) Gateman shall prevent tress passing by persons or cattle to the maximum extent.

4. **ACTION IN CASE OF UNUSUAL OCCURRENCE OF TRAIN.**

In case Gateman observes any thing unusual with a passing train, he shall take following action:

- i) He shall take prompt action to warn the driver/guard of the passing train by showing red flag by day and red light by night.
- ii) He shall simultaneously try to draw the attention of the driver/guard by whistling continuously, shouting, gesticulating, and throwing ballast on the brake van or by any other means.
- iii) If driver/guard fails to take notice, Gateman shall immediately inform the Station Master/MNGD, to take appropriate action, under exchange of private number.
- iv) In case of train parting, Gateman shall not show stop hand signal but shall show prescribed signal for train parting.
- v) He shall endeavor to attract the attention of the Driver/Guard by whistling continuously, shouting, gesticulating, and by raising both hands vertically

above, quickly parting them and bringing them together in repeated Up and Down motion as high and as low as possible.

- vi) In case the train does not stop, Gateman shall immediately inform the Station Master/BMCK, to take appropriate action, under exchange of private number.

5. ACTION IN AN EMERGENCY AT THE LEVEL CROSSING:

- i) In case of an obstruction at the level crossing gate, gateman shall maintain the gate signals, if an, in the 'ON' position.
- ii) Therefore, if he is unable to remove the obstruction, gateman shall immediately advise the Station Master on duty, regarding the defects/obstructions at the gate, under exchange of private number.
- iii) If there is no response from the Station Master after or three attempts he shall first protect the gate and then inform on phone.

The gateman shall protect the line as under: -

(A) On Double Line.

- i) If both lines are obstructed the Gateman shall plant a red banner flag by day and a red light by night 5 meters away from the line on which train is expected to arrive first.
- ii) Then he will similarly plant the other red banner flag by day and red light by night on the other line 5 meters away from the site of obstruction.
- iii) Gateman shall then proceed to protect the gate along with detonators, fusees and red flag by day and red hand signal lamp by night.
- iv) Gateman shall proceed exhibiting red flag by day and red hand signal lamp by night on the line on which a train is expected to arrive first, to a point 600 meters on BG and place one detonator on the line. Thereafter he shall proceed to a distance 1200 meters on BG from the level crossing gate and place 3 detonators on the track in 10 meters apart. Having thus protected the line he shall return to the level crossing gate picking up the intermediate detonator on his way back.
- v) Thereafter, he shall proceed on the other line, showing red hand signal, similarly place detonators as described in para (iv) above and return to the site of obstruction, picking up the intermediate detonators on his way back.
- vi) Having returned to the gate, he must then take steps to remove the obstruction and warn the driver of the approaching train.
- vii) In case the gateman observes or hears a train approaching when he is still on his way to protect and before he reaches the stipulated distance to place detonators, he shall place detonators on the line at a distance as far away as he can go.
- VIII) Thereafter, he shall light up and fix the fusee to warn the driver and stop the approaching train by waving his red flag by day red hand signal lamp by night repeatedly.

(B) OTHER ACTIONS TO BE TAKEN BY GATEMAN:

- i) At night Gateman shall light two hand signal lamps and take action to exhibit red light and protect the lines as described in sub paras (a) and (b) above.
- ii) If the gate is broken by a road vehicle, which is fouling the track, or if lifting barriers or any other part of the gate foul the track, or if there is any other obstruction at the gate, the Gateman shall take immediate action.
- iii) He shall note down the particulars of the road vehicle, vehicle number, name of the driver, owner and relay these details to the SM/BMCK and Permanent Way Inspector regarding the particulars and obstructions at the level crossing gate, through messenger or other means available.

1.5 SPECIAL INSTRUCTIONS:**1. MODE OF OPERATION:**

This is a Manned, interlocked traffic L.C.Gate situated at the MNGD end of the yard in between DN Starter and DN Adv. Starter signals at Km 304/11-12. Gatekeeper of Operating department under the control of SM/BMCK operates the L.C gate. The level crossing gate is of lifting barrier type operated by means of winch provided at the gate lodge. The normal position of the gate is opened to road traffic. A two-lever ground frame is provided at the gate lodge. The key of the LC remains in the winch when the gate is opened condition. When it is necessary to close the gate, for taking off signals or for shunting operations the SM on duty shall inform the gate man to close and lock the gate. The gate man on duty shall then close the barriers of the LC gate by operating winch. Then key 'P' is to be extracted from the winch, which will be inserted in the lever of GF-2. When GF-2 is reversed it locks the booms of the gates and releases GF-1 and key "Q". When key 'Q' is transmitted electrically to the panel in conjunction with GF-1 reversed, L.C Gate closed indication will appear on the Panel and UP reception and DN despatch signals automatically get released. GF-1 is provided in the gate lodge to put back the concerned signal to 'ON' in case of emergency.

After passage of the Train or completion of shunting, the SM on duty shall inform the gateman and press LC gate controlling button No.29 and group button (trans) and keep it pressed till such time the gate man extracts the control key 'Q' from the RKT instrument. After getting the Key 'Q' the gate man will open the L.C gate by normalising the levers. The LC gate shall be so worked as to cause least possible inconvenience to the vehicular traffic consistence with safety as per subsidiary rule 16.03.01 (a).

In the event of failure of any UP Home signal or DN starter signals signal or during Non Interlocking working the Traffic Gateman shall be informed and the Train shall be passed in terms of SR 3.69.02, 3.69.03 and 3.70.01 after ensuring correct closing and locking of L.C Gate.

2. INTIMATION TO GATEMAN:

- i) Before taking off reception/departure signals Station Master/BMCK shall inform the gateman, the number, description, and direction of the train.
- ii) The gateman shall close the gate and transfer the key to the Station Master.

- iii) The reception/departure signals will then taken 'OFF'
- iv) In order to ensure that road traffic is not held up for a long time, the Station Master/ BMCK must ensure that the train is ready for departure in all respects before he advises the gateman for closing the gate.
- v) When a train has to be piloted to and from the station yard or any shunting movement is to be done, the staff deputed to pilot the train to perform the shunting across the gate shall be personally responsible to ensure that the gate is closed against road traffic before allowing any movement across the gate.

3. **FAILURE OF TELEPHONIC COMMUNICATION:**

When Telephonic Communication fails or it does not get any response from the Gateman despite 2 or 3 attempts, the following procedure should be adopted:

- i) Station Master on duty/ BMCK shall send written advice to the gateman through the porter with full details of number, description and direction of the train.
- ii) Gateman on receipt of such advice shall close the gate and transmit the key to the Station Master/ BMCK, which will enable him to take 'OFF' reception/Departure signals.
- iii) When sufficient time is not available because of greater frequency of train service, station Master/ BMCK will issue written authority to the train driver to pass the signal at 'ON' position.
- iv) In addition Station Master/ BMCK shall also issue a caution order advising the driver to whistle continuously and approach the gate cautiously.
- v) The train driver shall be instructed to pass the gate cautiously, on before signaled by the gateman. If hand signal is not seen, driver should be prepared to stop short of the gate and ensure that gate is closed following GR.3.73.
- vi) In case of an approaching UP train, the Station Master/ BMCK shall advise the Station Master/MNGD, under exchange of private number, that the telephone at the gate has failed.
- vii) The station Master/ MNGD shall then issue a caution order to the driver before dispatching an UP train into the block section from his end.
- viii) He should also advise S&T staff responsible for maintenance of the telephone rectify the defect at he earliest.
- ix) Normal working will be resumed only after S&T staff rectify the telephone and issue reconnection /fit memo for the same.

4. **FAILURE OF LIFTING BARRIERS OF GATE:**

- i) When the gate cannot be closed due to failure of lifting barriers, the gateman will immediately inform, the Station Master on duty/ BMCK, under exchange of private number, and ensure the lifting barriers of gate do not foul the track.

- ii) He shall immediately fix red banner flag by day and red light by night on the post at that end first from which the train is approaching and then at the other end.
- iii) Gateman shall secure the gate against road traffic by means of safety chains and padlocks.
- iv) After securing the gate against road traffic, gateman shall show green hand signal flag by day and green light by night to the driver of the approaching train.
- v) Station Master on duty/ BMCK shall issue a caution order to the driver of a departing train.
- vi) He shall also advise the station Master/MNGD at the despatching end, under exchange of private number, to similarly issue a caution order to the driver before despatching an UP train into the block section from his end.
- vii) Station Master/ BMCK will advise maintenance staff responsible for maintenance of lifting barriers to repair the defect at the earliest.
- viii) Normal working will resume only after maintenance staff repair the barrier and issue reconnection/fit memo for the same.

5. **FAILURE OF THE GATE KEY WITH THE GATE IN CLOSED POSITION WHEN GATE KEY CANNOT BE EXTRACTED FOR OPENING THE GATE.**

- i) If the gate key cannot be extracted from the gate winch or the key transmitter, then gateman must immediately inform the Station Master / BMCK on duty on telephone, under exchange of private number.
- ii) Thereafter, the gate must be treated as non – interlocked and procedure for reception/ despatch of trains as prescribed for non – interlocked gates, should be adopted.
- iii) Station Master on duty/ BMCK shall issue a caution order to the driver of a departing train.
- iv) He shall also advise the station Master/MNGD at the despatching end, under exchange of private number, to similarly issue a caution order to the driver before despatching an UP train into the block section from his end.
- v) Station Master/ BMCK will advise S&T staff responsible for maintenance of winch/ key transmitter to rectify the defect at the earliest.
- vi) Normal working will resume only after S&T staff repairs the winch /key transmitter and issue reconnection/fit memo for the same.

6. **FAILURE OF THE GATE KEY, WITH THE GATE IN OPEN CONDITION:**

- i) If the gate key cannot be extracted from the winch, gate lever or key transmitter then gateman must immediately inform the Station Master on duty/ BMCK on telephone, under exchange of private number.
- ii) Thereafter, the gate must be treated as non-interlocked and procedure for reception/despatch of trains as prescribed for non-interlocked gates should be adopted.
- iii) Gateman shall secure the gate against road traffic by means of chains and padlocks and pass the trains on hand signals.

- iv) Station Master on duty/ BMCK shall issue caution order to the driver of a departing train.
- v) He shall also advise the station Master/MNGD at the despatching end, under exchange of private number, to similarly issue a caution order to the driver before despatching an UP train into the block section from his end.
- vi) Station Master/ BMCK will advise S&T staff responsible for maintenance of winch/key transmitter to rectify the defect at the earliest.
- vii) Normal working will resumed only after S&T staff repairs the winch/key transmitter and issue reconnection/fit memo for the same.

7. OBSTRUCTION AT THE GATE:

- i) If the gate is broken by a road vehicle which is fouling the track, or if lifting barriers or any other part of the gate foul the track, or if there is any other obstruction at the gate, the gateman shall Immediately fix red banner flag by day and red lamp by night on posts provided at both ends of the gate, for this purpose.
- ii) Immediately after this, the gateman shall advise the Station Master/ BMCK on duty, regarding the defects/obstruction at the gate, under exchange of private number.
- iii) Stationmaster/ BMCK on duty shall be advised to put the reception/departure signals back to 'ON' position, if taken 'OFF' for a train.
- iv) If there is no response from the Station Master / BMCK after two or three attempts, he shall first protect the gate and then inform on phone.
- v) Gateman shall then rush with detonators, fusee and red flag by day and red hand signal lamp by night in the direction of the approaching train and protect the gate as stipulated in General Instruction for duties of gateman under item No.1.4. (5).
- vi) Thereafter he shall protect the gate from the other direction also.
- vii) He shall note down the particulars of the road vehicle, name of the driver, owner and reply these details to the station Master/ BMCK who shall not start the train unless he has been assured by the gateman that the road vehicle or the lifting barriers are not fouling the track.
- viii) The Station Master/ BMCK shall also inform the station Master/MNGD at the despatching end, under exchange of private number, asking him not to despatch any train into the block section from his end, until the track has been cleared of all obstructions.
- ix) After the track has been cleared of all obstructions the gateman shall inform the Station Master/ BMCK accordingly, under exchange of private number.
- x) Station Master/ BMCK and MNGD shall then issue a caution order to drivers of all trains to proceed cautiously, and pass the gate signal at 'ON' position on green hand signal of the gateman, if the gate is broken, but is clear of any obstruction.
- xi) Gateman shall secure the gate against road traffic by means of safety chains and padlocks and they're after exhibit green hand signal, if the gate is not obstructed.
- xii) Station Master/ BMCK shall advise maintenance staff responsible for maintaining the lifting barriers to repair the same at the earliest.

xiii) Normal working will be resumed only after maintenance staffs rectify the defective lifting barriers and issue reconnection/fit memo for the same.

8. OBSTRUCTION ON THE TRACK NEAR LEVEL CROSSING GATE:

If there is a rail fracture or obstruction on the track due to falling of a tree, fouling by road vehicle or derailment which is visible to the gateman, the gateman and Station Master/ BMCK will adopt the procedure given under item No.7 above. If the obstruction fouls the level Crossing Gate, gateman must keep the gates closed against road traffic till the track is cleared of the obstruction.

2.0 GATE WORKING RULES OF “C” CLASS ENGINEERING, INTERLOCKED LEVEL CROSSING GATE AT KM 308/2-3 BETWEEN BMCK-THV STATIONS (No.RV-236).

2.1 GENERAL INSTRUCTIONS: -

A. DESCRIPTION OF THE LEVEL CROSSING GATE:-

1	No. of Level Crossing Gate	:	RV-236
2	Engineering or Traffic gate	:	Engineering
3	Under control of Station Master or permanent way inspector.	:	PWI
4	Location at Km.	:	308/2-3
5	At station	:	-----
6	In between station	:	BMCK-THV
7	BG/MG/NG	:	BG
8	Single line/double line/multiple line	:	Double line
9	Normal position	:	Open to road traffic
10	Interlocked/ Non-Interlocked	:	Interlocked
11	Means of Interlocking	:	RKT
12	Provision of gate single at Km.	:	308/5-6 & 307/14-15
13	Signaling arrangement	:	MACLS
14	Means of communication Telephone.	:	Telephone from gate Goomty with SM/ BMCK
15	Width of the level crossing gate	:	10m.
16	Type of road (NH/SH/Others)	:	SH
17	Name of road	:	Rayagada - Bhawanipatna
18	Metalled /Non-Metalled	:	Metalled
19	Approach road	:	Metalled
20	Width of the road	:	9.10 Mtrs
	Angle of road crossing (in case of the SKEW	:	45 ⁰ (Degree)
21	gates)		
22	Road gradients (if any)	:	[a] North East Side. [b] South West Side
23	Road alignment (straight/Curve)	:	[a] North East Side: Curve [b] South West Side: Curve
24.	Provision of height gauges	:	Not provided
25.	Type of barriers	:	Winch Operated Lifting barriers
26.	Length of check rails	:	12.90 Mtrs.
27.	Road surface in between level crossing gates.	:	Hexagonal RCC Block
28.	Length of rumble strip/ speed breakers.	:	9.10 Mtrs
29.	Road signs	:	Available
30.	Speed breakers indication board	:	Provided

R.K.Behera
Dy. CSTE(Con)/SBP

Ashok Kumar
Sr. DEN(West)/SBP

M.K.Mishra
Sr.DOM/SBP

31. TUV : 49658 on 09/ 2010
 32. Census next due on : 09/ 2013
 33. Demarcation for placement of detonators. : Displayed
 34. No. of gateman working : 03
 35. Nearest Railway Medical Assistance : Rayagada
 36. Nearest Private Medical Assistance available : BISSAM CUTTACK
 (if any)
 37. List of equipment available (Yes/No) : Yes

2.2. **EQUIPMENT:**

ITEMS	QUANTITY/NUMBERS
1. Hand signal Lamp Tri Colour:	3(5 on Quadruple/Line or twin single line)
2. Hand signal Flag Green	1 mounted on sticks
3. Hand Signal Flag Red.	3 (6 on Quadruple/line or Twin single line and 7 in case Hexaple section mounted on sticks)
4. Banner Flag Red	3 (5 on Quadruple/Line or twin single line)
5. Posts for exhibiting red banner flag	2 (4 on Q/Twin single line and 5 on Hexaple section)
6. Spares chains with padlocks	2 with stop mark
7. Detonators	10 in tin case
8. Gate Lamps	2
9. Tommy Bar	1
10. Motor Pan	1
11. Spade/Fowrah	1
12. Rammer	1 (in case of asphalted road this may not be provided)
13. Pick Axe	1 (in case of asphalted road this may not be provided)
14. Tin case for flags	1
15. Can for oil	1
16. Water pot/Bucket	1
17. Canister for Muster Roll	1
18. Set of spare spectacles of Gateman Wearing glasses.	1
19. Board demarcating protection of level crossing Gate diagram in case of obstruction on Gate	1
20. Basket	1
21. Whistle	1
22. Wall clock	1
23. Small size chains with padlock to be used in case of failure of Gate boom lock.	2

2.3 THE GATEMAN SHALL BE PROVIDED WITH FOLLOWING REGISTERS: -

- i) Gate working instructions in Hindi / English.
- ii) Gate working instructions in local vernacular language.
- iii) General Rules Book in Local vernacular language.
- iv) List for tools and books.
- v) Duty Roster.
- vi) Certificate for working as Gateman.
- vii) Bio–Data particulars of Gateman, including date of passing vision test, initial/refresher course, safety camp etc.
- viii) Accident Register.
- ix) Records of last census of road traffic at level crossing gate.
- x) Public complaint Book.
- xi) Inspection Book.
- xii) S&T register.

2.4 DUTIES OF GATEMAN:**1. ALERTNESS:**

The Gateman on duty shall be alert. He should be prepared to take immediate action, when danger is apprehended. Keys of the Gate shall be in his personal custody.

2. POSITION OF GATE KEEPER DURING PASSAGE OF TRAINS:

During passage of trains, Gateman will stand in the manner indicated below:

- i) Gateman will stand attentively in front of the Gate – lodge facing the approaching train.
- ii) In daytime, Gateman shall hold red and green flags furled up on separate sticks in right and left hands respectively.
- iii) In nighttime, Gateman shall hold lighted hand signal lamp with white light facing the track.
- iv) He shall keep the whistle slung around his neck from a cord and blow the whistle to draw the attention of Driver & Guard of the passing train.

3. ROUTINE DUTIES OF GATEMAN:

- i) Gateman shall ensure that red banner flag by day and red lamp by night is placed across the track in case of emergency and obstruction on the track.
- ii) Gateman shall ensure that all Gate lamps and hand signal lamps are lighted and kept burning continuously from sunset to sunrise.
- iii) Gateman shall perform his duties strictly according to the duty roster and shall not leave the Gate unless his reliever arrives and takes over charge from him. However, if it is necessary to leave the Gate in an emergency, he must close and lock the Gates against road traffic, before leaving the Gate.
- iv) Except where otherwise prescribed under special instructions, he shall observe all passing trains and be prepared to take such action as may be necessary to ensure safety of trains.
- v) Gateman shall watch all passing trains and keep sharp look out for any unusual like hot axle, hanging chains, hanging battery, any vehicle/wagons /trains/battery/box on fire, shifted load, falling material like brake blocks,

- brake beams, safety bracket, vacuum cylinder or any other situation endangering safe running of trains.
- vi) Gateman shall also be prepared to repeat any signal which guard may give to the driver on walkie talkie or any other way.
 - vii) If lifting barriers get damaged or becomes out of order, the Gateman shall use the spare chain with disc and padlocks for securing the Gate against road traffic.
 - viii) Gateman shall report to the nearest SM, Gangmate or Permanent Way Inspector any defect in his Gate or apparatus pertaining to it, as soon as possible.
 - ix) In the event of gate signal becoming defective the gateman shall maintain the signal in the ON position by disconnecting the signal or the wire, if necessary.
 - x) At the gate to signal have become defective, the gateman shall close and lock the lifting barriers on sighting a train and hand signal or pilot the train past the defective signal. In such case he should inform the driver to report the defect at the next station.
 - xi) Gateman shall wear badge and prescribed uniform while on duty at level crossing Gate.
 - xii) Gateman shall ensure that he is having competency certificate in his possession while on duty.
 - xiii) Gateman shall work the Gate as per Gate working instructions and remain well conversant with these instructions.
 - xiv) Gateman shall ensure that equipment supplied at the Gate is in good order and ready for immediate use.
 - xv) Gateman shall see that the channel for the flange of the wheel is kept clear.
 - xvi) Gateman must keep the road surface well-watered and rammed in case of unmetalled road.
 - xvii) Gateman must be vigilant to see that inconvenience to road users due to closure of Gates should be to the minimum possible extent.
 - xviii) Gateman shall prevent tress passing by persons or cattle to the maximum extent.

4. ACTION IN CASE OF UNUSUAL OCCURRENCE OF TRAIN.

- In case Gateman observes any thing unusual with a passing train, he shall take following action:
- i) He shall take prompt action to warn the driver/guard of the passing train by showing red flag by day and red light by night.
 - ii) He shall simultaneously try to draw the attention of the driver/guard by whistling continuously, shouting, gesticulating, and throwing ballast on the brake van or by any other means.
 - iii) If driver/guard fails to take notice, Gateman shall immediately inform the SM on duty to take appropriate action, under exchange of private number.
 - iv) In case of train parting, Gateman shall not show stop hand signal but shall show prescribed signal for train parting.
 - v) He shall endeavor to attract the attention of the Driver/Guard by whistling continuously, shouting, gesticulating, and by raising both hands vertically above, quickly parting them and bringing them together in repeated Up and Down motion as high and as low as possible.

- vi) In case the train does not stop, Gateman shall immediately inform the SM to take appropriate action, under exchange of private number.

5. **ACTION IN EMERGENCY AT THE LEVEL CROSSING:**

- i) In case of an obstruction at the level crossing Gate, he shall place banner flag/red light lamps on the stave on track at 5 m. away from the edge of the road at Level Crossing.
- ii) Thereafter, if he is unable to remove the obstruction, Gateman shall immediately advise the SM on duty/BMCK regarding the defects/obstructions at the Gate, under exchange of private number.
- iii) If there is no response from the SM on duty after three attempts, he shall first protect the Gate and then inform on phone.
- a) The Gateman shall protect the line as under: -**
The gateman shall protect the line as under: -
- ix) If both lines are obstructed the Gateman shall plant a red banner flag by day and a red light by night 5 meters away from the line on which train is expected to arrive first.
- x) Then he will similarly plant the other red banner flag by day and red light by night on the other line 5 meters away from the site of obstruction.
- xi) Gateman shall then proceed to protect the gate along with detonators, fusees and red flag by day and red hand signal lamp by night.
- xii) Gateman shall proceed exhibiting red flag by day and red hand signal lamp by night on the line on which a train is expected to arrive first, to a point 600 meters on BG and 400 meters on MG/NG and place one detonator on the line. Thereafter he shall proceed to a distance 1200 meters on BG and 800 meters on MG/NG from the level crossing gate and place 3 detonators on the track in 10 meters apart. Having thus protected the line he shall return to the level crossing gate picking up the intermediate detonator on his way back.
- xiii) Thereafter, he shall proceed on the other line, showing red hand signal, similarly place detonators as described in para (iv) above and return to the site of obstruction, picking up the intermediate detonators on his way back.
- xiv) Having returned to the gate, he must then take steps to remove the obstruction and warn the driver of the approaching train.
- xv) In case the gateman observes or hears a train approaching when he is still on his way to protect and before he reaches the stipulated distance to place detonators, he shall place detonators on the line at a distance as far away as he can go.
- viii) Thereafter, he shall light up and fix the fusee to warn the driver and stop the approaching train by waving his red flag by day red hand signal lamp by night repeatedly.
- (b) Other actions to be taken by Gateman:**
- i) At night Gateman shall light two hand signal lamps and take action to exhibit red light and protect the lines as described in sub paras (a) and (b) above.
- ii) If the Gate is broken by a road vehicle, which is fouling the track, or if lifting barriers or any other part of the Gate foul the track, or if there is any other obstruction at the Gate, the Gateman shall take immediate action.

- iii) He shall note down the particulars of the road vehicle, vehicle number, name of the driver, owner and relay these details to the SM and Permanent Way Inspector regarding the particulars and obstructions at the level crossing Gate, through messenger or other means available.

2.5 **SPECIAL INSTRUCTIONS.**

1. **MODE OF OPERATION:**

This is a Engg., interlocked L.C. Gate situated at THV end at KM 308/2-3. Telephone communication is provided between the L C. gate lodge with SM on duty of BMCK Station. The level crossing gate is of lifting barrier type operated by means of winch provided at the gate lodge. The normal position of the gate is opened to road traffic. The key of the LC remains in the winch when the gate is opened condition. When it is necessary to close the gate, for taking OFF signals or for train passing, the SM on duty shall inform the gate man to close and lock the gate. The gate man on duty shall then close the barriers of the LC gate by operating the winch. Then key 'X' is to be extracted from the winch, which releases lever No.GF-2. Lever No. GF-2 thus reversed effects boom locking and releases key No "Y" and GF-3 & 4. The key "Y" is inserted in the EKT at gate lodge and turned then the lever No. GF-3 or GF-4 is reversed to take OFF concerned Gate stop signals. GF-3 or GF-4 can be used to put back the concerned Gate stop signal, in case of emergency. Lever No. GF-1 is spare lever.

After passage of the Train or completion of shunting, the SM on duty shall inform the gateman, the gate man shall normalize the concerned GF-3 or GF-4 then GF-2 which will unlock the gate boom and release Key 'Y'. The gate man shall extract the control key 'X' from the GF-2 and he will open the gate by inserting the Key 'X' into the winch for normal passage of road traffic. The LC gate shall be so worked as to cause least possible inconvenience to the vehicular traffic consistence with safety as per subsidiary rule 16.03.01 (a).

Once the LC gate closed should not be opened by the gateman till such time the train for which the gate was closed has passed the LC gate completely. In case of emergency the LC gate may be opened with the specific permission of the SM/BMCK under exchange of PN if there is no train in the section. The LC gate shall be so worked as to cause least possible inconvenience to the vehicular traffic consistence with safety as per subsidiary rule 16.03.01 (a).

Once the LC gate closed should not be opened by the gateman till such time the train for which the gate was closed has passed the LC gate completely. In case of emergency the LC gate may be opened with the specific permission of the SM/BMCK under exchange of PN if there is no train in the section. The LC gate shall be so worked as to cause least possible inconvenience to the vehicular traffic consistence with safety as per subsidiary rule 16.03.01 (a).

2. **INTIMATION TO GATEMAN. :**

- (i) Immediately after departure of the train, Station Master/BMCK shall advise the gateman through telephone connected at his end, the number, description, direction and expected time of passage of the train at the gate.

- (ii) This advice shall be given by the Station Master/ BMCK to the gateman as soon as he receives train entering section advice from the dispatching station SM/THV.
- (iii) If the actual running time of the train from either end of the section is less than 10 minutes, Station Master/ BMCK will convey this advice to the gateman before obtaining/granting line clear.
- (iv) It should be the duty of the gateman to ensure that the gate is closed in time, so that there is no detention to the train of excessive detention to road traffic.

3. FAILURE OF TELEPHONIC COMMUNICATION:

When Telephonic Communication fails or it does not get any response from the Gateman despite 2 or 3 attempts, the following procedure should be adopted:

- (i) If the telephone fails at the gate connected with the station at the dispatching end, Station Master/ BMCK shall issue a caution order to the driver of the departing train.
- (ii) Station Master BMCK shall advise the driver to whistle continuously and proceed cautiously while approaching the gate.
- (iii) In case the gate signal is 'ON' he should stop at the gate signal and follow the procedure laid down under GR 3.73.
- (iv) In case of an approaching train, the Station Master/ BMCK shall advise the Station Master /THV, under exchange of private number that the telephone at the gate has failed.
- (v) The Station Master/ THV at the dispatching end shall then issue a caution order to the driver before dispatching a train into the block section from his end.
- (vi) Station Master/ BMCK will also advise the gateman through Gangman/Patrolman/Driver of the first train that the telephone has become defective.
- (vii) Station Master/ BMCK should also advise S&T staff responsible for maintenance of the telephone to rectify the same at the earliest.
- (viii) Normal working will be resumed only after S&T staff rectify the telephone and issue reconnection/fit memo for the same.

4. FAILURE OF LIFTING BARRIERS OF GATE:

When the gate cannot be closed due to failure of lifting barriers, the gateman shall immediately inform the Station Master on duty/ BMCK under exchange of private number, and ensure that lifting barriers do not foul the track.

- (i) He shall immediately fix red banner flag by day and red light by night on the post that end first from which the train is approaching and then at the other end.
- (ii) Gateman shall secure the gate against road traffic by means of safety chains and padlocks.
- (iii) After securing the gate against road traffic, gateman shall show green hand signal flag by day and green light to the driver of the approaching train.
- (iv) Station Master on duty/ BMCK shall issue caution order to the driver of a departing train.

- (v) He shall also advise the Station Master/THV, under exchange of private number; to similarly issue a caution order to the driver before dispatching a train into the block section.
- (vi) Station Master/ BMCK shall advise maintenance staff responsible for maintaining the lifting barriers to rectify the same at the earliest.
- (vii) Normal working will be resumed only after maintenance staff repair the lifting barriers and issue reconnection/fit memo for the same.

5. FAILURE OF THE GATE KEY WITH THE GATE IN CLOSED POSITION WHEN GATE KEY CANNOT BE EXTRACTED FOR OPENING THE GATE.

- (i) If the gate key cannot be extracted from the winch, gate signal lever or key transmitter then gateman must immediately inform the Station Master/ BMCK on duty on telephone, under exchange of private number.
- (ii) Thereafter, the gate must be treated as non interlocked and procedure for reception/dispatch of trains as prescribed for non-interlocked gates, should be adopted.
- (iii) Station Master on duty/ BMCK shall issue caution order to the driver of a departing train.
- (iv) He shall also advise the Station Master/THV at the dispatching end, under exchange of private number, to similarly issue a caution order to the driver before dispatching a train into the block section his end.
- (v) Station Master/ BMCK shall advise S&T staff responsible for maintaining the key transmitter to repair the same at the earliest.
- (vi) Normal working will be resumed only after S&T staff repair the key transmitter and issue reconnection/fit memo for the same.

6. FAILURE OF THE GATE KEY, WITH THE GATE IN OPEN CONDITION:

- (i) If the gate key cannot be extracted from the winch, gate signal lever or key transmitter then gateman must immediately inform the Station Master/ BMCK on duty on telephone, under exchange of private number.
- (ii) Thereafter, the gate must be treated as non-interlocked and procedure for reception/dispatch of trains as prescribed for non-interlocked gates, should be adopted.
- (iii) The gateman shall secure the gate against road traffic by means of chains and padlocks and pass trains on hand signals.
- (iv) Station Master on duty/ BMCK shall issue a caution order to the driver of a departing train.
- (v) He shall also advise the Station Master/THV under exchange of private number, to similarly issue a caution order to the driver before dispatching a train into the block section from his end.
- (vi) Station Master/ BMCK shall advise S&T staff responsible for maintaining the key transmitter to repair the same at the earliest.
- (vii) Normal working will be resumed only after S&T staff repair the key transmitter and issue reconnection/fit memo for the same.

7. DEFECTIVE GATE SIGNAL:

- (i) The gateman shall treat the gate signal as defective and must not take off them under following circumstances:
 - (a) If gate signals can be taken 'OFF' without closing the gate, or

- (b) The key can be extracted from the operating winch when the gate is in open condition, or
- (c) The key can be extracted from the gate lever when the gate is in open condition.
- (ii) If the Gate or the Gate Signal or Warner/Distant Signal becomes defective in 'OFF' position, the gateman will make all efforts to put it at 'ON' position even by cutting signal wire/power, if necessary.
- (iii) The gateman will immediately advise the Station Master on duty/ BMCK, under exchange of private number, regarding defective gate signals.
- (iv) Thereafter, the gate must be treated as non – interlocked and procedure for reception/dispatch as prescribed for non interlocked gates should be adopted.
- (v) He shall show green hand signal flag by day and green light by night to the passing train after closing the gate.
- (vi) Station Master on duty/ BMCK will issue a caution order to the driver of departing train.
- (vii) He shall also advise the Station Master/THV under exchange of private number, to similarly issue a caution order to the driver before despatching train into the block section from his end.
- (viii) Station Master/ BMCK shall advise S&T staff responsible for maintaining the gate signal to repair the same at the earliest.
- (ix) Normal working will be resumed only after S&T staff rectify the defective gate signal and issue reconnection/fit memo for the same.

8. OBSTRUCTION AT THE GATE:

- i) If the gate is broken by a road vehicle, which is fouling the track, or if lifting barriers or any other part of the gate foul the track, or if there is any other obstruction at the gate, the gateman shall immediately put back gate signals to 'ON' position.
- ii) He shall fix red banner flag by day and red lamp by night on posts provided at both ends of the gate.
- iii) Immediately after this, the gateman shall advise the station Master/ BMCK on duty regarding the defects /obstructions at the gate, under exchange of private number.
- iv) If there is no response from the Station Master / BMCK after two or three attempts, he shall first protect the gate and then inform on phone.
- v) Gateman shall then rush with detonators, fusee and red flag by day and red hand signal lamp by night in the direction of the approaching train and protect the gate as stipulated in General Instruction for duties of gateman under item No.2.4. (5).
- vi) Thereafter he shall protect the gate from the other direction also.
- vii) He shall note down the particulars of the road vehicle, name of the driver, owner and reply these details to the station Master/ BMCK who shall not start the trains unless he has been assured by the gateman that the road vehicle or the lifting barriers are not fouling the track.
- viii) The Station Master/ BMCK shall also inform the station Master/THV under exchange of private number, asking him not to despatch any train into the block section from his end, until the track has been cleared of all obstructions.

- ix) After the track has been cleared of all obstructions the gateman shall inform the Station Master/ BMCK accordingly, under exchange of private number.
- x) Station Master/ BMCK shall then issue a caution order to drivers of all trains to proceed cautiously, and pass the gate signal at 'ON' position on green hand signal of the gateman, if the gate is broken, but is clear of any obstruction.
- xi) Gateman shall secure the gate against road traffic by means of safety chains and padlocks and they're after exhibit green hand signal, if the gate is not obstructed.
- xii) Station Master/ BMCK shall advise maintenance staff responsible for maintaining the lifting barriers to repair the same at the earliest.
- xiii) Normally working will be resumed only after maintenance staffs rectify the defective lifting barriers/leaf gates and issue reconnection/fit memo for the same.

9. **OBSTRUCTION ON THE TRACK NEAR LEVEL CROSSING GATE:**

If there is a rail fracture or obstruction on the track due to falling of a tree, fouling by road vehicle or derailment which is visible to the gateman, the gateman and Station Master will adopt the procedure given under item No, 8 above, If the obstruction fouls the level Crossing Gate, gateman must keep the gates closed against road traffic till the track is cleared of the obstruction.

3.0 GATE WORKING RULES OF “C” CLASS ENGG. INTERLOCKED LEVEL CROSSING GATE AT KM 292/2 (NO.RV-229) BETWEEN BMCK-MNGD STATIONS

GENERAL INSTRUCTIONS: -

3.1 DESCRIPTION OF THE LEVEL CROSSING GATE:

1.	Number of Level Crossing Gate: -	RV-229
2.	Engineering or Traffic Gate: -	Engineering.
3.	Under control of Station Master/PWI:	PWI.
4.	Location KM	292.093 (292/2)
5.	At. Station: -	-----.
6.	In between stations: -	MNGD- BMCK.
7.	BG/MG/NG: -	BG.
8.	Single line/Double line/Multiple line: -	Double Line.
9.	Normal Position: -	Open to road traffic.
10.	Interlocked/Non Interlocked: -	Interlocked.
11.	Means of interlocking: -	Gate signals.
12.	Provision of Gate signal at KMs	i) Up line- KM 291.913 ii) Dn line – KM292.273
13.	Signalling arrangement: -	MACLS
14.	Means of Communication:	Telephone Connection from Gate Goomty with SM office/MNGD.
15.	Width of level crossing Gate: -	7.5eters.
16.	Type of road. (NH/SH/Others): -	S.H
17.	Name of Road: -	RGDA Road
18.	Metaled/Non:	Metaled
19.	Approach Road: -	Metaled.
20.	Width of the road: -	5.5m
21.	Angle of road crossing (In case of the skew Gates)	25 Degree
22.	Road gradient (If any)	i) North/East side -- Level ii) South/West side- Level
23.	Road alignment (Straight/Curve): - Curve	i) North/ East - ii) South/West side-Curve
24.	Provision of height gauges: -	Not Provided.
25.	Type of Barriers: -	Lifting Barriers
26.	Length of check rails: -	9.5 Meters.
27.	Road surface in between Level: -	Concrete Blocks.
28.	Length of speed breakers: -	7.5M
29.	Road signs: -	Available
30.	Speed breaker indication board: -	Provided
31.	TVU: -	32411 on 07/2008
32.	Census next due on: -	07/2011.
33.	Demarcation for placement of Detonators: -	Displayed.
34.	No. of Gateman working: -	02
35.	Nearest Railway Medical Assistance: -	TIG
36.	Nearest Private Medical Assistance available (if any)	MNGD.

R.K.Behera
Dy. CSTE(Con)/SBP

Ashok Kumar
Sr. DEN(West)/SBP

M.K.Mishra
Sr.DOM/SBP

37. List of equipment available Yes//No: - Yes.

3.2. **EQUIPMET:**

	ITEMS	QUANTITY/NUMBERS
1.	Hand signal Lamp Tri Colour	3 (5 on Quadruple/Line or twin single line)
2.	Hand signal Flag Green	1 mounted on sticks
3.	Hand Signal Flag Red.	3 (6 on Quadruple/line or Twin single line and 7 in case Hexaple section mounted on sticks)
4.	Banner Flag Red	3 (5 on Quadruple/Line or twin single line)
5.	Posts for exhibiting red banner flag	2 (4 on Q/Twin single line and 5 on Hexaple section)
6.	Spares chains with padlocks	2 with stop mark
7.	Detonators	10 in tin case
8.	Gate Lamps	2
9.	Tommy Bar	1
10.	Motor Pan	1
11.	Spade/Fowrah	1
12.	Rammer	1 (in case of asphalted road this may not be provided)
13.	Pick Axe	1 (in case of asphalted road this may not be provided)
14.	Tin case for flags	1
15.	Can for oil	1
16.	Water pot/Bucket	1
17.	Canister for Muster Roll	1
18.	Set of spare spectacles of Gateman wearing glasses.	1
19.	Board demarcating protection of level crossing Gate diagram in case of obstruction on Gate .	1
20.	Basket	1
21.	Whistle	1
22.	Wall clock	1
23.	Small size chains with padlock to be used in case of failure of Gate boom lock.	2

3.3 **THE GATEMAN SHALL BE PROVIDED WITH FOLLOWING REGISTERS: -**

- i) Gate working instructions in Hindi / English.
- ii) Gate working instructions in local vernacular language.
- iii) General Rules Book in Local vernacular language.
- iv) List for tools and books.
- v) Duty Roster.
- vi) Certificate for working as Gateman.
- vii) Bio–Data particulars of Gateman, including date of passing vision test, initial/refresher course, safety camp etc.
- viii) Accident Register.
- ix) Records of last census of road traffic at level crossing gate.
- x) Public complaint Book.
- xi) Inspection Book.

3.4 **DUTIES OF GATEMAN:**

1. **ALERTNESS:**

The Gateman on duty shall be alert. He should be prepared to take immediate action, when danger is apprehended. Keys of the Gate shall be in his personal custody.

2. **POSITION OF GATE KEEPER DURING PASSAGE OF TRAINS:**

During passage of trains, Gateman will stand in the manner indicated below:

- i) Gateman will stand attentively in front of the Gate – lodge facing the approaching train.
- ii) In daytime, Gateman shall hold red and green flags furled up on separate sticks in right and left hands respectively.
- iii) In nighttime, Gateman shall hold lighted hand signal lamp with white light facing the track.
- iv) He shall keep the whistle slung around his neck from a cord and blow the whistle to draw the attention of Driver & Guard of the passing train.

3. **ROUTINE DUTIES OF GATEMAN:**

- i) Gateman shall ensure that red banner flag by day and red lamp by night is placed across the track in case of emergency and obstruction on the track.
- ii) Gateman shall ensure that Gate lamps and lamps of all gate signal are lighted and kept burning continuously from sunset to sunrise.
- iii) Gateman shall perform his duties strictly according to the duty roster and shall not leave the Gate unless his reliever arrives and takes over charge from him. However, if it is necessary to leave the Gate in an emergency, he must close and lock the Gates against road traffic, before leaving the Gate.
- iv) Except where otherwise prescribed under special instructions, he shall observe all passing trains and be prepared to take such action as may be necessary to ensure safety of trains.
- v) Gateman shall watch all passing trains and keep sharp look out for any unusual like hot axle, hanging chains, hanging battery, any vehicle/wagons /trains/battery/box on fire, shifted load, falling material like brake blocks, brake beams, safety bracket, vacuum cylinder or any other situation endangering safe running of trains.
- vi) Gateman shall also be prepared to repeat any signal which guard may give to the driver on walkie talkie or any other way.
- vii) If lifting barriers get damaged or becomes out of order, the Gateman shall use the spare chain with disc and padlocks for securing the Gate against road traffic.
- viii) Gateman shall report to the nearest SM, Gangmate or Permanent Way Inspector any defect in his Gate or apparatus pertaining to it, as soon as possible.
- ix) In the event of gate signal becoming defective the gateman shall maintain the signal in the ON position by disconnecting the signal or the wire, if necessary.
- x) At the gate whose signal have become defective, the gateman shall close and lock the lifting barriers on sighting a train and hand signal or pilot the train past the defective signal. In such case he should inform the driver to report the defect at the next station.
- xi) Gateman shall wear badge and prescribed uniform while on duty at level crossing Gate.
- xii) Gateman shall ensure that he is having competency certificate in his possession while on duty.

- xiii) Gateman shall work the Gate as per Gate working instructions and remain well conversant with these instructions.
- xiv) Gateman shall ensure that equipment supplied at the Gate is in good order and ready for immediate use.
- xv) Gateman shall see that the channel for the flange of the wheel is kept clear.
- xvi) Gateman must keep the road surface well-watered and rammed in case of unmetalled roads.
- xvii) Gateman must be vigilant to see that inconvenience to road users due to closure of Gates should be to the minimum possible extent.
- xviii) Gateman shall prevent tress passing by persons or cattle to the maximum extent.

4. **ACTION IN CASE OF UNUSUAL OCCURRENCE OF TRAIN.**

In case Gateman observes any thing unusual with a passing train, he shall take following action:

- i) He shall take prompt action to warn the driver/guard of the passing train by showing red flag by day and red light by night.
- ii) He shall simultaneously try to draw the attention of the driver/guard by whistling continuously, shouting, gesticulating, & throwing ballast on the brake van or by any other means.
- iii) If driver/guard fails to take notice, Gateman shall immediately inform the SM on duty to take appropriate action, under exchange of private number.
- iv) In case of train parting, Gateman shall not show stop hand signal but shall show prescribed signal for train parting.
- v) He shall endeavor to attract the attention of the Driver/Guard by whistling continuously, shouting, gesticulating, and by raising both hands vertically above, quickly parting them and bringing them together in repeated Up and Down motion as high and as low as possible.
- vi) In case the train does not stop, Gateman shall immediately inform the SM to take appropriate action, under exchange of private number.

5. **ACTION IN EMERGENCY AT THE LEVEL CROSSING:**

- i) In case of an obstruction at the level crossing Gate, he shall place banner flag/red light lamps on the stave on track at 5 m. away from the edge of the road at Level Crossing.
- ii) Thereafter, if he is unable to remove the obstruction, Gateman shall immediately advise the SM on duty/ MNGD regarding the defects/obstructions at the Gate, under exchange of PN.
- iii) If there is no response from the SM on duty after three attempts, he shall first protect the Gate and then inform on phone.

b) The Gateman shall protect the line as under: -

The gateman shall protect the line as under: -

- i) If both lines are obstructed the Gateman shall plant a red banner flag by day and a red light by night 5 meters away from the line on which train is expected to arrive first.
- ii) Then he will similarly plant the other red banner flag by day and red light by night on the other line 5 meters away from the site of obstruction.
- iii) Gateman shall then proceed to protect the gate along with detonators, fusees and red flag by day and red hand signal lamp by night.

- iv) Gateman shall proceed exhibiting red flag by day and red hand signal lamp by night on the line on which a train is expected to arrive first, to a point 600 meters on BG and 400 meters on MG/NG and place one detonator on the line. Thereafter he shall proceed to a distance 1200 meters on BG and 800 meters on MG/NG from the level crossing gate and place 3 detonators on the track in 10 meters apart. Having thus protected the line he shall return to the level crossing gate picking up the intermediate detonator on his way back.
- v) Thereafter, he shall proceed on the other line, showing red hand signal, similarly place detonators as described in para (iv) above and return to the site of obstruction, picking up the intermediate detonators on his way back.
- vi) Having returned to the gate, he must then take steps to remove the obstruction and warn the driver of the approaching train.
- vii) In case the gateman observes or hears a train approaching when he is still on his way to protect and before he reaches the stipulated distance to place detonators, he shall place detonators on the line at a distance as far away as he can go.
- viii) Thereafter, he shall light up and fix the fusee to warn the driver and stop the approaching train by waving his red flag by day red hand signal lamp by night repeatedly.

(c) Other actions to be taken by Gateman:

- i) At night Gateman shall light two hand signal lamps and take action to exhibit red light and protect the lines as described in sub paras (a) and (b) above.
- ii) If the Gate is broken by a road vehicle, which is fouling the track, or if lifting barriers or any other part of the Gate foul the track, or if there is any other obstruction at the Gate, the Gateman shall take immediate action.
- iii) He shall note down the particulars of the road vehicle, vehicle number, name of the driver, owner and relay these details to the SM and Permanent Way Inspector regarding the particulars and obstructions at the level crossing Gate, through messenger or other means available.

3.5 SPECIAL INSTRUCTIONS:

1. MODE OF OPERATION:

This is an interlocked Engineering L.C.Gate situated at Km 292/2 between MNGD-BMCK stations. The level crossing gate is interlocked with gate stop signals. Telephone connection is provided between the L.C gate lodge and SM's office MNGD. The level crossing gate is of lifting barrier type operated by means of winch provided at the gate lodge. The normal position of the gate is open to road traffic. A four lever ground frame is provided in the gate lodge. The key of the LC remains in the winch when the gate is open condition. When it is necessary to close the gate for train passing, the SM on duty shall inform the gate man to close and lock the gate. The gate man on duty shall then close the barriers of the LC gate by operating the winch. Then key 'G' is to be extracted from the winch and inserted in Lever No-GF-1. This releases lever No.GF-1. When Lever No. GF-1 is reversed it locks the booms of the gate and releases GF-2 & GF-3. Then after, the gateman can reverse lever No.GF-2 or GF-3 for taking off concerned UP or DN Gate stop signals. GF-2 or GF-3 can be used to put back the concerned Gate stop signal, in case of emergency. The GF-4 is spare lever.

After passage of the Train, the gateman shall normalize the concerned GF-2 or GF-3 to put back the gate signal. The gateman after normalizing the GF-1 lever

shall extract the Key G from GF-1. Then the gateman shall open the gate for normal passage of road traffic by inserting Key 'G' in the winch. The LC gate shall be so worked as to cause least possible inconvenience to the vehicular traffic consistent with safety as per subsidiary rule 16.03.01 (a).

Once the LC gate closed should not be opened by the gateman till such time the train for which the gate was closed has passed the LC gate completely. In case of emergency the LC gate may be opened with the specific permission of the SM/MNGD under exchange of PN if there is no train in the section.

2. INTIMATION TO GATEMAN:-

- (i) Immediately after departure of the train, Station Master/MNGD shall advise the gateman through telephone connected at his end, the number, description, direction and expected time of passage of the train at the gate.
- (ii) This advice shall be given by the Station Master/ MNGD to the gateman as soon as he receives train entering section advice from the dispatching station SM/BMCK.
- (iii) If the actual running time of the train from either end of the section is less than 10 minutes, SM/ MNGD will convey this advice to the gateman before obtaining/granting line clear.
- (iv) It should be the duty of the gateman to ensure that the gate is closed in time, so that there is no detention to the train of excessive detention to road traffic.

3. FAILURE OF TELEPHONIC COMMUNICATION:

When Telephonic Communication fails or it does not get any response from the Gateman despite 2 or 3 attempts, the following procedure should be adopted:

- (i) If the telephone fails at the gate connected with the station at the dispatching end, Station Master/ MNGD shall issue a caution order to the driver of the departing train.
- (ii) Station Master/ MNGD shall advise the driver to whistle continuously and proceed cautiously while approaching the gate.
- (iii) In case the gate signal is 'ON' he should stop at the gate signal and follow the procedure laid down under GR 3.73.
- (iv) In case of an approaching train, the Station Master/ MNGD shall advise the Station Master / BMCK, under exchange of private number that the telephone at the gate has failed.
- (v) The Station Master/ BMCK at the dispatching end shall then issue a caution order to the driver before dispatching a train into the block section from his end.
- (vi) Station Master/ MNGD will also advise the gateman through Gangman/Patrolman/Driver of the first train that the telephone has become defective.
- (vii) Station Master/ MNGD should also advise S&T staff responsible for maintenance of the telephone to rectify the same at the earliest.
- (viii) Normal working will be resumed only after S&T staff rectify the telephone and issue reconnection/fit memo for the same.

4. FAILURE OF LIFTING BARRIERS OF GATE:

When the gate cannot be closed due to failure of lifting barriers, the gateman shall immediately inform the Station Master on duty/ MNGD under exchange of private number, and ensure that lifting barriers do not foul the track.

- (i) He shall immediately fix red banner flag by day and red light by night on the post that end first from which the train is approaching and then at the other end.
- (ii) Gateman shall secure the gate against road traffic by means of safety chains and padlocks.
- (iii) After securing the gate against road traffic, gateman shall show green hand signal flag by day and green light to the driver of the approaching train.
- (iv) Station Master on duty/ MNGD shall issue caution order to the driver of a departing train.
- (v) He shall also advise the Station Master/ BMCK, under exchange of private number; to similarly issue a caution order to the driver before dispatching a train into the block section.
- (vi) Station Master/ MNGD shall advise maintenance staff responsible for maintaining the lifting barriers to rectify the same at the earliest.
- (vii) Normal working will be resumed only after maintenance staff repair the lifting barriers and issue reconnection/fit memo for the same.

5. FAILURE OF THE GATE KEY WITH THE GATE IN CLOSED POSITION WHEN GATE KEY CANNOT BE EXTRACTED FOR OPENING THE GATE.

- (i) If the gate key cannot be extracted from the winch, gate signal lever or key transmitter then gateman must immediately inform the SM/MNGD on duty on telephone, under exchange of PN.
- (ii) Thereafter, the gate must be treated as non interlocked and procedure for reception/dispatch of trains as prescribed for non-interlocked gates should be adopted.
- (iii) Station Master on duty/ MNGD shall issue caution order to the driver of a departing train.
- (iv) He shall also advise the Station Master/ BMCK at the dispatching end, under exchange of private number, to similarly issue a caution order to the driver before dispatching a train into the block section his end.
- (v) Station Master/ MNGD shall advise S&T staff responsible for maintaining the key transmitter to repair the same at the earliest.
- (vi) Normal working will be resumed only after S&T staff repair the key transmitter and issue reconnection/fit memo for the same.

6. FAILURE OF THE GATE KEY, WITH THE GATE IN OPEN CONDITION:

- (i) If the gate key cannot be extracted from the winch, gate signal lever or key transmitter then gateman must immediately inform the Station Master/ MNGD on duty on telephone, under exchange of private number.
- (ii) Thereafter, the gate must be treated as non-interlocked and procedure for reception/dispatch of trains as prescribed for non-interlocked gates should be adopted.
- (iii) The gateman shall secure the gate against road traffic by means of chains and padlocks and pass trains on hand signals.
- (iv) Station Master on duty/ MNGD shall issue a caution order to the driver of a departing train.
- (v) He shall also advise the Station Master/ BMCK under exchange of private number, to similarly issue a caution order to the driver before dispatching a train into the block section from his end.
- (vi) Station Master/ MNGD shall advise S&T staff responsible for maintaining the key transmitter to repair the same at the earliest.

- (vii) Normal working will be resumed only after S&T staff repairs the key transmitter and issue reconnection/fit memo for the same.

7. DEFECTIVE GATE SIGNAL :

- (i) The gateman shall treat the gate signal as defective and must not take off them under following circumstances:
- (a) If gate signals can be taken 'OFF' without closing the gate, or
 - (b) The key can be extracted from the operating winch when the gate is in open condition, or
 - (c) The key can be extracted from the gate lever when the gate is in open condition.
- (ii) If the Gate or the Gate Signal or Warner/Distant Signal becomes defective in 'OFF' position, the gateman will make all efforts to put it at 'ON' position even by cutting signal wire/power, if necessary.
- (iii) The gateman will immediately advise the Station Master on duty/ MNGD, under exchange of private number, regarding defective gate signals.
- (iv) Thereafter, the gate must be treated as non – interlocked and procedure for reception/dispatch as prescribed for non interlocked gates should be adopted.
- (v) He shall show green hand signal flag by day and green light by night to the passing train after closing the gate.
- (vi) Station Master on duty/ MNGD will issue a caution order to the driver of departing train.
- (vii) He shall also advise the Station Master/ BMCK under exchange of private number, to similarly issue a caution order to the driver before despatching train in the block section from his end.
- (viii) Station Master/ MNGD shall advise S&T staff responsible for maintaining the gate signal to repair the same at the earliest.
- (ix) Normal working will be resumed only after S&T staff rectify the defective gate signal and issue reconnection/fit memo for the same.

8. OBSTRUCTION AT THE GATE:

- i) If the gate is broken by a road vehicle, which is fouling the track, or if lifting barriers or any other part of the gate foul the track, or if there is any other obstruction at the gate, the gateman shall immediately put back gate signals to 'ON' position.
- ii) He shall fix red banner flag by day and red lamp by night on posts provided at both ends of the gate.
- iii) Immediately after this, the gateman shall advise the station Master/ MNGD on duty regarding the defects /obstructions at the gate, under exchange of private number.
- iv) If there is no response from the Station Master / MNGD after two or three attempts, he shall first protect the gate and then inform on phone.
- v) Gateman shall then rush with detonators, fusee and red flag by day and red hand signal lamp by night in the direction of the approaching train and protect the gate as stipulated in General Instruction for duties of gateman under item No.4.4 (5).
- vi) Thereafter he shall protect the gate from the other direction also.
- vii) He shall note down the particulars of the road vehicle, name of the driver, owner and reply these details to the station Master/ MNGD who shall not start the trains unless he has been assured by the gateman that the road vehicle or the lifting barriers are not fouling the track.

- viii) The Station Master/ MNGD shall also inform the station Master/ BMCK under exchange of private number, asking him not to despatch any train into the block section from his end, until the track has been cleared of all obstructions.
- ix) After the track has been cleared of all obstructions the gateman shall inform the Station Master/ MNGD accordingly, under exchange of private number.
- x) Station Master/ MNGD shall then issue a caution order to drivers of all trains to proceed cautiously, and pass the gate signal at 'ON' position on green hand signal of the gateman, if the gate is broken, but is clear of any obstruction.
- xi) Gateman shall secure the gate against road traffic by means of safety chains and padlocks and they're after exhibit green hand signal, if the gate is not obstructed.
- xii) Station Master/ MNGD shall advise maintenance staff responsible for maintaining the lifting barriers to repair the same at the earliest.
- xiii) Normally working will be resumed only after maintenance staffs rectify the defective lifting barriers/leaf gates and issue reconnection/fit memo for the same.

9. OBSTRUCTION ON THE TRACK NEAR LEVEL CROSSING GATE:

If there is a rail fracture or obstruction on the track due to falling of a tree, fouling by road vehicle or derailment which is visible to the gateman, the gateman and Station Master/ MNGD will adopt the procedure given under item No, 8 above, If the obstruction fouls the level Crossing Gate, gateman must keep the gate closed against road traffic till the track is cleared of the obstruction.

APPENDIX – ‘B’**DETAILS OF SIGNALLING AND INTERLOCKING INSTALLATIONS, INSTRUCTIONS FOR WORKING THEM NORMALLY AND EMERGENCIES ETC., INCLUDING THE POWER SUPPLY ARRANGEMENTS.****1.0 BRIEF DESCRIPTION OF THE SIGNALLING & INTERLOCKING INSTALLATIONS:**

This is a ‘B’ Class Station with Standard (III)R Interlocking (with isolations). The points and Signals are power operated from composite miniature central panel installed in the Station Master’s Office. The Station is equipped with manually operated Multi Aspect Colour Light Signalling.

1.1 DESCRIPTION OF PANEL:

The yard layout is depicted on the panel and the panel is fixed parallel to the track so that when SS/SM on duty faces the panel, the yard drawing of the panel corresponds to the actual layout.

1.1.1 DESCRIPTION OF POINT PUSH BUTTON (RUNNING LINE POINT) :-

SL.NO	POINT NO.	COLOUR OF BUTTON	DESCRIPTION
1	21	BLACK	Cross-over point between DN and UP Main line at MNGD end.
2	22	BLACK	Slip siding point on UP line at THV end
3	23	BLACK	Cross-over point between UP Main line and line No.1 (Common loop) at MNGD end.
4	24	BLACK	Slip siding point on DN line at THV end
5	25	BLACK	Cross-over point between DN Main line and line No.4 (DN loop) at MNGD end
6	26	BLACK	Cross-over point between UP and DN Main line at THV end
7.	28	BLACK	Cross-over point between UP Main line and line No.4 (DN loop) at THV end
8.	30	BLACK	Cross-over point between DN Main line and line No.4 (DN loop) at THV end

1.1.2 DESCRIPTION OF POINT GROUP BUTTON: -

These are two buttons at the top of panel one for Normal and one for Reverse operation of points. These are coloured Black with red dot. The button is operated in conjunction with point button to operate the concerned point to the required setting.

1.1.3 OPERATION OF POINTS BY POINT PUSH BUTTONS: -

Points are operated for NORMAL to REVERSE or vice versa by operating concerned point push button along with common point group button for normal or reverse operation. When the points are required to set from normal to reverse, the concerned point push button along with common point group button for reverse operation are to be pressed simultaneously. As soon as the operation is initiated the WHITE indication will start flashing till the point is correctly set to reverse at site and steady WHITE indication glows. Similar operation shall be done when the points are required to set from reverse to normal. Only one point can be operated individually at a time.

1.2.0 POINT INDICATIONS: -

Points are normally operated automatically along with route setting operation. However, required points can also be operated individually. For this, POINT BUTTONS, which are BLACK in colour, are fitted over the point layout on the panel board. The individual operation of the electric point machine is controlled by these point push buttons in conjunction with the POINT GROUP BUTTON (which are BLACK with red dot on it) 'N' or 'R' as per requirement fitted on the top of panel board. The indication for points are as follows; -

- 1.2.1. When a point is set and locked in Normal position, a horizontal 'WHITE' indication appears suggesting that the point is set in NORMAL position.
- 1.2.2. When a point is set and locked in REVERSE position, a diagonal 'WHITE' indication appears suggesting that the point is set in REVERSE position
- 1.2.3. When the points of any route have been correctly set and relevant signal taken 'OFF', RED indication near the point on the panel appears indicating that the concerned points are locked either in NORMAL or REVERSE position as the case may be.
- 1.2.4. When the points are not set or locked either in NORMAL or in REVERSE correctly, the normal and reverse steady indication will not be there but the WHITE indication will start flashing till such time the point is housed & locked properly in one of the positions. In such case points are to be set both ways by crank handle and clamped and padlocked. This WHITE indication will flash during operation of point also. After completion operation of point during crank handle operation, NORMAL or REVERSE indication appears on panel
- 1.2.5. All points over running lines are operated by electric point machines

1.2.6 NON SETTING OF POINTS: -

The cause for non-setting of the point in the desired position shall be checked up by the SS/SM on duty according to GR & SR 3.68.01 (C). If there is a defect other than any obstruction, then the point shall be considered defective and action shall be taken for clamping and padlocking of these points in the desired position by Station Master on duty himself for all trains according to SR 3.69.03(C). In such case both ends of the points shall be clamped and padlocked.

1.2.7 DESCRIPTION OF CRANK HANDLE BUTTONS: -

All motor operated points in the yard have been grouped into four crank handle zone for emergency / manual operation of points by crank handles as follows:

SL NO.	CRANK HANDLE	COLOUR OF BUTTON	CONTROL POINTS
1	CH1	BLUE	26 A and B
2	CH2	BLUE	21A and B.
3	CH3	BLUE	25A and 25B, 28A and 28B
4	CH4	BLUE	23A and 23B, 30A and 30B
5	CH5	BLUE	22
6	CH6	BLUE	24

Crank Handle buttons must be operated in conjunction with GROUP TRANS or GROUP RELEASE button to transmit or receive the crank handle.

1.3.0 **SIGNAL PUSH BUTTON:**

Push buttons for operation of signals are provided near the signals on the panel. These are operated in conjunction with Route button (white coloured) to operate the signals.

1.3.1 **DESCRIPTION OF SIGNAL BUTTONS:**

SL.NO.	BUTTON NO.	COLOUR	DESCRIPTION
01	S1	RED	UP Home Signal for Line No. 1 & 2
02	C1	RED with WHITE DOT	UP calling on Signal for line No. 1 & 2.
03	S2	RED	DN Home Signal for Line No.1, 3 & 4.
04	C2	RED with WHITE DOT	DN calling on Signal for line No.1, 3 & 4.
05	SH3	YELLOW	Shunting towards line no. 1, 2, 3 & 4.
06	SH4	YELLOW	Shunting towards line no. 1 & 2.
07	S7	RED	UP starter from line No.1
08	S8	RED	DN Starter from line No. 4
09	S10	RED	DN Starter on line No.1
10	S11	RED	UP starter from line No.2
11	S12	RED	DN starter from line No.3.
12	S13	RED	UP Advanced starter signal toward THV.
13	S14	RED	Down Advanced starter signal towards MNGD.
14	S 15	RED	UP Intermediate Block signal for section BMCK-THV

1.3.2. **SIGNAL INDICATIONS:** -

All signals in the yard are depicted on the panel along side the track as per their respective position in the yard. The aspects of all signals in the yard, at any time, are shown on the signal indications depicted on panel.

1.4 **ROUTE BUTTONS:** -

Route buttons are provided separately on each running line on the panel for initiation of route (viz. L1 UN, L1 UN1, L2 UN, L3 UN, L4 UN, L4 UN1). Common route buttons are also provided for taking off starters (viz.: 13AT UN, 14 AT UN). An individual route button is provided for taking off Advance starter (Viz.: 13 UN, 14 UN). For clearing the signals it is necessary to operate the signal buttons and the concerned route button concurrently. In the panel, the routes are set automatically by operation of entry and exit button.

1.4.2 **DESCRIPTION OF ROUTE BUTTONS**

SL. NO.	BUTTON NO.	COLOUR	DESCRIPTION
1	L1 UN	WHITE	Common route button for UP and DN Home, for line No.1 (Common loop) setting overlap up to advanced starters.
2	L1 UN1	WHITE with BLACK dot	Common route button for UP and DN Home overlap setting to dead end of overrun line or UP/DN Calling-On or back shunts (SH-3 OR SH-4) for Line No.1 (Common loop).
3	L2 UN	WHITE	Common route button for UP Home/UP Calling-on or back shunt (SH3 or SH4) for line No.2 (UP Main line).

4	L3 UN	WHITE	Common route button for DN Home/DN Calling-on and back shunt (SH-3), for line No.3 (DN Main Line) setting overlap up to advanced starters.
5	L4 UN	WHITE	Common route button for DN Home signal on line No. 4 (DN loop) setting overlap up to advanced starter.
5	L4 UN1	WHITE with BLACK dot	Common route button for DN Home, setting overlaps up to end of sand hump or DN Calling on or back shunts (SH-3) for line No.4 (DN Loop).
6	13AT UN	WHITE	Common route button for UP starter signal No. 7 or 11.
7	13 UN	WHITE	Route button for UP advanced starter signal No. 13.
8	14AT UN	WHITE	Common Route button for DN starter signals No.8 or 10 or 12.
9	14 UN	WHITE	Route button for DN advanced starter signal No.14.
10	15 UN	WHITE	Route button for UP Intermediate Block signal No. 15 for section BMCK-THV.

3.0 **TRAIN ARRIVAL INDICATION THROUGH AXLE COUNTER:**

The system provides for automatic check for last vehicle arrival through provision of axle counter. Axle counters are provided in THERUVALI - BISSAM CUTTACK and BISSAM CUTTACK – MUNIGUDA UP and DN sections to check the complete arrival of trains. The system is interlocked with respective Block Instrument. When the Axle counter section indication provided for each direction on the panel individually for sections indicates 'RED' i.e. occupied even after the complete arrival of trains, the Block instrument of the respective section can be normalized after ensuring complete arrival of trains by means of physical verification of last vehicle for stopping as well as run through trains (Refer resetting procedure of Axle counter).

4.0 **POWER FAILURE:**

Normal power supply to the signaling and interlocking installations at this station is drawn from SEB power supply source (AC 230 Volt / 50 Hz). In SM's Office there is SM power panel which represents the voltage of the Integrated power supply system.

- (i) In case voltage drops 105.9V an audible buzzer appears for starting Generator.
- (ii) In case voltage drops 105.1V an audible buzzer appears for emergency start of Generator.
- (iii) In case voltage drops 104.3V an audible buzzer appears for system shut down.

The SM now has to start the diesel engine for standby (Auxiliary) power supply. After stable run of the Diesel engine, the SM/SS on duty has to operate the change over switch for connecting the Auxiliary supply to the signalling installation. On resumption of power supply, the Diesel engine shall be stopped by SM/SS on duty after isolating Diesel engine by change over switch. Each time the power supply goes OFF or ON SM/SS on duty shall acknowledge. In case of any audible buzzer in SM's power panel, SM on duty should acknowledge the buzzer by pressing 'buzzer stop button'.

- 4.1 Inverters are provided to prevent possibility of blank signals in case of SEB power supply failure. Whenever SEB power supply fails inverter will immediately extend power supply to signals thereby preventing blank signals.
- 4.2 Based on the indication shown in the SM's Power Panel SM on duty should start DG for avoiding any case of shut down of power sub system of Integrated Power Supply system.
- 4.3 Solar Power supply is provided in the station as standby, power supply.
- 4.4 If there is any indication on SM's power panel regarding deviation in IPS system call S&T staff.

5.0 **EMERGENCY ROUTE RELEASE COUNTER**

This counter is provided to register the number of operations made for emergency cancellation of route. The SS/SM on duty must record the last number registered on the counter while taking over/ handing over duty.

6.0 **EMERGENCY ROUTE RELEASE INDICATION (WHITE) / EMERGENCY ROUTE RELEASE BUTTON (WHITE WITH RED DOT)**

This panel interlocking is based on the principle of 'DEAD APPROCH LOCKING'. As such when a route is set and signal is taken off on the route, the route gets locked. Normally the route is released by the passage of the train over the route. When it becomes necessary to alter the route after the signal has been taken off vide SR 3.36.02 (a), the concerned signal must be put back to Danger by pressing the Signal cancellation button (RED) and the concerned signal button. Then the emergency route release button (WHITE WITH RED DOT) positioned in the top of panel to be pressed and subsequently the concerned signal button pertaining to the route is to be pressed. A white light will flash (Up or Down) indicating that the timer is working. After 120 seconds, the white light along with the white strip of light will disappear suggesting that the route has been released. In case the route illumination (a white strip of lights) does not disappear after passage of train, it suggests that the route is not released/cancelled. In such case the emergency cancellation of route has to be resorted to.

The concerned S&T staff should be advised immediately to get the emergency route release button sealed after rectification of fault if any. Each operation of emergency cancellation of route is recorded in the emergency route release counter by registering the next higher number. All such operations and the new number should be recorded in the station diary, in train signal register and in the register meant for it.

7.0 **EMERGENCY POINT OPERATION (BLACK WITH RED DOT):**

Emergency point operation facility is provided to operate point in the event of failure of track circuit controlling the point. A push button (BLACK WITH RED DOT) is provided on the top of panel. If such operation is necessary, the SM/SS on duty, after ensuring that no vehicle is standing on the concerned point track circuit, shall insert SM's emergency point operation key in and shall push the emergency Point operation button and then operate the required point button and the point group button (Normal or Reverse). All such operations will be registered in the emergency point operation counter by next higher count. Each operation of emergency point operation shall be recorded in the station diary, in train signal register and in the register meant for this purpose. Before initiating emergency point operation when the concerned point zone track circuit is showing occupied

SM/SS on duty must carry out physical verification at site to ascertain that the said track circuit is clear of vehicles.

8.0 **BUTTON HELD ACKNOWLEDGEMENT BUTTON (WHITE WITH RED DOT) :**

All push button are self-restoring type. A button held acknowledgement push button (WHITE WITH RED DOT) along with a white strip is positioned at the top of the panel. When any button gets stuck in pressed condition, a buzzer will sound along with flashing white light Indication. The Station Master shall stop the buzzer by pressing the button held acknowledgement button (WHITE WITH RED DOT). The buzzer will stop but the flashing white light will continue to glow till the pressed button is normalised. SM on duty shall try to find out the pressed button for normalisation or otherwise inform the maintenance staff to rectify.

9.0 **OVERLAP TIME RELEASE INDICATION (WHITE LIGHT) :** -

These are two indications (white lights) for UP overlap time release and DN overlap time release to indicate the release of overlap. These indications will flash during releasing of overlap

10.0 **TRACK CIRCUITS:** -

The station yard is fully track circuited from Home signal to Home signal and also for 7 rail lengths in rear of the Home signals on either side. Track circuits 1AT and 2AT are calling-on track circuits. 22T, 24T, 26BT, 26/28T, 30AT, 30BT, 25AT, 25BT, 23AT, 23BT, 21AT and 21BT are Point zone track circuits. L1T1, L1T2, L1T3, L2T1, L2T2, L2T3, L3T1, L3T2, L3T3L4T1, L4T2, and L4T3 are berthing track circuits. Other track circuits namely 1T, 1T1, 14AT, 2T, 2T1 are for signal replacement, route holding and trolley suppression. Indications for all track circuits are indicated on the panel. Normally these are not lit when the track circuits are clear. And RED light appears when the track circuit is occupied/failed. White lights for the track indications appear when the relevant route is set. In case of failure of any track circuit, the controlled signals or points are to be treated as non-interlocked and trains shall be worked as per relevant rules.

11.0 **STATION MASTER'S PANEL CONTROL KEY:** -

The panel is fitted with Station Master's lock up key to prevent any unauthorized operation of the Panel. The SM/SS on duty is the only authorized person to operate the panel and the panel key must always remain in his personal custody vide SR 3.36.03 & GR 5.08. The key locks the panel board and no operations are possible. In case of emergency, signals can be put back to danger by operating concerned signal button and Signal cancel button without releasing the panel lock also. However, the provisions of SR 3.36.02 shall be followed while replacing the signals to 'ON'.

12.0 **CRANK HANDLE CONTROL KEY AND OPERATION:** -

When any point fails to operate normally by the route setting operation or through the concerned Point button from control panel, it is inevitable to operate the points with crank handle. Crank handles are interlocked with signals and interlocking system. Crank handles are for all motor operated points at the station. The Crank Handle push buttons CH1, CH2, CH3, CH4, CH5 and CH6 (BLUE) and Group Trans/Release button (WHITE WITH BLACK DOT) are provided at the top of the panel board. The CH button has two indications, viz. WHITE, and RED. The

WHITE indication suggests that the crank handle key is in its interlocked position of the panel. This is called Crank Handle Key 'IN' indication. The RED indication suggests that the crank handle key is locked and not free for extraction from RKT. This is called 'Crank handle key LOCKED' indication. When there is no light or blank, it suggests that the key is out of RKT. The crank handle key in RKT in the end locations can be released from the RKT. The SM has to press concerned crank handle button and Trans button. This will enable SM/TP to extract crank handle key CH-1/CH-2/CH-3/CH-4/CH-5/CH-6 from RKT at end location. SS/SM/TPM on duty after extracting the crank handle key from RKT at end-location, insert it in the space provided for it on the point machine and turn it to open up the slot for crank handle in the point machine. After inserting the crank handle in the point machine he shall operate it to set the point in desired position. After completion of point work the crank handle key is to be inserted in the RKT at end location and transmitted to station. Station Master on getting 'Key IN' flashing indication that will appear on panel, shall press relevant CH button & Group Release button to get the steady key "IN" indication. SS/SM on duty shall personally ensure clamping and padlocking all facing and trailing points en-route. The cases of failure of Motor operated points should be promptly reported to the concerned ESM/Signal Inspector for immediate rectification. SS/SM on duty as per OM 20.06 (d) shall maintain an emergency crank handle register. The procedure for use of crank handle for Motor operated points shall be followed in terms of operating Manual 20.06.

13.0 **SETTING OF ROUTE AND TAKING OFF RECEPTION SIGNALS: -**

For setting a route all the concerned points must be set by operation of relevant point button and group button one at a time in the desired position or by operating signal button and route Button. As soon as the points on route, overlap and isolation are set to the required position, the concerned signal for the route will clear and a white strip of light will appear on the entire route confirming that the Route is set & locked. The signal 'off' indication will appear on the panel provided other conditions for taking 'OFF' reception signals are satisfied.

14.1 **SETTING OF ROUTE AND TAKING OFF DEPARTURE SIGNALS:**

For setting a particular route for departure of a train, all the concerned points must be set by operation of point button and point group button one at a time in the desired position or by operating signal button and route button. To take off advanced starter, line clear must be obtained from the concerned block station in advance. Then the concerned advanced starter signal button shall be pressed along with the advanced starter route button to be pressed for two to three seconds and released. This will clear the advanced starter signal and a white strip of light will appear on the panel up to the foot of the advanced starter signal.

14.1.1 To take off the starter signal the concerned signal button to be pressed and at the same time common Route button to be pressed for two to three seconds and released. This will clear starter signal and a white Strip of light will appear on the route from the concerned Starter to the advanced starter signal.

14.2.0 **TAKING OFF CALLING-ON SIGNAL: -**

Miniature Colour light Calling on signal is provided below the Home signals in terms of GR 3.13(6)(b). A Calling on signal shows no light in the 'ON' position. A

calling on signal is taken 'OFF' for reception of a train when the Home signal above it cannot be taken 'OFF' due to failure of Track circuit or any other reason or for admission of train on blocked line.

- 14.2.1 To take off Calling-on signal the train must come to a stop at the foot of the home signal, occupying the track circuit in rear of the signal. When a train occupies the track circuit a RED light strip will appear on the panel. The particular route on which train is intended to be received shall be set by operating by point push button and group button individually or by signal and route button pressing or by crank handling in the event of failure of operation of points through panel. After the route is set, the calling-on signal switches 'C1'/'C2' (RED WITH WHITE DOT as the case may be), shall be pressed simultaneously along with the concerned route button for few seconds and released. After a lapse of 120 seconds, the calling on signal clears i.e., a yellow light glows at the concerned calling on signal on the panel. For loop lines, route button UN1 shall be pressed for respective setting of the overlap points. Each operation of Calling On signal shall be registered in respective Calling On signal counter (UP or DN) by registering next higher number. A separate register is to be maintained for this purpose.
- 14.3.0 **RELEASE / CANCELLATION OF ROUTE:**
Normally when a train is received on any route and dispatched, the route illumination will disappear automatically after passage of the train suggesting that the route is released.
- 14.4 **REPLACEMENT OF SIGNALS TO 'ON':**
Signals are replaced to 'ON' automatically by the passage of a train past the signal. It will not be possible to re-clear the signal again unless the due process for clearing the signal is repeated again. For replacement of any signal to 'ON' position manually, the respective signal button and the signal cancellation button (RED) to be pressed simultaneously.
- 14.5.0 **INTERLOCKING OF SIGNALS/POINTS:**
All running line points are fitted with facing point locks in the point machine and are electrically detected by the relevant home signal and starters.
- 14.5.1 DN Advanced starter is interlocked with respective block instrument in sending position i.e., train going to position and by axle counter for last vehicle check. UP Advanced starter signal is controlled by the clearance of IB Axle counter and in turn IB Home signal is controlled by the DLBI of section BMCK-THV in its sending position and by clearance of last vehicle check Axle counter
- 14.5.2 The block instrument cannot be made normal unless the respective Home signal is put back to 'ON'.
- 14.5.3 Signals once taken 'OFF' can be put back to danger in case of emergency by pressing concerned signal button and signal cancellation button even when the panel is locked up with Station Master's key.

14.6 **PILOTING OF TRAINS: -**

In the event of failure of both Home signal and Calling-on signal simultaneously, it is inevitable to pilot the train 'IN'. For piloting the train, the setting of route must be ensured by SM/SS on duty personally and the points en-route must be clamped & padlocked at both facing & trailing end by Operating staff. Same procedure shall be adopted when route illumination fail to disappear. Facing and trailing ends of the all-motor operated points must be clamped and padlocked while piloting 'IN' or 'OUT' and during non-signalled movements.

14.7 **SHUNTING:**

For shunting, OFF aspect of starter signals shall be used. For back shunting, shunt signals provided on each side of the yard shall be used. For back shunting the SS/SM on duty shall press the concerned shunt signal button (YELLOW) along with route button of the route to clear the shunt signal. For back shunting on the loop lines UN1 route buttons shall be used.

15 **NON RUNNING LINE: -**

(A) **GOODS SIDING: -**

The Goods siding with CAL of 85 Mts. at THV end of the yard with both side entries is taking off from Common Loop (Line No.1). The entrance point and corresponding derailing switch are coupled and operated by an arc lever at site. Both the entrance points are fitted with hand plunger locks. These hand plunger locks are unlocked by Goods siding keys S1 (MNGD end) & S2 (THV end), extracted from RKT at SM's office by pressing the button No.32 (BLACK) along with group trans button (WHITE WITH BLACK DOT) provided on the panel. Similar to that of crank handle button indication, control button 32 has key 'IN' and key 'LOCKED' indication, which glows white when key is in, red when route is set and no light when key is out of the RKT. Reception signals (i.e. 1A, C1A. in UP direction and 2C, C2C in DN direction) and shunt signal Nos.SH-3A and SH-4B are electrically interlocked in such a way that these signals cannot be taken 'OFF' if the Goods siding key is taken 'OUT' from the RKT. Whenever shunting is to be done on the Goods siding SS/SM on duty shall press the control button 32 and group trans button to extract the siding keys. These siding keys will unlock the hand plunger lock fitted on the siding points to facilitate the setting of siding points to required position. After completion of work siding points shall be set and locked at normal setting at site and keys shall be inserted in the RKT and turned, a flashing white indication will appear on the panel SS/SM on duty shall press the control button 32 and group release button to get the steady white indication.

(B) **HOT AXLE SIDING: -**

The Hot axle siding with CAL of 50 Mts. at MNGD end of the yard with both side entries is taking off from DN loop (Line No.4). The entrance point and corresponding derailing switch are coupled and operated by an arc lever at site. Both the entrance points are fitted with hand plunger locks. These hand plunger locks are unlocked by Goods siding keys D1 (THV end) & D2 (MNGD end), extracted from RKT at SM's office by pressing the button No.27 (BLACK) along with group trans button (WHITE WITH BLACK DOT) provided on the panel. Similar to that of crank handle button indication, control button 27 has key 'IN' and key 'LOCKED' indication, which glows white when key is in, red when route is set and no light when key is out of the RKT. Reception signals (i.e. 2A, C2A in DN direction) and shunt signal Nos.SH-3A are electrically interlocked in such a way

that these signals cannot be taken 'OFF' if the Hot axle siding key is taken 'OUT' from the RKT. Whenever shunting is to be done on the Goods siding SS/SM on duty shall press the control button 27 and group trans button to extract the siding keys. These siding keys will unlock the hand plunger lock fitted on the siding points to facilitate the setting of siding points to required position. After completion of work siding points shall be set and locked at normal setting at site and keys shall be inserted in the RKT and turned, a flashing white indication will appear on the panel SS/SM on duty shall press the control button 27 and group release button to get the steady white indication.

(C) SLIP SIDING: -

Slip sidings are provided on both UP and DN line at the THV end of the yard. The slip siding points are normally set to slip siding except for reception of DN trains and dispatch of UP trains and for shunting purpose. These points can be operated to normal and reverse setting with individual control buttons (BLACK) like other points. These two points are also set by route setting method and are interlocked with block instrument of the section. SM on duty shall make the points set to slip siding after every reception/despatch of trains from/to THV respectively by individually setting the points, i.e. pressing the concerned point button and common point group button. In case of DN line, after reception of train block instrument cannot be normalized, if slip siding point 22 is not set to slip siding and in case of UP line, SM cannot obtain line clear for subsequent train from THV unless he has set the slip siding point 24 to slip siding. In the event of failure of Block instrument in its normal position the slip siding point is required to be set with crank handle and the point clamped and padlocked.

16.0 VERIFICATION OF LINE CLEARANCE BY STATION MASTER ON DUTY FOR RECEPTION OF TRAIN INTO STATION YARD: -

In the Station yard, a route on the running line comprises of entrance, berthing and dispatch portion of the yard and this portion of the yard should be clear of any obstruction for the passages of any train or for any other movements. The clearance of the route including overlap must be ensured by the SS/SM on duty personally through panel indications of track before any movement of trains are permitted on the concerned route subject to the other conditions such as locking of the point's etc.

17.0 CRANK HANDLING EMERGENCY OPERATION OF POINTS:

Crank handles are interlocked with the signalling and interlocking system at this station. Crank handles which are normally locked inside the RKT instrument at the station, can be taken out only when all the signals are in the 'normal' position and the route is not locked for whatever reasons. Crank handle can be released by operating common 'TRANS' push button and concerned crank handle button simultaneously. When this key is taken out, no signal of the concerned route can be taken off in the yard. This key can be electrically transmitted at both ends of the yard.

On account of failure of point zone track circuits or crank handle key "LOCK" indication or when route is not released, crank handle key cannot be transmitted by normal operation. Hence SM/SS on duty has to resort to emergency crank handling of points. He shall press the concerned CH button and trans button simultaneously after ensuring that no vehicle is on the point. The

RED and WHITE indication of the CH button will start flashing and after 120 sec the RED indication will disappear indicating that crank handle is free to be extracted by normal crank handle operation. He shall then follow the procedure detailed in para 12.0.

On account of the doubtful operation of any track circuit by a light vehicle including self-propelled vehicle such as motor trolley or light steam/Diesel shunting engine or tower wagon, indicating the occupation of track, the SS/SM on duty shall satisfy himself positively that the said vehicle has cleared the point zone track circuits by observing the track indications of the track on either side of the crossovers.

18.0 INSTRUCTIONS REGARDING STABLING OF TRAINS ON RUNNING LINES:

When a train is stabled on a running line for a duration exceeding ten hours, the use of the said running line for passing the trains 'IN', 'THROUGH' or 'OUT' at the station shall be done with a lot of care & diligence. SM on duty shall meticulously observe the proper functioning of the relevant track circuits (occupancy/clearance) while admitting a train. Such observance should continue for a minimum of four to five trains thereafter. If SM on duty is not satisfied with the proper functioning of the track circuits on which the train was earlier stabled, the signals leading on the line shall be suspended and the S & T maintenance staff shall be informed for attending to this.

19.0 EMERGENCY OPERATIONS:

The following are the instructions for emergency operations.

20.1 EMERGENCY ROUTE CANCELLATION BUTTON AND VEEDER COUNTER: -

For the purpose of emergency operations there is an emergency 'Route cancellation'. There is a 'VEEDER COUNTER' for counting emergency operations involving operation of the emergency route cancellation button (provided at the top of the panel). The SS/SM on duty must press the emergency route cancellation button by breaking the seal and the signal button conforming to the section for which emergency route release is desired. A flashing indication will appear indicating that the cancellation operation has been initiated and after lapse of 120 seconds, the desired route will release provided all other conditions are favorable for route release.

20.2 The Veeder counter registers the number of such emergency cancellation operations. SS/SM on duty should specify the cause for its usage giving the particulars of causes and the time of operation as related to a particular train etc. in the train signal register as well as in a separate register meant for this purpose. The detailed operational instructions are as follows:

20.3 EMERGENCY OPERATIONS – CANCELLATION OF THE LOCKING OF POINTS NOT RELEASED AFTER THE PASSAGE OF THE TRAIN FOR WHATEVER REASON: -

If the locking of the route does not get released for one reason or the other after passage of the train, it is necessary to take recourse to the following emergency operations.

- a) Firstly it must be ensured that the Signal is in the normal position.
 - b) Operation as detailed in para 7.0 of Appendix-B to be followed.
- In case route is not released even after emergency route cancellation, facility of crank handling of points shall be used. For releasing the crank handle even when

lock indication of crank handle appears on the panel, press Group Trans button and crank handle button. After two minutes key from RKT can be extracted. For further operation 17.0 of Appendix 'B' shall be followed.

21.0 **LOCKING OF RELAY ROOM:** -

As per Para 1.14(b) of Operating manual the relay room should be kept locked with two separate locks, the arrangement should such that one key is kept with the on duty SM in his custody and the other key with the signal maintainer. Whenever required, the Station Master shall hand over the key to the maintainer with proper arrangement with proper acknowledgement in the basement/Relay room key register. The maintainer on receipt of the key from the station master may use the same and the key in his custody to open the relay room by inserting the keys one after another separately into the earmarked locks.

After completion of work, the relay room is to be locked using both the keys separately and designated key should be handed over to the SS/SM on duty. The details of the transaction should be properly recorded in the relevant register at the Station duly signed by SS/SM on duty and the signal staff concerned vide SR 3.51.05. If the relay room key is handed over to the Signal staff regarding the interference in safety gears, the train shall be piloted in and piloted out.

22.0 **MAINTENANCE OF S&T INSTALLATION & ADHERENCE TO MAINTENANCE SCHEDULES:** -

Regular maintenance of the S&T installations, adherence to schedules of maintenance, testing of points, track circuits, ground frames, level crossing gates, associated interlocking apparatus, cables and the interlocking functional tests is must for safe and satisfactory working of these installations at this station.

The tests, checks and replacements etc., including overhauling shall conform to the schedules of Maintenance as indicated in the Signal Engineering Manual as also as per the current and extant instructions/circulars on the subject. During checking/ testing or during day-to-day as well as regular maintenance of S&T gears, SS/SM on duty shall co-operate with S&T staff for safe and satisfactory maintenance.

22.1 **PROCEDURE TO BE FOLLOWED INCASE OF FAILURE OF A SIGNAL INTERLOCKING INSTALLATION:** -

In case of failure of any interlocking gear at the station, the failure report should be communicated by the SS/SM on duty to the sectional Maintainer, the JE/SE/SSE (SIG) of the Section and others through a memo as per G & SR 3.51.04 and 3.68.04 and document all such transactions.

22.2 **INSPECTION OF POINTS BEFORE DECLARING THEM DEFECTIVE:-**

However, before declaring a signal or any other S&T gear as defective SS/SM on duty shall verify them and setting of points on the route and overlap for a signal to which it applies shall be inspected by the SS/SM on duty irrespective of the position of buttons and indications on the panel and will work vide GR 3.68.

22.3 **RECTIFICATION AND CHECK BEFORE RESUMING NORMAL WORKING:** -

After receipt of this information the sectional Maintainer shall attend to the failure after giving a Disconnection Memo. After rectification of the fault, the Sectional Maintainer shall give a Reconnection Memo detailing the rectification. Thereafter

the SS/SM on duty shall personally check the defective apparatus. After satisfying himself that the gear is in good and proper working order, he shall resume the normal working of the said defective apparatus in terms of SR 3.68.04 (c), (d), (e) & (f).

22.4 PROCEDURE FOR CARRYING OUT PLANNED MAINTENANCE WORK: -

Whenever any normal maintenance or special works for major renewals etc., are involved, the signal & Telecom should pre plan these works. Field staff and the JE/SE/SSE (SIG) should give 'Advance Intimation' to the SS/SM in writing about this work in terms of GR15.08 & SR 15.08.01.

22.5 EMERGENCIES: -

Notwithstanding anything contained in the aforesaid paras when equipment is found to be defective and unsafe for passage of trains, the Signal & telecom. Staff must at once suspend the working of the equipment and associated installations and issue 'Suspension Memo' explaining the seriousness of defect or damage to the interlocking installation to the SS/SM on duty and take the Station Master's acknowledgement. After this, the usual practice of exchange of disconnection memo and reconnection memo can follow. The SS/SM on duty must act promptly on such messages and take adequate precaution treating the S&T installation as defective and pass trains over the affected interlocking equipment according to extant instructions as contained in G & SR 3.77. GR 3.68,GR 3.69,GR3.70, GR3.77and SRs thereto.

23 PROCEDURE TO BE FOLLOWED IN THE CASE OF FAILURE OF SIGNALS AND POINTS AND USE OF EMERGENCY CRANK HANDLE: -

Whenever a signal or a point becomes defective, any movement over the points on the running lines shall be made after clamping and padlocking of both facing and trailing points supervised by SS/SM on duty personally for all trains at this station.

- 23.1 In case of failure of a signal or a point and in case the point can not be point can not be operated from the panel, emergency crank handle, which is interlocked with system is to be extracted and the following procedure is to be adopted.
- 23.2 Emergency crank handle is provided for all motor operated points. This is mechanically attached to the key on RKT and can be released by pressing Crank Handle control push button CH1/CH2 and Group Trans button simultaneously. All signals will be locked in normal position as soon as the key is released. SS/SM on duty shall transmit the key to required end of the yard and operate the point manually.
- 23.3 When the crank handle key is removed from RKT for operation of the defective motor operated points, the responsibility for its safe custody vests with the Station Master on duty, till it is replaced back in RKT.
- 23.4 The case of failure of motor operated points should be promptly reported to the concerned Signal maintainer/JE/SE/SSE for rectification.

- 23.5 Whenever an Emergency Crank Handle is required to be used by a signal official for maintenance work or attending to failure, the signal official will give a disconnection memo to the SS/SM on duty and after making necessary entries in the Emergency Crank Handle Register. The SS/SM on duty will obtain the acknowledgement of the signal official in the Emergency Crank Handle Register and then hand over to him the Emergency Crank Handle. The points will be treated as defective till the Emergency Crank Handle is returned back to the SS/SM on duty.
- 23.6 Before parting with the Emergency Crank Handle either for attending failures or for maintenance work by Signal maintenance officials, the SS/SM on duty will ensure that the reception and departure signals are put back to 'ON' position. The points for the affected lines should be treated as non-interlocked. The SS/SM on duty is responsible for introduction of non-interlocked working and the trains will be piloted 'IN' and 'OUT' duly clamping and padlocking both facing and trailing points over which the train is to pass, as per GR 3.69 and 3.70 with relevant SRs. The SS/SM on duty will be personally responsible for setting and locking of points for reception or despatch of all trains.
- 23.7 The Emergency Crank Handle Register is to be maintained vide OM 20.06 note (d) by the SS/SM on duty wherein the particulars of the usage of the Emergency Crank Handle must be recorded.
- 24.0 **SUSPENSION OF LAST STOP SIGNALS:** -
When the Block instrument is suspended with its handle in 'TRAIN ON LINE' position or "TRAIN GOING TO" position as the case may be for whatever reason, the concerned last stop signal and Intermediate Block signal controlled by the Block Instruments must be treated as suspended and trains shall be piloted 'OUT'.
- 24.1 The SS/SM on duty shall not grant 'LINE CLEAR' unless he has ensured that the lamps of fixed signals, which apply, to the train are burning. If the signal lights can not be kept burning, the SS/SM on duty before giving 'LINE CLEAR' shall initiate action in accordance with the procedure prescribed in GR 3.61 to 3.71 & relevant SRs vide GR 3.49 (4).
- 24.2 The SS/SM on duty shall not grant or ask 'LINE CLEAR', if the Axle Counter Section indicates section occupied and will treat the Block Instrument as suspended.
25. **SIGNAL LIGHTS:** -
The SS/SM on duty at 00.00 hours (2nd night shift) must also ensure from panel board that all the signal lights are burning properly and brightly. This fact must be recorded in the Diary under a separate entry and confirm to the Section Controller on duty.
26. **CORRECTING TIME IN STATION CLOCK:** -
The SS/SM shall set the time in his clock according to the time signal given by the Section Controller on duty at 16.00 hours every day according to G & SR 4.01.01 and 4.01.02.

27.0. **NORMAL POWER SUPPLY:** -

The Station works on 230 volts AC single-phase power supply. The normal power supply is from the SEB. Stand-by power is supplied by the diesel generators two in number. Solar power supply is also provided in this station

27.1 **POWER FAILURE AND REPORTING SUCH FAILURES:** -

Normal power supply to the Signalling and Interlocking installations at this station is drawn from the OSEB Power supply source (at 230 V, 50 Hz). Whenever OSEB (Main) power supply fails, a buzzer on the panel will buzz on. SM on duty has to press the power acknowledgement button (RED coloured) positioned on the top of panel. The SM on duty shall start the Diesel engine for stand by (Auxiliary) power supply. After run of the Diesel generator and on resumption of power supply, SM shall acknowledge the same by pressing the power acknowledgement button. This will make the panel operative again.

27.2 The SS/SM on duty must maintain record of power failure and he must promptly report the failure to the section controller and the concerned electrical and S&T maintenance staff.

28.0 **AXLE COUNTER AS LAST VEHICLE CHECKING DEVICE (LVCD):** -

- (a) Axle Counter as LVCD has been provided for the section BMCK-MNGD and BMCK-THV as last vehicle checking device. The axle counter will also have control over the UP/DN last stop signals and block instrument of respective direction of BMCK station.
- (b) The occupation and clearance of the axle counter section is indicated by RED and GREEN indication respectively provided on the panel.
- (c) UP last stop signal of BMCK cannot be taken OFF if IB axle counter or LVCD axle counter of block section BMCK- THV fails and UP IB signal can not be taken off if LVCD axle counter of block section BMCK- THV fails. Similarly DN last stop signal of BMCK cannot be taken OFF if axle counter of block section BMCK- MNGD fails. On the other hand on arrival of a train at station if the axle counter continues to show occupied the block instruments of concerned block section cannot be turned to line closed position

28.1 **NORMALISATION OF AXLE COUNTER AND BLOCK WORKING BY RESETTING OF AXLE COUNTER**

- (A) After the train has been received by the receiving station or after a block back operation or when no train has entered into the block section and the axle counter displays RED, then the following procedure shall be adopted to reset the axle counter. Resetting operation of the axle counter though Non co-operative, SS/SM at the other end of the concerned block section shall extend co-operation to the SS/SM on duty at the resetting end.
- (B) **VERIFY THE BLOCK SECTION IS CLEAR OF ANY VEHICLES**
 - (i) Procedure laid down in GR 4.17 & relevant SRs thereto shall be followed for the purpose.
 - (ii) By checking the train register, the detail of the train passed through the block section and finding out from the station at other end of the concerned block

section or from Controller that last train has passed and arrived complete. SS/SM on duty shall exchange private number with the SS/SM at other end of the concerned block section or with the Controller or from whom the complete arrival has been confirmed.

- (iii) If the failure has occurred after arrival of a train, SS/SM on duty shall also obtain intact position from the guard of stopping train or by exchanging all right signal with the guard of through train, so that he can ensure that the train has arrived completely before resorting the reset of LVCD axle counter.

(C) RESETTING PROCEDURE FOR LVCD AXLE CENTER:-

After complete arrival of train, if the axle counter of the section does not clear or Axle counter section free indication (GREEN) does not appear in the panel, The receiving station SM shall call the attention of the station in rear through telephone for resetting and shall establish communication with the said station if resetting of equipment is considered necessary giving details of last train that has arrived complete at his station and the block section is clear.

The receiving station shall inform the sending station as to whether the last train that entered into the section has arrived or not. And, if arrived fully shall so intimate authenticated by exchanging Private number with the sending station.

As digital Axle counters are provided as LVCD in Block section, resetting is to be done by both of sending end and receiving end individually.

The status of the section LVCD i.e. Clear (GREEN), occupied (RED), preparatory reset (Miniature Green) and power on indications (YELLOW) are provided in the reset box.

The procedure to be followed for re-setting by both of sending end and receiving end individually is as follows:-

- a. Insert SM's LV reset key, turn right and keep pressed.
- b. Press LV reset button provided on the panel.
- c. Release SM's LV reset key and reset button.
- d. Turn left the SM's LV reset key and remove it.
- e. The system obtains preparatory reset state and preparatory reset indication (Miniature Green) glows on the panel.
- f. The counter reading increases by one count after a gap of 5 seconds approximately.
- g. The counter reading should be recorded.

- h. One train is to be piloted into the section to make the system normal.

The SM shall record in his Train Register the resetting operation giving details of train number, time, Private Number exchanged with SM in rear, giving reasons for the resetting operation.

If the axle counters functioning properly now, then Block Section cleared indication 'GREEN' will appear on the panel and the Block instrument of concerned section will be normalised.

If the axle counter section indication does not appear 'Green' and continues to show 'RED' indication, the concerned Block instrument shall remain suspended and failure intimation to be given to sectional signal Maintainer/JE/SE (Signal) for early rectification.

(D) RESETTING PROCEDURE FOR IBS AXLE CENTER:-

Please refer Appendix 'F' of this SWR

29. TELECOMMUNICATION FACILITIES: -

1. Telephone with Double line Lock and Block Instrument for either side Block Section.
2. Station to Station fixed telephone (hot line) is provided
3. Station is provided with Auto telephone connected with Railway Exchange
4. BSNL telephone is provided.
5. The station is connected to TIG-SPRD control circuit by a control telephone.
6. Station to station VHF communication is provided.
7. Telephone is provided between Station and both end crank handle locations.
8. Magneto telephone connection is provided between station and LC gate at Km. 304/10-11 and at Km 308/2-3.
9. Telephone communication is provided between station and UP IBS between BMCK -THV

NOTE: -

1. For obtaining Line Clear, VHF should be used as a last alternative and not as a sole means of communication.
2. VHF and Walkie-Talkie sets should not be used for unnecessary discussions with Drivers, Guards or any other staff.
3. The on duty SM shall use the above electrical communication instruments stated in Para- 29. from item No. (1) to (6) strictly in order of preference for obtaining/granting line clear vide SR 14.01.01. In case of failure of any of the above means of communication the SM on duty shall work vide SR 6.02.06.

30. FAILURE OF COMMUNICATION / FAILURE OF BLOCK INSTRUMENTS:

- 1) In the event of failure/suspension of block instrument, Track circuit & Axle Counter 'Line Clear' shall be obtained over telephone attached to the block instrument or station to station telephone by exchanging identification number and supported by private number as per GR 6.02.06 (a) and Chapter–III Part–II of Block Working Manual.
- 2) In the event of failure/suspension of block instrument and block telephone attached to the block instrument, or the Station to station fix telephone 'Line Clear' shall be obtained on Railway auto phone or BSNL phone, by exchanging

identification number supported by private number vide GR 6.02.06 (1)(b) and Chapter-III Part-II of Block Working Manual.

- 3) In the event of failure/suspension of block instrument, block telephone and station to station fixed telephone or Railway auto phone or BSNL phone, Line Clear shall be obtained over the control phone exchanging identification number and supported by 'Private Number' vide GR 6.02.06(1) (c) and Chapter-III Part-II of Block Working Manual.
- 4) **In the event of failure / suspension of block instrument or block telephone attached to the block instrument, or station to station fixed telephone or Railway auto telephone or BSNL phone or control telephone 'Line clear shall be obtained on the VHF sets exchanging ID number supported by PN provided that the instructions contained in SR 14.01.02 are followed vide GR 6.02.06 (1) (d), Chapter–III of Block Working Manual.**
- 5) In the event of total failure of all communications trains shall be worked vide SR 6.02.03.

APPENDIX - 'C'**ANTI COLLISION DEVICE (RAKSHA KAVACH)**

NIL

APPENDIX - 'D'**1.0 STATION SUPERINTENDENT (INCHARGE) :**

He is the in charge of the station. He performs 9 hrs. in day shift for train passing duties in turn with his Assistants. He is responsible for the efficient discharge of duties devolving upon all the staff employed at the station whether permanently or temporarily according to rules, safe working instructions and Station Working Rules. He shall see that all signals, points, level crossings, sidings and the whole machinery at the station are in perfect working order. He shall report all defects to the concerned officials. It is his personal responsibility to maintain the Station Working Rule, all rule books and Assurance Registers. He shall see that all operating and commercial records separately be maintained and due statements and returns are up to date. He shall submit the coaching return/statements in time with the help of his assistant. He shall conduct surprise night inspection, safety meetings and fire drills. He shall maintain good public relation as well as look after passenger's amenities and be helpful to travelling public.

His special attention is drawn to chapter No.II of G & SR(Amendment) 2000 and GR 5.01 to 5.08 with relevant SRs. He shall follow the instruction laid down in SR 3.68.01© & (d) and SR 14.07.01 and BWM 2.09 (e). . He will promptly attend to accidents and report them. In addition to his normal day shift duty. He will supervise the work of staff and conduct night inspections and report lapses of staff under him.

1.1.0 ASSURANCE REGISTER:

All staff before taking up independent charge of their duties at this station, shall make a written declaration in the assurance register that they have read and thoroughly understood the system in force and must sign such declaration.

1.1.1 No Railway servant shall be entrusted with any duty involving safety of the public unless the station in-charge is satisfied that the concerned staff is competent for the post. No Railway servant unless duly examined and certified shall be allowed to work the points and signals. The SS is responsible to see that all the staff are conversant with the Station Working Rules and their signature obtained in the Assurance register after he is satisfied that they have thoroughly understood the working rules of the station. In case of Group 'D' staff, their signature/thumb impression must be obtained after explaining fully about their duties and responsibilities.

1.1.2 The station superintendent is responsible personally for maintaining the Assurance Register and for obtaining declaration of the staff working under him. The Assurance Register must be maintained in two parts, one for Group 'C' and

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the other for Group 'D' staff. A duplicate copy of the Assurance Register must be maintained and kept in personal custody of the Station Superintendent.

1.1.3 The declaration shall be renewed in the following cases: -

- (i) Whenever there is a change in the Station Working Rules.
- (ii) For any staff who have not worked at the station or were away from the station for a period of 15 days or more.

2.0 **USE OF PRIVATE NUMBER BLOCKS IDENTIFICATION NUMBER SHEET :-**

Sufficient Private Number books and I.D number sheets in sealed covers shall be kept always in the stock by Station Superintendent under lock and key. He shall maintain a register for this purpose.

3. **ACCIDENTS:**

Accidents shall be reported and immediate action shall be taken by the Station Superintendent in charge in accordance with the instruction laid down in the Accident Manual. Whenever the Station Superintendent received report of an accident, he shall take all necessary precautionary measures to protect the traffic and shall arrange earliest possible assistance as required at the site of accident. He shall frame the accident message/reports and follow up all safety principles without delay.

4. **TESTING OF POINTS AND SIGNALS :**

The Station Superintendent shall test the working of the reception signals daily during the day when there is no train due to arrive/leave the station. He shall also test the working of points, crossings etc. and record the result in the StationMaster's diary.

5.0 **DySS/STATION MASTER/ASSISTANT STATION MASTER:**

He shall work in 8 hrs. shift for train passing and booking of traffic, coaching returns and other statements shall be prepared and submitted by him in time under the direction of the Dy. Station Superintendent in charge. He shall assist the Station Superintendent in charge for the up keep of the station in all aspects.

5.1 Station Master on duty who makes an entry in the train signal register must continue on duty till all the entries pertaining to the trains are completed vide Subsidiary Rule 14.07.01.

5.2 He is responsible for working beyond this period when called upon to do so in the exigencies of services. He will follow SR 3.68.01© & (d), SR 14.07.01. Their special attention is drawn to Chapter II of G & SR (Amendment) 2000 and GR 5.01 to 5.08 with relevant SRs. As an Assistant to the SS, he shall follow the instructions given to him by the Station Superintendent.

6. **HANDING OVER AND TAKING OVER CHARGE:**

The Station Superintendent in charge/Station Master/Assistant Station Master on duty shall record in the diary the condition of all the running lines, the caution orders in force at the time of handing over charge. These entries must be counter signed by Station Master/Assistant Station Master coming on duty while taking over charge. This will not, however, relieve any one of the SS/SM of his responsibility to ensure by physical check that the nominated line is clear of all obstructions before admission of any train on it.

7. **TRAFFIC POINTSMAN:**

- (i) Delivery of authority to proceed and caution order etc. to the driver of train.
- (ii) Setting and locking of points under the supervision of Station Master.
- (iii) To couple and uncouple vehicles under the supervision of Station Master/Guard when shunting operation is in progress.
- (iv) Piloting and hand signalling of trains when necessary.
- (v) Knowledge of hand signals, detonators and their use.
- (vi) Protection of line in emergency and fog signalling.
- (vii) Exchange of signals with the Driver and Guard of passing trains as directed by the Station Master.
- (viii) Cleaning, Oiling and lighting of lamps.
- (ix) Loading/unloading of parcels, luggage and packages to and from the train and watching the packages and other materials by properly stacking in the station premises.
- (x) Dusting of station office.
- (xi) Any other duties entrusted to them by the SS/SM from time to time.
- (xii) Use of emergency crank handle for setting of points.
- (xiii) To Supervise shunting as per SR 5.13.03.
- (xiv) They must be thoroughly conversant with the GR 3.38, 3.46, 3.77(I), 5.09, 3.52 to 3.60, 3.62, 5.13, 5.15, 5.16, 5.21, 5.23 & SRs there to.
- (xv) Their special attention is drawn to Chapter II of G & SR (Amendment) 2000.

8 **Sr.GK/GK**-He shall work under the orders of SS/Dy.SS/SM/ASM on duty. He shall have thorough knowledge in rules GR 16.01 to 16.11 and SRs thereto. He shall keep the channel for wheel flange always clean, will close the gate against the road traffic in time without causing detention to trains. He must ensure that there is no inconvenience to road user. He shall any irregularities on running trains while passing through his gate and report immediately to SS or SM on duty through Cabin Man. On noticing any obstruction on line he shall at once try to remove it or if unable to do so take steps to protect the gate vide GR 16.07. He shall clean the gate lamps and hand signal lamps at the gate and fill this with K.Oil .He will light up the gate lamps in the evening and ensure that they are burning brightly during the nighttime. It is his personal responsibility to maintain the gate equipments in working order and report any deficiencies and get it replaced. He shall make available the complaint book on demand to the road users and inspection registers to the inspecting officials. He shall carry out any other instructions given to him by SS/SM on duty. His special attention is drawn to Chapter II of G & SR (Amendment) 2000.

9 **SAFAIWALA /LCS**-He is responsible to attend the sanitation of Railway premises including SM's office Passengers awaiting room platform and platform latrines,

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cleaning of night soils and clearing of drainage. He shall remove night soil in staff quarters and dump in and also for clearing the drains attached to staff quarters. He shall do any other duties entrusted to him the SM in case of emergencies His special attention is drawn to Chapter II of G & SR (Amendment) 2000 also.

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APPENDIX - 'E'**ESSENTIAL EQUIPMENT OF THE STATION**

Below is the list of essential safety equipment, which shall be readily available in good working order with necessary relief stock.

1.	Detonators	...	10 in tin case
2.	Hand signal lamps/Tri colour torch	...	06 Nos.
3.	Hand signal flags	...	05 sets.
4.	Safety chains with pad locks	...	06 Nos.
5.	Wedges/Sprags	...	06 Nos.
6.	Fire buckets (with sand and water)	...	05 Nos.
7.	Clamps with padlocks	...	08 Nos.
8.	Reminder collars	...	06 Nos.
9.	"Motor Trolley on Line" boards	...	02 Nos.
10.	First aid Box	...	01 No.
11.	Stretcher with Blanket	...	01 No.
12.	Blanket	...	01No.
13.	Fire extinguisher	...	01 No.

APPENDIX - 'F'**RULES FOR WORKING OF DK STATIONS, HALTS, IBH, IBS, AND OUTLYING SIDING**

One passenger Halt at Km. (299/7(299.5)) between MNGD-BMCK stations is there to Sansarthali (code: SNRL). A commission agent has been appointed to operate the Passenger Halt 227/228 Raipur-Visakhapatnam-Raipur Passenger trains are stopping at the above Passenger Halt.

RULES FOR WORKING INTERMEDIATE BLOCK SIGNALLING BETWEEN BISSAMCUTTACK-THERUBALI

The block section between BISSAMCUTTACK-THERUBALI has been split into two block sections by providing Intermediate Block Stop signals at KM 313/7-8 [controlled by BISSAMCUTTACK station] for UP line and, on Dn line at KM 312/13-14 [controlled by THERUBALI station]. Intermediate Block stop signals are controlled through double line lock and block instruments at the respective receiving ends.

- a] The Block working for section between BISSAMCUTTACK-THERUBALI on UP and Down lines is controlled by the provision of Double line Lock and Block Instruments (SGE type) and are provided at BISSAMCUTTACK station and at THERUBALI station. The Down Advanced starter signal No. 36 of Theruvali and UP Advanced Starter signal No. S13 of Bissamcuttack are controlled by the clearance of IB section through respective IB section monitoring axle counters and the IB Home signals are controlled in turn through the line clear position of respective Double line lock and block instruments at the receiving stations.
- b] Trains between intermediate block signal to respective Home signal of Station in advance in both the sides are worked by means of SGE type lock block instrument vide 4.09, 5.07, 14.01 to 14.14 of the G & SR and chapter V of BWM.
- c] Last stop signal to the intermediate block stop signal in both the sides are controlled by Digital Axle counter and are worked under absolute block system in terms of G & SR 14.01, 14.13. Indications on Panel provided at Bissamcuttack station.

d) **INDICATIONS PROVIDED ON PANEL FOR I.B. SECTION.**

The indications of signals, IB and Block sections in both up and down directions are shown in the following table:

SECTION BISSAMCUTTACK-THERUVALI station (Up line):

SN	Signal Aspect [S-13]	IB Section Indication [13A XT]	IB Home Aspect [S-15]	Block Section Indication	Remarks.
1	Green	While Illuminated	-	-	Advance starter No:13 is taken off to dispatch a train up to IB Home.
2	Red	Red	-	-	IB Section is occupied.
3	-	-	Green	While illuminated.	IB Home taken off for train up to home signal of Therubali .
4	-	-	Red	Red	Block section is occupied or IB Home passed at danger.

IB SECTION THERUBALI – BISSAMCUTTACK (Dn line):

SN	Signal Aspect [W 38 of THV]	IB Section Indication [36 AXTof THV]	IB Home Aspect [38 of THV]	Block Section Indication	Remarks.
1	Green.	While Illuminated.	-	-	Advance starter No: W 36 is taken off to dispatch a train up to IB Home.
2	Red.	Red.	-	-	IB section occupied.
3	-	-	Green	While illuminated.	IB Home taken off for train up to home of BMCK.
4	-	-	Red	Red	Block section is occupied or IB Home passed at danger.

e) Buzzer/Bell

One audio buzzer is provided on the Panel at BMCK to detect Train entering section for outgoing trains. After train passes the intermediate block stop signal, the buzzer/bell will start ringing at BMCK station. On hearing the buzzer/bell the SS/SM must acknowledge the same by pressing the train entering section [TES] muting button to stop the buzzer/bell and then send train entering section report to the SM of the station in advance who in turn shall turn commutator of the Double Line Lock and Block Instrument from the Line Clear position to 'Train On Line position' and acknowledge train entering section following the procedures laid down vide Block Working Manual.

- f]** In the event of failure of I.B. track circuit [i.e. track clear indication not available] which shall not permit taking 'OFF' last stop signal, it should be ensured by SS/SM on duty at the dispatching station through exchange of private number with the SS/SM of the receiving station that the last train that passed the last stop signal of his station has fully arrived at receiving station. Before allowing the next train to enter in to the section, such permission to the next train shall be granted and the section BMCK-THV shall be treated as single section.

Train to be issued with pilot memo when normalization of the system is not possible. In such case, line clear has to be taken on lock and block instrument. Trains are to be dispatched from the station only after obtaining line clear till such time track circuit controlling last stop signal is restored to normal.

g] NORMALIZATION OF THE TRACK CIRCUIT AND OF BLOCK WORKING BY RESETTING FEATURE:

- i]** No train should be allowed to leave station in any particular direction unless I.B. track clear indication is available for the relevant track circuited portion of I.B. section. Last stop signal cannot be taken off and provisions stipulated in Para g.III to be followed.
- ii]** A Resetting arrangement for the resumption of I.B. Axle counter under failure condition through co-operative features of both the SS/SM on duty at either end stations of the Block section is provided, which should only be resorted to after the train that was lastly sent arrives fully at the receiving station and is certified in this respect by the SS/SM at the receiving station through exchange of private number.
- iii]** For monitoring of I.B. section working & re-setting of I.B. Axle counters, Track Indications and Re-setting arrangements are provided with buttons on the Panel at BMCK station and operating panels [re-setting panels] provided at THV station. Counters are also provided for the purpose of recording the re-settings of the I.B. Axle Counters in case of failures in IB

section. The Re-setting button and permission granting button on the Resetting Panel shall at BMCK and THV stations should normally be kept sealed by the S&T staff. SS/SM will inform the Maintainer for resealing the same whenever the seal is broken.

- iv] The SS/Dy.SS on duty at BMCK station shall maintain a separate register for use of resetting at IB Axle Counters wherein every operation of the resetting button shall be recorded giving details of date of use, train, number, time, number registered in the counter on Panel and reasons for resetting and initial each such entry.
- v] The procedure for resetting of the I.B. Axle counters in terms of clause g.II above shall be as follows:

SECTION BISSAMCUTTACK-THERUBALI ON UP LINE:

	DISPATCHING STATION [BMCK]		RECEIVING STATION [THV]
1	SS/SM on duty shall call the attention of SS/SM of Therubali station through Telephone for re-setting I.B. Axle counter zone giving details of last train left the station into the section.	1	SS/SM on duty at Therubali after verifying that the said dispatched train arrives fully, shall exchange private number with SS/Dy.SS on duty at BMCK and gives permission to re-set by pressing the 'Permission Granting' button provided on the re-set panel by break open the seal.
2	On getting re-set permission indication on PANEL SS/SM on duty shall acknowledge by pressing the 'Permission received from THV' acknowledgement button after break open the seal. For each such operation the reset counter provided in Panel shall increase by one digit. Dy. SS/SM on duty shall make an entry of changed Reset counter number in re-setting register.	2	SS/SM on duty at THV shall continue to press the 'Permission Granting' button for some time.
3	SS/SM on duty then shall re-set the I.B. Axle counter by turning 'DN Re-set Key' and press the 'Re-set button' on the re-set panel, Preparatory Reset indication will appear on Axle counter reset box and after arrival of next piloted train Axle counter will get reset .	3	
4	On completion of above re-setting process I.B. section clear indication will	4	The SS/SM on duty at Therubali shall record in his train register

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	appear on PANEL.		the re-setting operation giving train number, time and private number exchanged with the SM of Bisamcuttack station giving reasons for the re-setting operation.
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SECTION THERUBALI-BISSAMCUTTACK ON DOWN LINE:

	DISPATCHING STATION [THERUBALI]		RECEIVING STATION [BISSAMCUTTACK]
1	SS/SM on duty shall call the attention of SS/Dy. SS of BMCK station through Telephone for re-setting I.B. Axle counter zone giving details of last train left the station into the section.	1	SS/SM on duty at BMCK after verifying that the said dispatched train arrives fully, shall exchange private number with SS/Dy.SS on duty at THV and gives permission to re-set by pressing the 'Permission Granting' button provided on the re-set panel by break open the seal.
2	On getting re-set permission on re-set Panel SS/Dy. SS on duty shall acknowledge by pressing 'Permission received from BMCK acknowledgement button. For each such operation the reset counter provided in Operating Panel shall increase by one digit. SS/SM on duty shall make an entry of changed Reset counter number in re-setting register.	2	SS/SM on duty at BMCK shall continue to press the 'Permission Granting' button for some time.
3	SS/SM on duty then shall re-set the I.B. Axle counter by turning 'DN Re-set Key' and press the 'Re-set button' on the Axle counter re-set panel, preparatory indication will appear on the reset box and after passing of next piloted train the Axle Counter will get resetted.	3	
4	On completion of re-setting process I.B. section clear indication will appear on re-set panel.	4	The SS/SM on duty at BMCK shall record in his train register the re-setting operation giving train number, time and private number exchanged with the SS/Dy. SS of THV station giving reasons for the re-setting operation.

h] DISPATCH OF TRAINS:

Dispatch of trains is governed by the provision of G & SR 3.42, 3.70 and Block working manual rules.

From Bissamcuttack towards Therubali.

Train will be dispatched in accordance with the General Rules 3.42, 3.70., 3.75, 4.35 and 8.01 and subsidiary Rules thereto.

Bissamcuttack to IBS ON UP LINE:

The SS/SM on duty shall ensure that the portion of line between Advanced Starter and 400 Mtrs beyond IBS at their respective ends is clear of obstruction and indication to this effect is available in the PANEL and shall also ensure any non-isolated shunting at their respective ends suspended and shunting authority issued if any is with drawn and kept in his custody.

Advise the Station Master at the station in advance, of the train No. and description of such intended train to be dispatched and shall take his assent supported by Private Number and shall then set and lock the route and take off the Starter and Advanced Starter signals.

i] IBS SIGNAL TO THE STATION IN ADVANCE:

The SS/SM on duty shall obtain line clear over lock & Block instruments from the station in advance to dispatch a train past the IBS signal at the respective ends and shall take off the IBS signal.

After the train passes the intermediate Block Stop signal of Bissam cuttack a buzzer will ring in the PANEL. On hearing the buzzer/bell the SS/SM must acknowledge the same by clicking train entering section [TES] muting button to stop the buzzer/bell and then send train entering section report to the station master of THV station in advance who in turn will turn commutator of the Double line Lock and Block Instrument from the line clear position to Train On Line position and acknowledge train entering section. After dispatch of a train from Bissamcuttack into the Block section between BMCK and intermediate Block Post in case when the intermediate stop signal is not taken 'off' but the buzzer has started ringing. This may be either due to the train passing intermediate Block stop signal at 'ON' position or due to failure of the track circuit in advance of that intermediate Block Signal and shall exchange Private Number with the Station Master in advance indicating the occurrence and the number of the train. On getting the information from the Station Master supported by Private Number, the SS/SM on duty at BMCK in turn will inform SCR on duty about this.

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The procedure must be rigidly followed irrespective of the fact whether line clear for train has been received from station in advance or not and this must be recorded in the Train Register and SS/SM's diary book of both the Stations.

- (i) Dispatch of trains towards THV in case of failure of the UP Advanced Starter signal at BMCK Station due to failure of "Axle Counter" device or otherwise:-

If the failure of the Advanced starter of BMCK due to the failure of axle counting device or the indication lamp (repeated by indication lamp) showing 'Red' light either due to power failure or due to any other causes, the re-setting "Push Button" provided with Veeder counter at the SS/SM's office for restoring the normal function of the signal, should be operated accordingly to the following instruction. Whenever the Advanced starter signal of BMCK is found defective by the Station Master, the following procedure shall be adopted.

On receipt of this information, the SS/SM on duty after ensuring that all trains which had left his Block Station had arrived complete and intact at THV station (by exchange Private Number with the SS/SM THV confirming this), shall press the resetting button of the axle counter. When the resetting is successful, it shall be indicated by a green light in the resetting panel provided in the SS/SM's office at BMCK. The use of this resetting button is registered on the Veeder Counter and the SS/SM should record this giving the details of the occasion with timings in the Veeder Counter register kept at the station.

If it is not possible to restore normal working of the counter by use of the resetting button, the ESM-in-charge of the section shall be served with a written memo to attend the defective signal and rectify the same. The ESM-in-charge of the section on being served with a memo by the SS/SM, shall attend the failure and rectify the fault. The ESM after ensuring that all S&T gears relating to defective signal have been attended to and are in working order except the axle counter which needs re-setting shall establish communication with SS/SM concerned and ask him to reset the axle counter by pressing the reset push button. Where the SS/SM on duty, after ensuring that all the trains which had left his Block Station had arrived complete and intact at THV (by exchanging of P.N with SS/SM BMCK confirming this) shall press the resetting button provided in the Panel and resume the normal working.

j] DESPATCH OF TRAINS IN CASE OF FAILURE OF INTERMEDIATE BLOCK STOP SIGNAL:

- [a] When a driver finds an intermediate Block Stop signal at 'ON' Position he shall stop his train in rear of the signal and advise the guard of the fact by sounding long continuous whistle and shall then contact the Station Master of the Block Station in rear over the signal post telephone provided for the purpose vide SR.3.75.01[i].

- [b] If the SS/SM of BMCK station, on being contacted over Telephone by the driver, finds that the signal is defective, he shall, after obtaining "Line Clear" for the train from the station in advance, authorize the driver on the telephone to pass intermediate Block Signal at "ON" and enter the block

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section ahead. He shall give Driver the Private Number and identification Number under which he has received “Line Clear” for the train from the station in advance.

The driver shall then sound one short, one long and one short whistle and, on receipt of Guard’s signal shall proceed ahead duly exchanging signals with him.

The station Master on being contacted by the Driver on signal post telephone if he is unable to obtain “Line Clear” for the train due to total interruption of communications, shall call for the Guard’s through the Driver and on being contacted by guard, he shall advise the guard of the circumstances and give a Private Number for the train to proceed up to the next block station. The guard shall prepare a memo in duplicate authorizing the Driver to proceed with the Private Number received from the Station Master. In such case the speed of the train shall be restricted as prescribed in GR 3.75(3).

[c] In such case the Driver shall pass the IB signal at “ON” and proceed cautiously and be prepared to stop short of any obstruction, at a speed not exceeding 15 Kilometers an hour if he has a good view of the line ahead, otherwise at a speed not exceeding 8 kilometers an hour and report the failure to the Station Master at the block station ahead. While complying with the instructions contained in GR 3.75(3), when the Driver has to pass IB signal at “ON” after waiting for 5 minute at the signal, he shall proceed cautiously preparing to stop short of any obstruction at a speed not exceeding 15KMPH when view ahead is clear and 8 KMPH when view ahead is not clear due to curve, obstruction, rain, fog or any other cause until he reaches the foot of the next stop signal and even the signal is “OFF” the Driver shall continue to look out for possible obstruction short of the same and will act upon its indication only after he has reached it. Before starting, the Driver shall sound one long whistle which may be repeated as necessary and shall then start his train on receipt of Guard’s signal. Thereafter he shall exchange signals with the Guard.

On reaching the block station ahead the Driver shall report the failure of the signal to the Station Master. If, the telephone is provided at the intermediate Block Stop signal Post is out of order the Driver will pass the IB signal as per GR 3.75(3) & SR 3.75.02, and on reaching the block station ahead, the Driver shall report the failure of the signal to the Dy. SS/SM, Following train shall not be allowed to leave **BMCK** unless the complete arrival of the receiving train is certified by the SM on duty at **THV** under exchange of Private Numbers.

The station Master of the block station working the intermediate block stop signal on becoming aware that such a signal is defective shall, before dispatching the train, treat the entire section up to the block station immediately ahead of the intermediate block post as one block section and issue a written authority to the driver to pass the defective intermediate Block Stop Signal at “ON” without stopping at the signal. In accordance with the procedure prescribed by special instruction.

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A written authority as mentioned in GR 3.75(4) shall be in Form T/369[3b] in which the Private Number and identification Number obtained from the station in advance in support of the “Line Clear” shall be recorded. Display of “Proceed hand signal at the foot of defective Intermediate Block Stop Signal may be dispensed with.

- [d] However, if the SS/SM on the Block station immediately in rear of an intermediate Block Signal is aware that UP/DN intermediate Block Signal is defective shall before Dispatching a train shall verify that all trains which had left his Block Station had arrived complete and intact at THV station (by exchanging Private Number with SM- THV) shall press the resetting button of Axle counter equipment. Thereafter driver shall be handed over the authority of T-369[3b] to pass IBS Signal at “ON” position where in, the Private Number and identification number obtained for line clear, shall also be written. The use of this re-setting push button is registered on the veeder counter and SS/SM should record this usage giving details of the occasion with timings in the veeder Counter/register and also in train registers.

[k] INDICATION CUM RESETTING PROVISIONS IN THE PANEL AT BMCK:

The Panel provided with the following indications:

- a) Two green indications for the track- circuited portion of Axle Counter, which remain normally lit to indicate that the track is clear. These lamps extinguish no sooner the train passes the last stop signal and their place two red indications are lit to indicate that the track is occupied.
- b) Two red indications for the last stop signal replacement track circuit which remain lit so long this track- circuit is occupied or in under failure condition.
- c) Two red indication ahead of the IBS Signal, which are lit if the train passes the said signal in “ON” Position. These indications continue to glow till such time the lock and block working is resumed through emergence re-setting feature.
- d) Two red indications just ahead of IBS Signal for the IBS signals replacement track circuit. These indications normally remain dark and are lit either during occupation by a train or during failure of this track circuit.
- e) Two red indications for the block section for receiving trains. These indications shall normally remain no indication and shall be lit only when the incoming train passes the IBS signal. It remains lit till such time train arrives fully and Block Instrument is normalized.

[l] SPECIAL INSTRUCTION IN CASE OF A TRAIN PASSING IBH AT ‘ON’ POSITION:

- I] In case train run away indication appears, the Station Master of receiving Station shall not turn the block instrument handle to line clear position and SS/SM at sending station shall not take any action to despatch the third train unless the second train which passed the IB signal in the ‘ON’ position has actually arrived and its complete arrival is verified by the receiving station.
- II] Every case of a train passing IB signal at ‘ON’ position without strictly following the provision of GR 3.75 should be treated as a breach of block rule by the driver and action to be taken accordingly.

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- III] When train run away indication appears at the dispatching Station without any train in the section, the IBS system should be treated as failed and Signal Maintainer should be advised. All the subsequent trains shall be Piloted OUT after duly taking line clear & treating entire section as one Block section as per GR 3.75(4).
- IV] When ever a train after having obtained line clear passes IBS (when not taken off) in “ON” position the train run away indication appears at the Dispatching station and train entering section indication appears at the receiving station, under such circumstances no further train shall be allowed in the section till the said train arrives completely at the receiving station i.e., station in advance, and its complete arrival received at the receiving station i.e. station in rear supported by Private Number treating the entire block section as single section.
- V] If any train passes IB Signal at ‘ON’ position when there is a train in the Section between IBS and the station ahead, the train run away indication will appear at both receiving and Dispatching station. Under such circumstances the SS/SM in the receiving station shall not turn the Block instrument to Line Clear position and SS/SM at sending station shall not take action to despatch the (3rd) train, unless the 2nd train which passes the IBS in the ‘ON’ position has actually arrived and its complete arrival is verified by the receiving station.
- VI] Permission button to be pressed for the runaway train by breaking & opening the seal only after verifying that the last vehicle of the run away train has arrived in tact and ensured by exchange of private number with the SS/SM of the sending station. In case of failure of Axle Counter equipment at the sending station, permission button may also be pressed for normalizing the system only after verifying that there is no train in the section and after duly exchanging Private number with the SS/SM of the sending station.
- VII] Whenever a train run away indication appears and there is a train in the section, no further train should be allowed in the section till resetting is done.
- VIII] Before any re-setting operation is done, the Dispatching station should advise the receiving station giving details of the last train that has entered the section and should ensure by exchanging of private number that the last train has arrived complete at receiving station.

Every Case of re-setting shall be entered in a register in the following proforma.

Date and time	Train No. Last entered the block section	Private No. of station ahead for Complete Arrival of the train Under Col.2	Veeder Counter No Before resetting operation completed	Train No. Entering Block section Immediately after the resetting operation	Remarks	Signature of SS/SM
1	2	3	4	5	6	7

- IX] If resetting is not possible under item as mentioned above, the system should be treated as failed and train will be work treating the entire section up to the Block

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Station immediately ahead of the IBS Post as one block section as per GR 3.75(4).

- X] Action to be taken when a train passes Intermediate Block Stop Signal at 'ON'
- a) By SS/SM of Block Station in advance of the Intermediate Block Stop signal
- I] Shall not turn the Block Instrument commutator to "Line Closed" Position unless the complete arrival of the train which passed IBS at "ON" position is ensured, without any exception even for such a train which leaves the rear station after obtaining line clear and passes IBS at "ON" position, since there is a chance of leaving a vehicle or vehicles in the Axle Counter area where the function of Axle Counter also fail when IBS is passed at "ON" position.
- II] In case the bottom needle of the SGE type block instrument is in its 'Line closed' position action should be taken to turn the block instrument comutator to 'TOL' Position vide BWM 5.16(2)(iv) and must not turn to "Line closed" and then to "Line clear" position unless the train which had passed the "Intermediate Block Stop Signal" in the 'ON' position arrives complete and its complete arrival is verified.
- b] SS/SM/ASM of Block Station in rear of the intermediate Block Stop Signal must ensure that last stop signal controlling entry of trains into the section between the last stop signal and the intermediate Block Stop Signal is in its 'ON' position and shall under no circumstances take 'OFF' or attempt to take 'OFF' the said last Stop signal even if the Axle counter/Track circuit section from his block station up to and including the adequate distance beyond the Intermediate Block Stop signal shows 'clear', unless the train which had passed the intermediate Block Stop signal is in the 'ON' position arrives complete the block station in advance and its complete arrival is verified and intimated by the SS/SM/ASM of the block station in advance under exchange of Private number.
- c] The SS/SM of both the block stations in rear and in advance of the intermediate Block Stop Signal :-.
- I] After the complete arrival of the last train, according to the information received vide sub-para (b) above, the SS/SM of the block station in advance shall communicate the same to the SS/SM of the station in rear supported by a Private Number which shall be acknowledged by the later by issuing Private Number. Thereafter the SS/SM of the dispatching station and the SS/SM of the receiving station shall resort to 'Resetting ' of axle counter operation and record the next higher number registered in the counter.

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- II] The SS/SM of the Block Station in advance shall then take steps to normalize the block instrument.
- III] Record of Private Number exchange and the number shown in the counters shall be maintained by the concerning SS/SM in the train signal (Cum log) Register.

It is to be noted that in terms of GR3.75 whenever intermediate block stop; signal is at 'on' a driver must stop his train in rear of the signal and contact the SS/SM of the block Station in rear on the telephone provided on the signal post who will authorize him to pass the signal in 'ON' position supported by Private Number and identification number which were taken for the line clear from the station in advance. If the telephone is not provided or is out of order, the driver, after waiting for 5minutes shall pass it at "ON" but he must report the failure to the DY SS/SM at the Block Station ahead after following the provision in GR.3.75(3). This would mean that the driver shall either get an authority on telephone from the station master or must report at the station ahead about the failure of the telephone. If none of those provisions are complied with, it should be taken as breach of Block Rules.

- m) In the event of failure of IBS signal in the "OFF" position or cannot resume to "ON" position immediately after it has been passed by a train, the station master controlling the signal shall take steps to put back the IBS signal to "ON" position and treat IBS signal failed and train shall be dispatched treating entire section between his station and station in advance as one Block section.
- n] **RUNNING OF MOTOR TROLLYS ON IBS ZONE:**
 - i) While allowing motor trolley/4 wheeler tower wagon/material trolley etc., entire section between Bissamcuttack-Therubali shall be treated as one block section and shall be issued T-369 [3B] for passing IBS at "ON" position.
 - ii) After the complete arrival of the said Motor Trolley/4 wheeler tower wagon/material trolley etc., at the station ahead, Station Master at adjacent station shall exchange Private Number in token of complete arrival and then shall resume normal working by resetting the Axle Counter as stated in the SWR.
 - iii) Motor Trolleys shall not be allowed on following line clear.

NOTE:-

Backing of train on the portion of line after passing the intermediate Block Stop signal normally shall not be allowed, However, if it becomes inevitable to back, such backing may be done with great caution as mentioned in SR 3.75.04.

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0) SIGNAL POST TELEPHONE:

A telephone socket (RE Type portable telephone kept with drivers) with a RED Press button at the bottom is provided at the foot of each IB signal and is meant for driver to contact the SS/SM in rear by pressing the RED button. The driver of the train encountering the IB signal at 'ON' position shall contact the station in rear to find out the occupancy or otherwise of the block section ahead.

p) NORMAL POWER SUPPLY TO IBS GOOMTY AT KM 313/7-8:

Normal power supply to the Signaling and Interlocking installation at the IBS goomty is drawn from the Local power supply extended from BMCK station. Two nos of DG sets are provided at IBS goomty which can be started remotely from BMCK in case of local power supply fails. Apart from the above arrangement Solar power supply system also provided to charge IBS goomty battery.

APPENDIX - 'G'**RULES FOR WORKING OF TRAINS IN ELECTRIFIED**

NIL.