

EAST COAST RAILWAY
SAMBALPUR DIVISION

STATION WORKING RULES OF AMBODALA STATION (CODE: AMB)

BG/MG/NG- BROAD GAUGE

Date of issue : 30.09.2020

Date brought into force :

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.** SI/WRD- 22063 ALT - D.

1.2 **SIGNAL INTERLOCKING PLAN NO.:** - S.I – 22063, ALT - J.

The Station Working Rule diagram and Signal Interlocking Plan shows the complete lay out of the yard, siding, normal position of points, the Signaling and Interlocking arrangements, Gradients and Level Crossings within the station limits. This must be referred to for giving details of the points number and signals when reporting accidents.

2. DESCRIPTION OF STATION: -

AMBODALA is a six line station situated in Vizianagaram -Titlagarh double line section at KM 263.441 (Km.263/15-17(UP) Km.263/16-18 (DN)) from Raipur. It is Standard – III (R) interlocked, Class 'B' station having central panel. LVCD axle counter are provided at either end of the station.

2.1 GENERAL LOCATION: -

2.1.1 **NAME OF STATION:** - AMBODALA

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

2.1.3 **NAME OF THE SECTION:** - Vizianagaram –Titlagarh, Double Line, RE, BG section

2.1.4 **ROUTE:** - D Spl.

2.1.5 **LOCATION:** - 263.441 (Km.263/15-17(UP) Km.263/16-18 (DN)) from Raipur .

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

- i) Raipur end -Lanjigarh Road(Code: LJR), inter distance 13.62 K.M.
- ii) Vizianagaram end-Doikalu (Code: DKLU), inter distance 11.774 K.M.
- iii) Vizianagaram end-Alumina Refinery plant, inter distance 16. K.M.
- iv) Passenger halt: - Nil.
- v) Flag station: - Nil.
- vi) Outlying siding: - Nil.
- vii) D.K. station: - Nil.
- viii) IBH: - NIL.
- ix) IBS: - IBS: The section between LJR-AMB has been split into two block sections by providing Intermediate Block Stop (IBS) Signals at Km. 256.75 and Km. 256.68 on UP and DN lines respectively

2.3 **BLOCK SECTION LIMITS: -**

Between Sections.	The Point from which Block section Commences.	The Point at which Block section Ends.
AMB-LJR UP direction	Outermost facing point No. 19A of AMB station.	UP Advanced starter signal No. 13 of LJR station.
AMB-LJR DN Direction	Down Advanced starter signal No. 14 of AMB station	Outermost facing point No. 18 A of LJR station.
AMB-DKLU UP Direction	UP Advanced starter signal No. 13 of AMB station.	Outermost facing point No. 19 A of DKLU station.
AMB-DKLU DN direction	BSLB on DN line at DKLU end of AMB station.	DN Advanced starter signal No. 14 of DKLU station.
AMB-ALUMINA REFINARY	UP Advanced starter signal No. 47 of AMB station.	Down Advanced starter signal of ALUMINA REFINARY PLANT.

2.3.1 **STATION SECTION:**

Station section	The point from which the 'Station section' Commences.	The Point at which the 'Station Section' ends.
UP Line	Outermost facing point No. 19 A on UP line at LJR end.	UP Advanced starter No. 13 of AMB station at DKLU end.
DN line	BSLB near point No. 18 B on DN line and UP advanced starter No. 47 towards ALUMINA REFINARY PLANT.	Down advanced starter signal No. 14

2.3.2 **STATION LIMIT:**

UP line- It starts from the UP Inner Distant signal to UP Advanced starter signal No.13 (DKLU end).

DN line - It starts from the DN Inner distant signal (DKLU end) and from the DN Distant signal (Plant end) to DN Advanced starter signal No.14.

2.4: **GRADIENT: -**(a) **FROM THE CENTER OF STATIONBUILDING TOWARDS LANJIGARH**

CHAINAGE IN METER		INTER DISTANCE	GRADIENT	REMARKS
FROM	TO			
0	868.37	868.37	1 in 1000 R	UP&DN LINE.
868.37	1122.12	253.75	Level	UP&DN LINE.
1122.12	1866.595	744.475	1 in 250 R	UP&DN LINE
1866.595	2963.87	1097.275	1 in 150 R	UP&DN LINE
2963.87	2987	23.13	Level	UP&DN LINE.
2987	10775	7788	1 in 125 F	UP&DN LINE.
10775	Block section.	-----	1 in 237.3 F	UP&DN LINE

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

CHAINAGE IN METER		INTER DISTANCE in (m)	GRADIENT	
FROM in (m)	TO in (m)			REMARKS
0	590	590	1 in 1000 F	UP&DN line.
590	798	208	LEVEL	UP&DN line.
798	1714	916	1 in 150 F	UP&DN line
1714	1809	95	LEVEL	UP & DN line.
1809	2392	583	1 in 150 F	UP & DN line.
2392	2459	67	LEVEL	UP & DN line
2459	2564	105	1 in150 F	UP & DN line
2564	2659	95	LEVEL	UP & DN line
2659	3634	975	1 in 150 F	UP & DN line
3634	Block section	---	LEVEL	UP & DN line

(c) **FROM THE CENTER OF STATION BUILDING TOWARDS ALUMINA PLANT**

CHAINAGE IN METER		INTER DISTANCE in (m)	GRADIENT	
FROM in (m)	TO in (m)			REMARKS
0	450	450	1 in 1000 F	<u>MVAA MID STATION</u>
450	650	200	LEVEL	<u>MVAA MID STATION</u>
650	1875	1225	1 in 250 F	<u>MVAA MID STATION</u>
1875	2125	250	1 in 150 F	<u>MVAA MID STATION</u>
2125	3000	875	1 in 200 F	<u>MVAA MID STATION</u>
3000	3775	375	1 in 221.3 F	<u>MVAA MID STATION</u>
3775	Block section	---	1 in150 R	<u>MVAA MID STATION</u>

2.5 **LAY OUT: -**

- i) No. of running lines :- 06 (Six)
- ii) No. of sidings :- 02(One)sick line, takes off from ORL of line No. 5 at DKLU end and another shunting neck taking off from line No.4 at LJR end.
- iii) No. of Passenger platform :- 3 (Three)
 - a) High level Platform beside Line no.-1 (540 m X 6.09 M)
 - b) High level island Platform between Line no-4& 5 (500mX 8.90m)

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

(i)

DESCRIPTION	CSL	ISOLATION PROVIDED	
		TOWARDS DKLU	TOWARDS LJR
Line No.1 (COMMON LOOP)	CSL-770.0 M (STR. TO STR)	Overrun line	Overrun line
Line No.2 (UP MAIN)	CSL- 807.0M(STR. TO SB)

Line No. 3 (DN MAIN)	CSL- 839.0M (STR. TO SB.)
Line No.4 (COMMON LOOP)	CSL- 732.0M (STR. TO Str.)	Overrun line	Overrun line
COMMON LOOP Line No.5	CSL- 709 M (STR TO STR)	Overrun line	Derailing Switch
GOODS COMMON LOOP Line No.6	CSL- 705 M (STR TO STR)	Derailing Switch	Derailing Switch

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

- a. Trains arriving from LANJIGARH Road end are UP trains.
- b. Trains arriving from DOIKALU and MVAA Mid station are DN trains.

2.5.2 **NON-RUNNING LINES AND CSL.:** -

Sl. No.	Description	CLS	Takes off	Exit	Operation
1.	Sick line	39.252 (SH to SH)	ORL of line No. 5	Both way	Panel Operation
2.	Shunting Neck	84M(SH to SB)	ORL of line No.4	One way	Panel Operation

2.5.3 **ANY SPECIAL FEATURES IN THE LAYOUT:** - NIL

2.6 **LEVEL CROSSINGS: (STATION SECTION)**

Sl. No.	Location	K.m.& No.	Normal position	Class	Type	Operation	Communication
1.	Between DN Advanced starter and DN starter signals	262/49-51(UP), 262/50-52(DN) (RV-213)	Open	'B1'	Interlocked	Electrical operated lifting barrier	Magneto telephone with SM office/AMB
2.	Between UP Starter and UP Advanced starter signal	263/33 – 264//3 (UP), 263/34-264/2(DN) (RV-214)	Open	'A'	Interlocked	Electrical operated lifting barrier	Magneto telephone with SM office/AMB

2.7 **LEVEL CROSSINGS: (IN BLOCK SECTION)-**

SL No.	Location	K.M.& No.	Normal Position	Class	Type	Operation	Communication
1.	Between DN Inner Distant and DN Home signal of AMB & VAL line.	264/41-43(UP), 264/42-44 (DN) (RV-215)	Closed to Road traffic.	'B2'	Non-inter locked	Winch operated Lifting barrier.	Magneto telephone with SM/AMB.
2.	Between UP Inner Distant and UP Home signals	261/11-13(UP), 261/12-14(DN) (RV-212)	Closed to Road traffic	'C'	Non-Interlocked	Winch operated Lifting barrier.	Magneto telephone with SM office/AMB

3.	Beiween (DKLU-AMB)	270/11-12 (RV-217)	Closed to Road traffic	'C'	Non-Interlocked	Winch operated Lifting barrier.	Magneto telephone with SM office/DKLU
4.	Beiween (DKLU-AMB)	270/15 (RV-218)	Closed to Road traffic	'C'	Non-Interlocked	Winch operated Lifting barrier.	Magneto telephone with SM office/DKLU

Note- Train Actuated Warning Device has not been provided at above Level Crossing Gates.
(Working of Level Crossing Gate is detailed in appendix 'A')

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

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

- i) **System of working** :- Absolute Block system on double line & Single line between AMB and plant cabin.
- ii) **Type of block instrument:** - (i) SGE type Double Line lock and Block Instrument with adjacent stations LJR & DKLU.
(ii) Single line token less block instrument with Alumina Plant Cabin.
- iii) **Instrument** : - Co-operative type with LJR, DKLU and MVAA Mid station.
- iv) **Block Telephone** :- Connected with adjacent stations LJR and DKLU Station & MVAA Mid 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, with Multiple Aspect Colour Light Signaling having maximum equipment of signals The aspects and indications of the MACLS is governed by GR 3.08 (4) (b).

The station is provided with central panel interlocking and having no end cabins. All signals and points are electrically operated from the Central Panel provided at SM's officer. Calling –on signals are provided below UP Home signal as per GR 3.13 (1) (b), (2) (3) (4) and (6) (b). Central panel with miniature push buttons are provided in the Station Master's office to electrically control all signals, points, siding key, Gate key, etc., the control panel is provided with SM's key which shall always remain in the personal custody of the Station Master on duty in terms of SR 3.36.03 (a).

Minimum equipment of signal – Distant, Inner Distant, Home, Starter and Advanced starter in either direction and on MVAA Mid station.

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.

4.1.3 **TRACK CIRCUIT: -**

All the lines including point zone between Home and Advanced starter signals on all the three directions 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 at either side of the station.

4.1.4. **AXLE COUNTER**

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. Axle counters are also provided for Block section between AMB station and VAL Alumina refinery plant siding one just ahead of UP Advanced starter AMB end one just before line DN Advanced starter of Alumina Plant for checking the complete arrival of a train.

[Details are given in Appendix-'B']

(a) **IB SECTION LJR-AMB UP LINE:**

A pair of Digital axle counter is provided on UP line to monitor the IB section from UP Advanced Starter Signal No. 13 of LJR to 400 meter beyond the UP IB Home signal No. 29 of LJR.

(b) **IB SECTION AMB - LJR DN LINE:**

A pair of Digital axle counter is provided on DN line to monitor the IB section from DN Advanced Starter signal of No. 14 of AMB to 400 meter beyond DN IB Home signal No. 16 of AMB.

(c) **LV SECTION UP LINE**

A pair of digital axle counter is provided between LJR-AMB on UP line one just beyond UP IB Home signal No. 29 of LJR on 29T track circuit and another on the track 1T1 just beyond UP Home signal of AMB to monitor LV section.

(d) **LV SECTION DN LINE**

A pair of digital axle counter is provided between AMB-LJR on DN line one just beyond DN IB Home signal No. 16 of AMB on 16T track circuit and another on track 2T1 just beyond DN Home signal of LJR to monitor LV section.

4.1.5 **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.

4.1.6 **IBS: -** IBS is provided between LJR-AMB section.

4.1.7 **POINT AND TRAP INDICATOR: -** Nil.

4.1.8 **REPEATING SIGNAL (ELECTRIC/BANNER TYPE): -** Nil

4.1.9. **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 263/33 – 264//3 (UP), 263/34-264/2(DN (RV-214) & 262/49-51(UP), 262/50-52(DN)) (RV-213) for opening and closing of the L.C 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 those L.C. gates are mentioned in Appendix 'A'.

4.1.10 **CALLING ON SIGNALS:-**

'Calling on' signals have been provided below UP and DN home signals and Home signal of Alumina Refinery Line. Also calling on signal is provide below UP starter signal no.41&43 on R6 & R5 respectively. It shows no light when 'ON' and 'YELLOW' light when taken off.

4.1.11 **SHUNT SIGNALS:-**

Independent shunt signals are provided on top point at either end for back shunting movement. Independent shunt signals are provided in sick line and below starter signal No. 41 and 43 for shunting also. Also Shunt Signal No.3 & 4 are provided at LJR and DKLU end respectively.

4.1.12 **ANTI COLLOISION DEVICE: - NIL**

4.1.13 **TRAIN PROTECTION & WARNING SYSTEM – NIL**

4.1.14 **CRANK HANDLE**

When any point fails to operate normally by the route setting operation or individual operation through panel it is inevitable to operate the points with crank handle. The SM on duty shall personally ensure clamping and padlocking of all facing and trailing points on the route. Crank handle keys are interlocked with signals and interlocking system. When points become defective, the signals controlling these points shall be considered defective and vice-versa and the procedure for use of crank handle, for motor operated points shall be followed.

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/TPM to extract crank handle key CH-1/CH-2/CH-3/CH-4/CH-5/CH-6 from RKT at end goomty. SS/SM/TPM on duty after extracting the crank handle key from RKT at end- goomty shall insert it in the space/groove provided in the point machine and turn it to open up the slot for inserting crank handle into the point machine. After inserting the crank handle in the point machine he shall operate it to set the point to desired position. After completion of point work the crank handle key is to be inserted in the RKT at end goomty 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. SM on duty shall personally ensure clamping and padlocking of all facing and trailing points en-route. The cases of failure of Motor operated points should be promptly reported to the concerned ESM/SSE (Sig) for immediate rectification. SM on duty as per OM 2.19 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 2.19.

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

Emergency point operation facility is provided to operate the points from the panel in case of failure of point controlling track circuit. If such operation is necessary, the SM on duty, after ensuring that no vehicle is standing on the concerned point track circuit and SM's emergency point key is 'IN' shall press emergency point operation button by breaking the seal along with relevant point button simultaneously. Then retaining point button pressed, emergency point operation button to be released and the point group button normal / reverse button is to be pressed for operating the point to 'NORMAL' or 'REVERSE'. All such operations will be registered in the emergency point operation counter and the counter number will increase by next number. Each operation of emergency point operation shall be recorded in the station diary and in the register meant for this purpose. The concerned S&T staff should be advised immediately to get the emergency point button resealed.

4.1.16 **EMERGENCY ROUTE RELEASE INDICATION (WHITE) EMERGENCY ROUTE RELEASE BUTTON (WHITE WITH RED DOT):**

The panel interlocking is based on the principle of 'DEAD APPROACH 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 simultaneously pressing the signal cancellation button and the concerned signal button. After this the emergency route release button (white with red dot) positioned in the top of panel to be pressed first by breaking the seal and subsequently the concerned signal button is to be pressed releasing the emergency route release button. A white flashing light will glow indicating that the timer is working. After 120 seconds, the white flashing light along with the white strip of light will disappear suggesting the route has been released.

In case the route illumination (white strip lights) does not disappear, it suggests that the route is not released/cancelled. In such case the concerned S&T staff should be advised immediately to get the emergency route release button resealed 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, train signal register and concerned register.

4.1.17 **SEALING OF EMERGENCY OPERATION BUTTONS/KEYS:-**

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, SM on duty shall break open the seal of the concerned button to make the button operative. Immediately after completion of emergency operation, SM on duty shall inform concerned S&T staff for resealing of the concerned button.

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

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 JPO/02/2012 of 29.08.2012, the following procedure shall be adopted for opening of Relay Room:-

The Relay room of station shall have double locking system of operating and S&T Locks. One Godrej Lock shall be provided on the door of Relay Room by the Station Master. This lock is named as operating lock. The key shall be kept in the safe custody in the key- box with the SM on duty. Likewise, one Godrej lock shall be provided on the door of Relay Room by the Signal Maintainer/ Signal Supervisor of the Station /Section.

Names of the S&T staff authorized for opening of Relay Room is to be entered in the first page of Relay Room Key Register and jointly certified by SSE /Signal In-Charge and TI In-Charge of the Section. In emergency, if any S&T staff other than authorized wants to open Relay room, he must inform DSTE through Signal Fault Control. Signal Fault Control shall convey the permission of DSTE to SS/SM by giving Signal Fault Control order number.

Whenever relay room is to be opened either for scheduled maintenance or during failures or for other maintenance activities/construction works. The concerned Maintainer/Signal Supervisor will inform SM on duty for opening of Relay Room with reason. SM on duty will verify his identity from the list of authorized S & T Staff recorded in the first page of Relay Room Key register or as advised by Signal Fault Control in emergency. SM shall give the key of operating lock to S&T staff, after the entry is made in the Relay Room and also with Red Ink in TSR. Relay Room key shall not be handed over by SM on duty to any Group D staff of S&T department. On completion of work, the concerned Signal

Maintainer/ Signal Supervisor shall properly close Relay Room door and lock it with both the locks and then return the key of operating lock to the SM on duty making the entry in the relay room register.

When the key of Operating Lock is returned by S& T staff to SM on duty, he shall first verify the Relay Room for proper locking and then keep the key in safe custody and acknowledge it on the Relay-Room key register. 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 out.

For attending Failures of S& T gears within relay Rooms, the following steps shall be taken :

Entry to be made in S& T failure register by SM on duty and failure Memo has to be issued to S& T staff. S& T staff shall not take the Relay Room Key for attending failures and open the Relay Room unless the failure is recorded in Signal failure register. If disconnection is required, Disconnection Memo has to be given by S& T staff to SM on duty. Failure Memo should be acknowledged and entry in relay room key register to be made by S& T staff before obtaining Station Master's key. Relay Room key for Schedule maintenance shall be taken once in a calendar Month during monthly inspection by Sectional Supervisor.

Relay room can be opened by following above procedure for special maintenance activities like cable insulation testing, block/ disconnection memos, selection/ locking table testing, maintenance work inside relay room by Electrical and Engineering staff, during failures, data logger resetting and inspection by Divisional and Headquarter officials, Track Circuit adjustments & voltage monitoring during monsoon and whenever required during rains. Works required by S& T Construction & open line staff for preparatory works and during commissioning. In each such case, the Construction Staff Shall follow the detailed guidelines issued regarding working on signaling gears under the charge of open line.

In case of emergencies such as fire, flood, earthquake etc., Open Line Section Engineer (Signal) / Signal Maintainer & SS/SM shall jointly decide the need for opening the Relay Room. Section Engineer Signal HQ at Divisional Control Office and Section controller shall be advised respectively. In case of communication failure during such emergencies, Open Line Signal Maintainers/ Supervisors and SS/SM on duty shall jointly decide the need for opening the Relay Room and communicate later on to respective controls. In case key is lost /misplaced, it shall be reported to S&T control as well as section control for either lock. In normal course the spare key with respective custodians shall be used. In emergency situation, lock may be broken under advice to Section Control as well as S&T control. New lock shall be procured and provided.

In case SS/SM on duty comes to know of relay Room opening by unauthorized means or by unauthorized person or by any Group-D' Staff, the signaling system shall be suspended by him and matter immediately reported to Section Controller for necessary action. Senior section Engineer/ Signal & TI of the respective section will check the station records of relay room opening during their inspections and cross check it with data logger/counter reading if provided. Discrepancy, if any, shall be immediately inquired into and advised to Sr DSTE & Sr DOM by numbered control message from the station immediately for further action.

4.3 **POWER SUPPLY: -**

Power signaling and interlocking installations and the ancillary field units are fed from the following sources of power supply.

- i) CLS power panel with rotary change over switch is provided in the SM's office with the three power supplies viz UP AT, DN AT and local power supply for changing the switch to the required supply position. Luminous indicator's are provided above the circuit breaker for each supply to indicate the availability of the supplies.
- ii) Normally the rotary switch will be kept towards UP AT or DN AT position. Whenever the power block is to be given on the line, the on duty SM must

ascertain the power is available on the other AT e.g if power block is to be given on the UP line, DN AT must be available and vice versa.

- iii) During the non-availability of both the AT supplies SM on duty shall keep the rotary change over switch towards the local supply to feed available local supply to the Installation.
- iv) In case of failure of one of the AT supply without any power block, on duty SM has to check whether the circuit breaker has tripped. (Three circuit breakers are provided in the changeover switch board, one for each supply and their normal position is UP and when tripped, it goes DN). In case of failure of both AT supplies, the local supplies shall be utilized by operating the switch. If the circuit breaker is tripping, even after resetting, no attempts shall be made to hold it by any other means and a message shall be given to the AEEE/GEN and CTFO/PSI/TRD/GEN for prompt rectification.
- v) For IPS system that provides to PI, auto-change over has been provided.
- vi) There is a remote monitoring ASM box provided at the station to monitor the health of IPS.

REMOTE MONITORING ASM BOX:

Remote monitoring ASM box gives alarm to the ASM for the following fault conditions:-

- a) 50% DOD (Depth of Discharge) of Battery. In this condition Audio/Visual alarm comes which can be acknowledged with audio cut off.
- b) 60% DOD (Depth of Discharge), which warns for emergency. The Alarm for this condition is same as for condition 1.
- c) 70% DOD (Depth of Discharge), which signals system, shut down. In this condition Signal feed cut off and all DC-DC converters continue working. Audio alarm will continue till power supply restored.
- d) Any of the Module fails, which calls for "Call S&T".
- e) Whenever there is a failure of power supply in one AT, the SM shall take prompt action to inform to all concerned for the rectification. The SM himself, during his daily checks, shall test the availability of power supply on both AT's and make an entry in station diary duly initiating action for rectification of failure, if any.

5.0 TELECOMMUNICATION FACILITIES: -

1. Telephone attached with Block Instruments for either side Block Sections.
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 BLGR-SPRD control circuits by control telephones.
6. Station to station 25 Watt VHF communication is provided.
7. Telephone is provided between Station and both end crank handle locations and siding locations.
8. Telephone connection is provided between station and LC gates at Km.261/11-13 (up) & km.261/12-14 (dn), Km.262/49-51 (up) & km.262/50-51 (dn), km.263/33-264/3 (up) & km.263/34 - 264/2 (dn), km.264/41-43 (up) & km.264/42-44 (dn) respectively.
9. Telephone communication is provided between SM/AMB and DN IBS post at Km.256.68
10. Traction power control and traction loco control of section SPRD –TIG.

NOTE:

- (i) For obtaining line clear, VHF should be used as a last alternative and not as a sole means of communication.
- (ii) VHF and Walkie Talkie sets should not be used for unnecessary discussions with Loco Pilots, Guards or any other staff.
- (iii) Traction power control and traction loco control of section TIG-SPRD.

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 are 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.	SS (In-charge) SM	Excluded Continuous	---- 01	---- 08 hrs.
2	PM-A/PM-B	Continuous	01	08 hrs.
3	GK(RV-213)	E.I.	01	12hrs.
4	GK(RV-214)	E.I.	01	12 hrs.

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 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.
- (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.

6.2 **CONDITIONS FOR GRANTING LINE CLEAR: -**

The conditions laid down in GR:3.49(4) ,8.01(1)(a),(b)(c), 8.01(2)(b),8.03(2),(a),(b),(c),8.03(1)(a),(b)(c)(ii) shall be complied before the line is considered clear and 'Line Clear' is granted for a train by on duty SM. Reception of train is governed by rules laid down in GR 3.36, 3.38, 3.40, 3.46 and 4.17 with relevant SRs. 3.36.01, 3.36.04(a) 3.40.01 to 3.40.03,3.42.02(a)(iv), 4.42.03 and other relevant provisions General and Subsidiary Rules, Block Working Manual, Operating Manual & Station Working Rules.

- [A] **For double line Section-** (AMB- LJR and AMB-DKLU)
Before granting line clear for a train, the SM on duty shall ensure that-
- i) The whole of the last preceding train has arrived complete inside the BSLB in case of a DN train and outermost point No19A in case of an UP train.
 - ii) All necessary signals have been put back to 'ON' behind the said train.
 - iii) The line is clear up to the outermost point No19A for UP trains & up to the BSLB for DN trains.

[B] **For Single Line Section-** (AMB- VAL Refinery plant siding)

- 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) Block section is clear of trains running in the direction towards the block section for which such line clear is being given.
- iv) The line is clear up to the advanced starter of station nearest to expected train i.e. UP Advanced starter signal No-47.

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 driver is notified of the fact in writing by the SS/SM on duty of the station to which such line clear is granted.

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

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

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.

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) Shunting shall not be permitted at DKLU end of the yard unless the engine is leading towards falling gradient.
- (ii) UP trains running through the common loop at the station is strictly prohibited.
- (iii) 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.

6.2.1.7 SPECIAL INSTRUCTIONS: -

- (i) After a non-signal movement has taken place over a point, SM on duty shall operate the point to normal and reverse position for ensuring the correct setting and indication on the panel. Then after, further signal movement may be permitted over the point.
- (ii) 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.

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.CRS, SE Circle/Kolkatta's dispensation vide letter No.431 of 01.08.2008 obtained for adequate distance.)

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 (UP Loop)	Foot of the UP starter signal No.7	Up advanced starter No.13 Or Up to the end of overrun line.	--	--
2.	Line no. 2 (UP Main line)	Foot of the UP main line starter No. 7	UP advanced starter signal No. 13	--	--
3.	Line No. 3 (DN Main line)	--	--	Foot of the DN starter signal No.12	DN advanced starter signal No. 14.
4.	Line No. 4 (Common Loop)	Foot of the UP Starter Signal No. 9	Up to the end of Dead end of ORL	Foot of the DN starter signal No. 8	DN advanced starter signal No. 14 or up to Derailing switch
5.	Line No. 5 (Goods Common loop-1)	Foot of the UP starter signal No. 43	Up to MVAA end	Foot of the DN starter signal No. 48	DN advanced starter signal No. 14 or up to Derailing switch
6.	Line No. 6 (Goods common loop-2)	Foot of the UP starter signal No. 41	Up to MVAA end	Foot of the DN starter signal NO. 46	DN advanced starter signal No. 14 or up to Derailing switch

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 SM on duty shall nominate a clear line in consultation

with the Section Controller on duty. 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 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/C40 (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.

(Calling on signals have been provided below starter signals No-41 & 43 vide CRS, SE Circle's dispensation letter No.431 of 01.08.2008.

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.

6.4 SIMULTANEOUS RECEPTION, DESPATCH, CROSSING & PRECEDENCE OF TRAINS (GR 3.47): -

1.	While Receiving of an Up train on line No.1 (UP loop) set to ORL.	Receiving / Dispatching of DN train from the line No.3 or 4 or 5 or 6 OR Dispatching of UP trains from line No. 2 or 4 or 5 or 6.
2.	While Receiving of an UP train on line No.2 (UP Main).	Receiving / Dispatching of DN train from line No.3 or 4 or 5 or 6 OR Dispatching of UP trains from line No. 5 or 6 towards plant end.
3.	While Receiving of an UP train on line No.4 (common loop) set to ORL.	Dispatching of an UP trains from line No.1 or 2 towards DKLU end and Dispatching of UP trains from line No. 5 or 6 towards plant end.
4.	While receiving of an UP train on line No. 5 (goods common loop – 1) set to DS-44.	Dispatching of an UP trains from line No. 1 or 2 or 4 towards DKLU end.
5.	While Receiving of and UP train on line No. 6 (goods common loop – 2) set to DS-44.	Dispatching of UP trains from line No. 1 or 2 or 4 towards DKLU end.
6.	While Receiving of a DN train on line No. 3 (DN main) from DKLU end.	Receiving / Dispatching of an UP trains from line No. 1 or 2 and Dispatching of an UP train from line No. 5 or 6 towards plant end.

7.	While Receiving of a DN trains on line No. 4 (common loop) from DKLU end set to ORL.	Receiving/Dispatching of an UP trains from line No. 1 or 2 and Dispatching of an UP train from Line No. 5 or 6 towards plant end and Dispatching of DN trains from line No. 3.
8.	While Receiving of a DN train on line No. 5 (goods common loop-1) form DKLU end set to ORL of R4.	Receiving / Dispatching of an up train from line No. 1 or 2 and Dispatching of DN train from line No. 3.
9.	While receiving of DN train on line No. 6 (goods common loop-2) from DKLU end.	Receiving / Dispatching of an UP train from line No.1 or 2 and Dispatching of DN train from line No. 3.
10	While Receiving of a DN train on line No. 5 (goods common loop-1) from plant end set to ORL of R4.	Receiving/Dispatching of an Up train from line No. 1 or 2 or 4 OR Receiving / Dispatching of DN train from line No. 3.
11.	While Receiving of a DN train on line No. 6 (goods common loop-2) from plant end.	Receiving / Dispatching of an UP train from line No. 1 or 2 or 4 OR Receiving/ Dispatching of DN train from line No. 3.

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

- 7 **COMPLETE ARRIVAL OF TRAIN:** (Rule no. GR 4.16 SR4.16.01, 4.160.2.4.16.03, 4.16.04, 4.16.05,GR4.17&SR4.17.01,SR4.17.02,SR4.17.03, GR 14.10).

a) **STAFF RESPONSIBLE TO VERIFY COMPLETE ARRIVAL: -**
SM on duty.

b) **MODE OF VERIFICATION:**

Through AXLE COUNTER or through physical verification.

- 6.5.1 **L.V. VERIFICATION THROUGH AXLE COUNTER: -**

Entire block section at both sides of the station including Alumina plant side 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 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:-**

On occasions 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: -**

Dispatch 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 dispatch a train, the SS/SM on duty, having obtained line clear for that train, shall set the route for the outgoing train correctly and satisfy himself by observing the visual indication on

S.SAINI
DSTE/SBP

BIJENDRA MEENA
DEN(South)/SBP

SANDEEP KUMAR
DOM(M)/SBP

the panel board. He shall suspend all non-isolated shunting; ensure closure of traffic interlocked L.C.gate at that end of yard and the Engg. LC gate 261/11-13(UP),261/12-14(DN) for dispatching train to AMB-LJR section and then 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 Loco Pilot shall start his train. He shall also ensure closure of Traffic LC. Gate and Engg. LC. Gate at Km.263/33-264/3(UP),263/34-264/2(DN), 264/41-43(UP),264/42-44(DN),270/11-12&270/15 for dispatching of trains to AMB-DKLU section.

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/dispatch 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 Loco Pilot 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. The 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 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 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 SR 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.

6.8.2 TRACK CIRCUIT:

In the event of failure of track circuit in the yard concerned signal shall be suspended and trains shall be admitted on calling-on signal. If calling-on signal fails then train shall be piloted 'IN'. Before piloting a train in to the yard the clearance of the track must be ensured by physical verification.

6.8.3 AXLE COUNTER:

In the event of failure of axle counter of concerned block section SM on duty shall initiate resetting of axle counter after ensuring the complete arrival of the train by SM of other end Station. After resetting the first train will be piloted 'OUT' to the concerned Block section for normalising the system of working. In case failure of Axle counter Block instrument of concerned block instrument of section shall be suspended. Details of operations involved in resetting of axle counter are given in Appendix-'B'.

6.8.4 DEFECTIVE SIGNALS:

When signals become defective, the procedure laid down in GR & SR shall be followed. A signal in the OFF position is the final indication that the points are correctly set for the route, for which it applies. If, it is found impossible to take OFF a signal the setting of points on the route to which it applies shall be inspected by the Station Master on duty before the signal is declared as defective irrespective of what is indicated by the position of the route. [Refer GR 3.68 to 3.46, 3.52 to 3.56, 3.71, 3.80 and SR 3.68.01 (c)].

In case of disconnection of signal and interlocking for repairs and maintenance, procedure laid down in GR and relevant SRs shall be followed.

In the event of signal showing no lights, Station Master on duty shall before giving line clear, initiate action in accordance with the procedure prescribed in GR and the relevant SRs. [Refer GR 3.51, 3.69, 3.49 (4), 3.68 to 3.77].

6.8.5 BLOCK INSTRUMENT:

In the event of partial interruption/ failure of block instrument the concerned block instrument shall be suspended till its rectification and trains shall work as per GR. [Refer SR 6.02.06].

Both UP and DN advanced Starters are electrically interlocked with respective block instruments so that the same cannot be taken off unless the concerned block instrument is in line clear position. When the block instrument is suspended in 'Line clear' position, the concerned advanced Starter signal must also be treated as suspended.

During the failure of Block Instrument the authority will be T/369(3b) with identification number & Private Number issued from the station in advance written both in figure and words. In case of failure of Block Instrument between AMB and VAL siding, the authority will be paper line clear ticket.

UP and DN Home signals are electrically interlocked with respective block instrument can be normalised from 'TRAIN ON LINE' to 'LINE CLOSED' position, when the corresponding Home

signals are in the 'ON position. However, the Home signals can be taken off in case of failure of the block instruments.

6.8.6 DEFECTIVE INTERLOCKING:

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 SM on duty shall be responsible for correct setting, clamping and padlocking of points for admission of train.

6.8.7 DEFECTIVE/DAMAGED POINTS:

When any point fails to operate normally by the route setting operation through panel it is inevitable to operate the points with crank handle. The SM on duty shall personally ensure clamping and padlocking of all facing and trailing points on the route. Crank handles are interlocked with signals and interlocking system. When points become defective, the signals controlling these points shall be considered defective and vice-versa and the procedure for use of crank handle for motor operated points shall be followed as per operating manual para-20.06.

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

6.8.8 RECEPTION OF A TRAIN ON BLOCKED LINE:

Whenever trains are to be admitted on an obstructed line the SM on duty shall authorize the on duty TPM with form T/509 indicating the reason for such admission the line number and the nature of obstruction on that line.

A stop hand signal shall be exhibited by the SM on duty at a distance of not less 45mts. from the point of obstruction to indicate to the Driver as to where the train shall be brought to a stand.

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 point levers and lock levers 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 loco Pilot 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.
- (c) Rail Dolleys will work in accordance with Subsidiary Rules 15.27.10.

The following precaution must be taken:

- (i) The section where axel counters are provided in lieu of track circuits, trolleys, motor trolleys, Lorries etc. which are insulated, shall not be allowed to run except on line clear.
- (ii) Motor trolley/ tower wagon/material Lorries are not likely to actuate the axel counter correctly. When they are to run over the sections split by axel counters, the whole section to be treated as one and next train is to be started after the first train has arrived complete.
- (iii) In all other respects the working of a light motor trolley shall conform to the rules laid down for ordinary trolleys while running without block protection and to rules laid down for motor trolleys while running under block protection or following another light motor trolley or a motor trolley.

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, signal 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, 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.

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 in rear 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 from vehicles on running line is prohibited unless permitted by Sr. DOM / SBP vide SR 5.19.01. At stations where loading and unloading of goods is permitted whether full rake or part thereof, the station master shall ensure that no goods are left fouling any line before and after clearance of the rake from the line. The railway servant supervising loading and unloading shall also ensure that consignment does not foul any line vide SR 5.19.001: (a).

If the stations are on gradients, the rake should be properly secured as detailed in SR 5.23.01. During the time of loading / unloading, the station master shall ensure isolation of the lines(s) as detailed in SR 3.51.06.

8.0 **SHUNTING: -**

8.1 **GENERAL PRECAUTIONS.**

Shunting will be carried out at the station in accordance with General Rule and relevant Subsidiary Rules and Block working Manual [Refer GR 3.46, 3.52 to 3.56, 5.13 to 5.23, 8.09 to 8.15] The Guard, SS, SM and TPM on duty is authorized to supervise shunting operation. Normally shunt signals and shunt below starters shall be used for shunting operations.

In case failure of shunt signal/starter signals the authority for shunting is a shunting order (T-806) to be issued by the SM on duty, which shall be withdrawn after completion of shunting, or in need when train movement is involved to receive/dispatch trains on the adjacent line. The same shall be cancelled and pasted to its record foil.

The SM on duty and the official supervising shunting shall cooperate with each other regarding shunting operations. Neither reception signals nor departure signals shall be taken 'OFF' unless the shunting is isolated and the path of incoming or outgoing train is free from obstructions.

NOTE :

The official supervising the shunting shall ensure the correct setting, clamping and padlocking of points in case of non signaled movements.

8.2 **SHUNTING IN FACE OF AN APPROACHING TRAIN:**

Shunting in the face of an approach train is strictly prohibited.

8.3 **PROHIBITION OF SHUNTING ANY SPECIAL FEATURES IF ANY:**

- (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 **SHUNTING ON SINGLE LINE:-**

- (i) Shunting in Station Section i.e. within Adv. Starter signals is permitted provided no line clear is given for a train.
- (ii) The line outside the station section and upto the Home Signal shall not be obstructed unless a Railway Servant specially appointed on his behalf by the Station Master on duty who is the in-charge of the operations and unless the block section into which the shunting is to take place is clear of approaching train and all relevant & necessary signals are kept at "ON" position (GR 8.12).
- (iii) In case the block section between is clear, shunting can be performed beyond Adv. Starter after blocking back the section under exchange of private number.
- (iv) The line outside the first stop signal shall not be obstructed unless line has been blocked back under exchange of private number.

1.5 **SHUNTING ON DOUBLE LINE:-**

- (a) Shunting in Station Section is permitted provided no line clear is given for a train.
- (b) When line clear has been given, no shunting shall be permitted in the block section in rear vide GR. 8.05[2].
- (c) Shunting or obstruction for any other purpose shall not be permitted in block section in rear unless it is clear and blocked back.
- (d) Shunting or obstruction for any other purpose shall not be permitted in block section in advance unless it is clear and is block forward vide GR 8.06.(3).

8.6 **SHUNTING IN THE SIDING**

While shunting in the Sick line, relevant provisions of GR 5.14 and SRs thereto to be followed. In case of failure of shunt signals all facing and trailing points of the route shall be clamped and padlocked.

8.7 **DURING FAILURE OF BLOCK INSTRUMENT ON DOUBLE LINE: -** the SM on duty shall ensure that there is no train in the block section and the last train has arrived complete clearing the fouling mark while conducting shunting at that end of the block section of which block instrument has been suspended and all necessary precautions have been taken as per rules laid down in GR.

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 TO 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 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.

After sending a train on Block ticket, a following train shall not be dispatched in the same direction unless:

- i) The previous block ticket is collected & cancelled, or
- ii) Necessary endorsement is given on the previous block ticket with the advise to wait at the site for a next train to follow, or
- iii) The previous train has met with an accident or has been disabled, or
- iv) The block ticket has been collected from the Loco Pilot of the previous train by the official in-charge at the site & kept in the personal custody & shall be kept until the arrival of the next train & such assurance is given over the telephone installed at the site quoting the serial number of the Block Ticket so collected.

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 Loco Pilot/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/Loco Pilot then SM on duty may resume normal working after exchanging proper messages supported by Private Number.

[iii]. **TRAINS DELAYED IN BLOCK SECTIONS**

If a train carrying passenger does not arrive within 10 minutes or if a goods train does not arrive within 20 minutes after allowing for its normal running time from the station in rear, the SM at the station in advance shall immediately advise the station in rear and the control this fact. There after SMs at either end of the Block section shall immediately stop all trains proceeding in to the block section on adjacent line in either direction and warn the Loco Pilots and Guards of such trains by issue of suitable Caution Orders. [Refer GR 6.04 & SRs thereto]

[IV] **FAILURE/PASSING OF INTERMEDIATE BLOCK STOP SIGNAL AT ON: - Detailed working in given App-F**

[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 given in Para No.4.1.14 (Main body) & Appendix 'B' of SWR. Procedure for emergency operation of points with point zone axle counter/Track circuits failure and emergency route release.[GR 3.39 and GR 3.77]

(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 SM on duty. After satisfying himself 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 points, Track circuits/axle counter or any interlocking gear at station, the failure should be reported by SM on duty to the concerned Signaling Maintenance Staff on duty responsible for attending to the failure through a memo as per G & SR 3.68.04 and only after receipt of the written memo from the Signaling Maintainer for rectification of the fault, SM should restore the normal working.

The entries in failure register shall be made with message to the section controller.

9.1 **TOTAL FAILURE OF COMMUNICATION: -**

In the event of total interruption of all communications occurring between AMB – DKLU or AMB -LJR stations, i.e. when line clear cannot be obtained by any one of the following means stated in order of preference, viz.

- (a) Block Instruments, Track Circuits or Axle counters,
- (b) Telephone attached to the Block Instruments,
- (c) Station to station fixed telephones wherever available,
- (d) Fixed telephones such as Railway auto phones & BSNL phones,
- (e) Control telephone, and
- (f) VHF sets.

The trains shall be worked in terms of GR.6.02.03, which is summarized in brief as follows:

- (i) Each train before being allowed to enter into the Block Section should be stopped and the Guard and Loco Pilot of the train apprised of the situation.
- (ii) The SM will hand over an authority for T/C-602 working of train during total interruption of communication to the Loco Pilot of each train which shall include-
 - a) Authority to proceed without 'Line Clear'.
 - b) Authority to pass the Last Stop Signal at its "ON" position, i.e. T/369(3b).
 - c) A caution order restricting the speed to 25KMPH by day when view ahead is clear and 10KMPH by night or when view ahead is not clear.

- 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 dispatch 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.
 - iv) 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.
 - v) On arrival at the next block station the Loco Pilot shall hand over the 'Authority for working of trains during total interruption of communication in double line section' to the 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. The section controller shall be advised of the position immediately on restoration of communication with him.
- (B) **In the event of total interruption of all communications between AMB and Alumina Plant Cabin**, action is to be taken as per SR 6.02.04. The train, which is to be dispatched to the affected section, will be stopped before the train is detached the Loco Pilot and Guard shall be informed of the situation. SM on duty shall hand over to the Loco Pilot / Motorman / Guard/ SM of the light Engine / train engine / Motor trolley / Tower wagon etc going to open communication "an authority for opening communication during total interruption of communication of single line section which includes.
- i) An authority to proceed without line clear.
 - ii) A caution order restricting the speed to 15 KMPH by day when view ahead is clear and 10 KMPH during night or when view is obstructed addition to other speed restrictions in force.
 - iii) An authority to pass the last stop signal at 'ON' position.
 - iv) A line clear Enquiry message addressed to the SM of the block section at the other end asking for line clear for the train waiting to be dispatched.
 - v) Conditional line clear message for the light engine to return with or without a train attached supported by a Private Number.

On arrival of the engine at the next station the conditional line clear message and enquiry message shall be collected by the Station Master on duty who shall prepare a conditional line clear ticket for engine to return either light or with train attached and conditional line clear reply message for the enquiry message giving line clear for the train waiting at other station shall be handed over to the Loco Pilot of light engine. On return trip the driver will come on booked speed subject to speed and other restrictions in force. If there be an even flow in both directions, enquiry and conditional line clear message for each succeeding train may be sent through the Guard of the preceding train. If the station master at one end has more than one train to dispatch following trains. It must be started that these later trains will be dispatched after the first train at an interval of 30 minutes.

When dispatching the second and subsequent train, particulars of last preceding train along with its departure time will be endorsed and a caution order restricting the speed to 25 KMPH over straight when view ahead is clear and 10 KMPH, when the view ahead is not clear it to be issued. While adopting this procedure the guard and Loco Pilot should be instructed to keep a 'sharp' lookout and be prepared to stop short of any obstruction. Trains must continue to work on this system until any one of the means of communication is restored.

As soon as any one of the means of communication has been restored, the conditional line clear working of trains shall be cancelled when there is no train in the affected block section and message shall be exchanged supported by Private Number keeping section controller informed.

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 AMB - LJR or AMB - DKLU 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 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 SM on duty proposing single line working must issue a message containing the following information under exchange of private numbers to the 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 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 Loco Pilot must be given the following documents: -
- a) Paper Line Clear Ticket (T/D 602).
 - b) 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.
 - c) An authority 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.
- 9.2.7 In case of train proceeding on wrong line the train shall be piloted in on the, written authority issued by the SM.
- 9.2.8 On being ensured that the obstructed line is clear of all obstructions the 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 dispatch 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: NA

- i) V.T.O. post / Authorised substitutes earmarked to work as V.T.O. Post. – The lights of Line No.1 starter signals on both ends are earmarked to serve as VISIBILITY TEST OBJECTS vide GR 3.61 (2) (b) (ii).
- ii) Distance between CSB and V. T. O. post: - 180 Mts.
- iii) Station Master on duty will test the visibility during thick and foggy weather and if visibility is impaired, he will work as per GR 3.61 and SRs thereto.

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 AMBODALA 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 COLLOISION 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 L.C.GATES TOGETHER WITH INSTRUCTIONS TO THE OPERATING STAFF (INCLUDING L. C. GATE MEN) ABOUT THEIR NORMAL WORKING, THEIR MAINTENANCE & THEIR WORKING INCASE OF FAILURES EMERGENCIES WITH SPECIAL PROVISIONS, IF ANY.

1.0 GATE WORKING INSTRUCTIONS OF “C” CLASS ENGG. NON-INTERLOCKED LEVEL CROSSING GATE AT KM 261/11-13 (UP), 261/12-14 (DN) Km. (No.RV-212) BETWEEN LANJIGARH ROAD – AMBODALA STATIONS.

1. GENERAL INSTRUCTIONS: -

1.1 DESCRIPTION OF THE LEVEL CROSSING GATE:

1. Number of Level Crossing Gate: -	RV-212.
2. Engineering or Traffic Gate: -	Engineering.
3. Under control of Station Master/Permanent Way Inspector:-	PWI.
4. Location KM	Km.261/11-13(UP), 261/12-14 (DN)
5. At. Station	-----
6. In between stations:	LJR-AMB
7. BG/MG/NG	BG.
8. Single line/Double line/Multiple line	Double Line
9. Normal Position	Closed to road traffic
10. Interlocked/Non Interlocked	Non-interlocked
11. Means of interlocking	NIL
12. Provision of Gate signal at Kms	i) Up line NIL ii) Dn line NIL
13. Signalling arrangement	NIL.
14. Means of Communication – Telephone/Bell etc	Telephone Communication from Gate Goomty with SM / AMB.
15. Width of level crossing Gate	7.5 Meters
16. Type of road. (NH/SH/Others)	Others
17. Name of Road:	Village Road
18. Metaled/Non Metaled	Metaled
19. Approach Road:	Metaled
20. Width of the road:	5.5 m
21. Angle of road crossing (In case of the skew Gates)	Nil.
22. Road gradient (If any)	i) North/East side:-1 in 30 ii) South/West side:- 1 in 30
23. Road alignment (Straight/Curve): -	i) North/East side:- Curve ii) South/West side:-Straight
24. Provision of height gauges	Provided
25. Type of Barriers	Winch Operated Lifting barriers
26. Length of check rails	9.5 Meter
27. Road surface in between Level X-ings Gates	CC Blocks
28. Length of speed breakers: -	5.5 Meters
29. Road signs:	Provided
30. Speed breaker indication board	Available
31. TVU:	12635 on 02/2022
32. Census next due on	02/2025
33. Demarcation for placement of Detonators	Provided.

- | | |
|---|---------------------|
| 34. No. of Gateman working | 02(12 Hours shift). |
| 35. Nearest Railway Medical Assistance | Titlagarh. |
| 36. Nearest Private Medical Assistance available (if any) | Lanjigarh |
| 37. List of equipment available Yes//No | Yes. |

1.2. **EQUIPMENT:**
ITEMS

QUANTITY/NUMBERS

- | | |
|--|---|
| 1. Tri Colour Torch | 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. Spare 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 padlocks to be used in case of failure of 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) Gateman Rule 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 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.

3. **ROUTINE DUTIES OF GATEMAN:**

- i) Gateman shall ensure that red banner flag by day and red light by night is placed across the track whenever the gate is kept in open condition for passage of road vehicles.
- 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) 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.
- vii) 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.
- viii) Gateman shall wear badge and prescribed uniform while on duty at level crossing gate.
- ix) Gateman shall ensure that he is having competency certificate in his possession while on duty.
- x) Gateman shall work the gate as per gate working instructions and remain well conversant with these instructions.
- xi) Gateman shall ensure that equipment supplied at the gate is in good order and ready for immediate use.
- xii) Gateman shall see that the channel for the flange of the wheel is kept clear.
- xiii) Gateman must keep the road surface well watered and rammed in case of unmetalled roads.
- xiv) Gateman must be vigilant to see that inconvenience to road users due to closure of gates should be to the minimum possible extent.
- xv) Gateman shall prevent trespassing by persons or cattle to the maximum extent.

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

In case gateman observes anything unusual with a passing train, he shall take following action:

- i) He shall take prompt action to warn the Loco pilot/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 Loco pilot/guard by whistling continuously, shouting, gesticulating, and throwing ballast on the brake van or by any other means.
- iii) If Loco pilot/guard fails to take notice, gateman shall immediately inform the SM/ AMB, 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 Loco pilot/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/ AMB, 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/ AMB on duty, regarding the defects/obstructions at the gate, under exchange of private number.
- iii) If there is no response from the SM/ AMB after three attempts, he shall first protect the gate and then inform on phone.

B. **ON ELECTRIFIED SECTION.**

- i) On noticing that, the whole or part of the OHE or a feeder or a cable facing down , the gate keeper shall ensure that , as far as possible, human beings, animals or vehicle etc. Are kept away in order to avoid any contact with the live equipment.
- ii) As soon as it noticed that, Pantograph of an electric rolling stock getting damaged/or entanglement of the same with the OHE, he shall make every possible effort to stop the train and immediately inform the SM on duty.
- iii) Any damage to the track or structures of the OHE comes to the notice of on duty GK, He shall immediately inform SM on duty and take all to be necessary measures for the portion of line as under.

The gateman shall protect the line as under:-

B) ON DOUBLE LINE SECTION: -

- 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 on posts duly provided for the purpose. He shall first protect the direction from which a train is expected to arrive first.
- ii) Then he will similarly plant the other red banner flag by day and red light by night towards the other direction 5 meters away from the site of obstruction.
- iii) Gateman shall then proceed to protect the gate along with detonators 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 towards the direction, which a train is expected to arrive first, to a point 600 meters and place one detonator on the line. Thereafter he shall proceed to a distance 1200 meters 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, which was placed at boom.
- v) Thereafter, he shall proceed towards the other direction, showing red hand signal, similarly place detonators as described in (iv) above and return to the site of obstruction, picking up the intermediate detonator on his way back.
- vi) Having returned to the gate, he must then take steps to remove the obstruction and warn the Loco pilot 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 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/ AMB and Permanent Way Inspector regarding the particulars and obstructions at the level crossing gate, through messenger or other means available.

1.5 ENGINEERING ITEMS:

i) **Visibility :-**

Direction	Side	Visibility Distance
UP	Right	1000 m.
	Left	950 m.
DN	Right	1000 m
	Left	800 m

- ii) Speed Breaker: - Speed Breakers of approved design are provided on either side of this Level Crossing gate.
- iii) Periodical Census of traffic has been taken and the latest TVU is 12635 on 02/2022.

1.6 SPECIAL INSTRUCTIONS:

1. MODE OF OPERATION:

This is a Non-interlocked 'C' Class Engineering L.C. Gate situated at 261/11-13 (UP), 261/12-14 (DN) between AMB-LJR stations. This gate is provided with winch operated coupled lifting barriers. The gateman closes and opens the lifting barriers of gate manually by operating the winch. Telephone connection is provided between the L C. gate lodge and SM's office at SM/ AMB station. The level crossing gate is normally closed to road traffic. The SM/ AMB shall not permit any train to enter the block section, unless he is assured of the closure and locking of the gate by the gateman supported by exchange of private number. When the gateman desires to open the gate for passage of road traffic he should ensure that no PN has been exchanged with the SM/ AMB for the passage of train or the whole of the train with last vehicle indicator has passed over the level crossing gate for which the gateman has exchanged private number with the SM/ AMB. Before opening the gate for road traffic, he shall display banner flag/danger signal at either side of the track at a distance of 5 meters away from the gate.

2. EXCHANGE OF PRIVATE NUMBERS.

- (i) The normal position of level crossing gate being "Closed to Road Traffic" it should always be in closed condition against road traffic, except when, it is opened for passage of road traffic over the level crossing, subject to conditions prescribed below.
- (ii) The SM/ AMB before permitting each train to enter into the block section, shall ask Gateman on the telephone by giving a Private Number whether, gate is closed against road traffic for the passage of train. The Gateman only after ensuring that the gate is actually closed and locked against road traffic shall give a Private Number to the SM/ AMB in assurance of gate being closed and locked against road traffic.
- (iii) The SM/ AMB shall not permit any train to enter the block section, unless he is assured of the closure and locking of the gate by the gateman supported by exchange of private number.

- (iv) When the gateman desires to open the gate for passage of road traffic he should ensure that:
 - (1) He has not exchanged any private number with the SM/ AMB as per (ii) above.
 - (2) If he has exchanged private number with the SM/ AMB, the whole of the train with last vehicle indicator has passed over the level crossing gate and SM/ AMB has not exchanged private number with him for any other movement immediately in rear of that train or on the adjacent line.

Before opening the gate for road traffic, he shall display banner flag/danger signal at either side of the track at a distance of 5 meters away from the gate. Then he shall open the gate for passing the road traffic, keeping a red flag / red hand signal lamp ready in his hand to stop approaching train if any.

- (v) In case the Gateman is not responding on the telephone or in case the telephone becomes defective or private number is not received from the Gateman, the SM/ AMB shall adhere to the procedure prescribed in SR 16.03.04.
- (vi) In the event of failure of telephone, if the gate is required to be opened for the passage of road traffic, the gateman shall look out in both directions before opening the gate to ensure that no train is approaching from either end. He shall then plant a banner flag during day and a hand signal lamp with the red light during night, 5 meters away from the gate on the track on either side. He will thereafter, open the gate for passing the road traffic keeping a red flag / red hand signal lamp ready in his hand to stop approaching train if any.

3. **FAILURE OF TELEPHONIC COMMUNICATION:**

When Telephonic Communication fails or SM/ AMB does not get any response from the Gateman despite 2 or 3 attempts, the following procedure shall be adopted:

- a) SM/ AMB shall serve a caution order to the Loco pilot and the Guard of every train proceeding into the affected section giving the number and kilometreage of the level crossing and directing the loco pilot:-
 - (i) To whistle frequently to attract the attention of the gateman,
 - (ii) To proceed cautiously, and stop 30M. short of the level crossing and be guided by hand signal.
- b) (i) The Loco Pilot after stopping, if the gateman is available and apparently in a fit condition to continue his duty and the gates are closed, shall arrange to advise the SM/ AMB as the case may be of the fact using the telephone provided at the gate. The SM/ AMB on receipt of such an advice from the Loco Pilot shall discontinue issue of caution order to the following trains provided the acknowledgement of the gateman is available over the telephone.
 - (ii) In the above circumstance, the Loco Pilot should not stop his train at the next station to advise the Station Master.
- c) (i) If the loco Pilot does not find the gateman at the level crossing or if the gateman is apparently unfit for duty and the gates are not closed, he shall depute his Assistant, the Loco Pilot shall seek assistance of the Assistant Guard or Guard of the train. The same should be informed to the SM/ AMB on gate telephone.
 - (ii) The Loco Pilot, after being hand signaled, shall pass the level crossing and stop clear of it by at least 2 bogie lengths to pick up the Assistant or Assistant Guard / Guard, as the case may be. The Railway servant deputed for closing the gate shall reopen it for road traffic after the passage of the last vehicle of the train.
 - (iii) If, however, the telephone is out of order or the gateman is not available or is apparently unfit to continue his duty and intimation of the fact could not be given to the SM/ AMB from the gate, the Loco Pilot shall stop his train at the next station (even if it is through passing station) and give a memo to the Station Master/ LJR indicating the condition of the gateman, gate and telephone.
 - (iv) The SM/ LJR on receipt of the Loco Pilot's report regarding absence or unfitness of the gateman, shall advise the station Master/ AMB, the Notice Station, the Section Controller, JE/SE/SSE (P.Way) and AEN concerned and the Gangmate of the nearest

gang for immediate posting of a gateman. He shall also inform the maintenance staff to attend and repair the telephone, if required. Issue of caution order should continue till normal working condition is restored.

- d) Before giving line clear to a train, the SM/ LJR shall advise the Station Master/AMB of the facts by message supported by a Private Number, and obtain his acknowledgement with a Private Number. The latter shall issue a caution order to the Loco Pilot as detailed in Para (a).
- e) Necessary entries shall be made in the Caution Order Register, Station Diary or Signal Failure Register as the case may be by Station Masters at either end of the affected station. The Section Controller shall also keep a note in his chart indicating the action taken by him.

4. **FAILURE OF LIFTING BARRIERS:**

- i) When the Gate cannot be closed due to failure of lifting barriers, The Gateman will immediately inform the SM/ AMB, under exchange of Private number, and ensure that lifting barriers 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, he shall show green hand signal flag by day and green light by night to the Loco pilot of an approaching train.
- v) Station master on duty / AMB shall issue caution order to the Loco pilot of departing DN train.
- vi) The SM/ AMB shall also advise the Station Master/ LJR at the despatching end, under exchange of private number, to similarly issue a caution order to the Loco pilot before despatching an UP train into the block section from his end.
- vii) The SM/ AMB should also advise maintenance staff responsible for maintenance of the lifting barriers to rectify the defect at the earliest.
- viii) Normal working will be resumed only after maintenance staff rectify the lifting barriers and issue reconnection/fit memo for the same.

5. **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 SM/ AMB on duty regarding the defects/obstruction at the Gate under exchange of private number.
- iii) Station master at AMB on duty shall be advised to put the departure signals back to 'ON' position, if taken 'OFF' for a train.
- iv) If there is no response from the SM/ AMB after two or three attempts, he shall first protect the Gate and then inform him on phone.
- v) Gateman shall then rush with detonator 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 relay these details to the SM/ AMB who shall not allow 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 SM/ AMB shall also inform the station Master/ LJR 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 obstruction.
- ix) After the track has been cleared of all obstructions the Gateman shall inform the SM / AMB accordingly under exchange of private number.

- x) Gateman shall secure the Gate against road traffic by means of safety chains and padlocks and thereafter exhibit green hand signal, if the Gate is not obstructed.
- xi) The SM/ AMB shall advise maintenance staff responsible for maintaining the lifting barriers Gates to repair the same at the earliest.
- xii) Normal working will be resumed only after maintenance staff rectify the defective lifting barriers and issue reconnection/fit memo for the same.

6. **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 SM/ AMB will adopt the procedure given under item No.5 above. If the obstruction fouls the level Crossing Gate, Gateman must keep the Gates closed against road traffic till the track is cleared of obstructions.

7. **ACCIDENTAL ROLLING DOWN OF THE TRAINS:-**

When the gateman seen that a train is rolling down or immediately after reception of the information about accidental rolling down of the train the government shall:-

- i) First close the gate against the on duty.
- ii) Then immediately inform the SM on duty.
- iii) He shall not open the gate till he ensured that the train has completely stopped.

CERTIFICATE:- NOTHING IN THESE RULES SHALL BE READ AS CANCELLING AMENDING OR MODIFYING ANY GR & SR'S ANY OTHER RELEVANT RULES.

2.0. WORKING INSTRUCTIONS OF 'B1' CLASS TRAFFIC INTERLOCKED LEVEL CROSSING GATE No.RV-213 AT KM 262/49-51(UP), 262/50-52(DN) OF AMB STATION YARD AT LJR END.

2.1. GENERAL DESCRIPTION.

2.1.1 DESCRIPTION OF THE LEVEL CROSSING GATE: -

1	No. of Level Crossing Gate	:	RV-213
2	Engineering or Traffic gate	:	Traffic
3	Under control of station master or PWI.	:	SM/ AMB
4	Location at Km.	:	262/49-51(UP), 262/50-52(DN)
5	At station	:	AMB
6	In between station	:	AMB-LJR
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	:	EKT
12	Provision of gate single at Km.	:	NIL
13	Signaling arrangement	:	MACLS
14	Means of communication Telephone.	:	Telephone connection with SM Office/ AMB
15	Width of the level crossing gate	:	5.5m.
16	Type of road	:	Others (Panchayat)
17	Name of road	:	AMBODALA 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. --- 1 in 1000 [b] South /West Side. --- 1 in 1000
23.	Road alignment (straight/Curve)	:	[a] North/ East Side - Straight [b] South/ West Side – Straight
24.	Provision of height gauges	:	Provided
25.	Type of barriers	:	Electrically operated Lifting barriers
26.	Length of check rails	:	7.5 Mtrs.
27.	Road surface in between L.C.gates.	:	CCB
28.	Length of rumble strip/ speed breakers.	:	5.5 Mtrs
29.	Road signs	:	Provided
30.	Speed breakers indication board	:	Provided
31.	TVU	:	25570 on 10/2021
32.	Census next due on	:	10/2024
33.	Demarcation for placement of detonators.	:	Provided
34.	No. of gateman working	:	02(12 Hours shift)
35.	Nearest Railway Medical Assistance	:	Rayagada
36.	Nearest Private Medical Assistance available (if any)	:	AMBODALA
37.	List of equipment available (Yes/No)	:	Yes

2.2 ESSENTIAL EQUIPMENTS:

Sl.No.	Description	Requirement	To be used as
1.	LED Tri colour hand signal lamps	Two	One for use and another for spare.
2.	Green Hand Signal Flag	One flag mounted on sticks	To hold in furred condition while passing train.
3.	Red Hand Signal Flag	Two flags mounted on sticks.	One to hold in furred condition and another for spare.
4.	Red Banner Flag mounted with sticks.	Double Line-2	In case of obstruction, it is to be displayed on either side of the line.
5.	Spare chains with padlocks.	2 chains with 2 padlocks.	For securing gate against road traffic in case of gate boom cannot be closed.
6.	Stop Boards.	2 retro reflective stop boards with stands.	To display towards road traffic when gate is secured by gate chains due to failure of booms.
7.	Padlock	One	To lock the door of the gate lodge in case of necessity.
8.	Detonators.	Ten (10) in a tin case.	For use in case of obstruction of track.
9.	Tommy Bar	One	For levelling the soil surface or to clean the channels of rails.
10.	Bucket	One	To keep water.
11.	Whistle	One	For alerting road users on approach of train and LP/ Guard to call their attention.
12.	Wall Clock	One	To note down the timings in PN/Log book.
13.	A small size chain for use in case of failure of gate boom lock.	Two	For securing boom in closed condition in case of failure of boom lock.

2.3 RECORDS TO BE KEPT AT GATE LODGE:

In addition to the above equipment, following records shall also be kept at the gate lodge.

1. Gate working Instructions in Hindi / English.
2. Gate working instructions in local vernacular language.
3. Gateman Rule Book in local vernacular language.
4. List for tools and books.
5. Duty Roster.
6. Certificate for working as Gateman
7. Bio-data particulars of Gateman, including date of passing vision test, Initial/refresher course, safety camp, etc.
8. Accident Register.
9. Record of last census of road traffic at level crossing gate.
10. Public Complaint Book.
11. Inspection Book.

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.

3. **ROUTINE DUTIES OF GATEMAN:**

- i) Gateman shall ensure that red banner flag by day and red light by night is placed across the track whenever the Gate is kept in open condition in case of emergency and obstruction on the track.
- ii) Gateman shall ensure that Gate lamps and lamps of all gate signals 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 & 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) 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.
- x) Gateman shall wear badge and prescribed uniform while on duty at level crossing Gate.
- xi) Gateman shall ensure that he is having competency certificate in his possession while on duty.
- xii) Gateman shall work the Gate as per Gate working instructions and remain well conversant with these instructions.
- xiii) Gateman shall ensure that equipment supplied at the Gate is in good order and ready for immediate use.
- xiv) Gateman shall see that the channel for the flange of the wheel is kept clear.
- xv) Gateman must keep the road surface well-watered & rammed in case of unmetalled roads.
- xvi) Gateman must be vigilant to see that inconvenience to road users due to closure of Gates should be to the minimum possible extent.
- xvii) Gateman on electrified section shall watch that road vehicles/animals passing from 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 anything unusual with a passing train, he shall take following action:

- i) He shall take prompt action to warn the Loco Pilot/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 Loco Pilot/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 Loco Pilot /Guard by whistling continuously, shouting, gesticulating, and by raising both hands vertically above, quickly parting them & bringing them together in repeated Up & 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, gateman shall maintain the gate signals, if an, in the 'ON' position.
- ii) Thereafter, if he is unable to remove the obstruction, Gateman shall immediately advise the SM on duty 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. **ON ELECTRIFIED SECTION.**

- i) On noticing that, the whole or part of the OHE or a feeder or a cable facing down , the gate keeper shall ensure that , as far as possible, human beings, animals or vehicle etc. Are kept away in order to avoid any contact with the live equipment.
- ii) As soon as it noticed that, Pantograph of an electric rolling stock getting damaged/or entanglement of the same with the OHE, he shall make every possible effort to stop the train and immediately inform the SM on duty.
- iii) Any damage to the track or structures of the OHE comes to the notice of on duty GK, He shall immediately inform SM on duty and take all to be necessary measures for the portion of line as under.
 - a) **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 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 L.C. 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 Loco Pilot 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 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 & relay these details to the SM and PWI regarding the particulars and obstructions at the L.C.Gate, through messenger or other means available.

2.5 **SPECIAL INSTRUCTIONS:**

1. **MODE OF OPERATION:**

This is an interlocked L.C.Gate situated at the LJR end of the yard in between DN Starter and DN Advanced starter signal of AMB station. Telephone connection is provided between the L C. gate Goomty and SM's office of AMB Station. The level crossing gate is of electrically operated lifting barrier type and operated by means RED and GREEN push buttons from panel provided at the gate lodge. The normal position of the gate is open to road traffic.

When it is necessary to close the gate, for taking of signals, SM on duty LJR shall inform the gate man to close and lock the gate. The gateman shall close the barriers of the LC gate by pressing the RED push button provided on the gate panel till the gate is closed and locked. Gate man will keep the red push button pressed till gate is closed against road traffic and locked indication appears in the panel. The key "Q" thus extracted from EKT-2 is inserted in EKT-1 & transmitted electrically to SM in conjunction with switch "GS" switch reversed thus releases concerned signals. Switch 'GS' is provided at the gate lodge to put back the concerned signals to "ON" in case of emergency.

After passage of the Train, the SM on duty shall inform the gateman and press LC gate controlling button No.25 and Trans button and the gate man will extract the control key 'Q' from the EKT-1 . After getting the Key "Q" from EKT-1, the gate man will insert the key in the EKT-2 in panel and press the push button green till the gate is fully opened. Then closed and locked indication will extinguish on the panel.

The gate man on duty can operate the barrier-1 & barrier-2 switches for individual operation of barriers, if required.

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). During Non Interlocking working the 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/AMB 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/ AMB 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/ AMB 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/ AMB, which will enable him to take 'OFF' reception/Departure signals.
- iii) When sufficient time is not available because of greater frequency of train service, SM/ AMB will issue written authority to the train driver to pass the signal at 'ON' position.
- iv) In addition Station Master/ AMB shall also issue a caution order advising the Loco Pilot 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 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/ AMB shall advise the SM/LJR, under exchange of private number, that the telephone at the gate has failed.
- vii) The station Master/ LJR shall then issue a caution order to the Loco Pilot 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 to rectify the defect at the 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/ AMB, 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/ AMB shall issue a caution order to the Loco Pilot of a departing train.
- vi) He shall also advise the station Master/LJR at the despatching end, under exchange of private number, to similarly issue a caution order to the Loco Pilot before despatching an UP train into the block section from his end.
- vii) Station Master/ AMB will advise maintenance staff responsible for maintenance of lifting barriers to repair the defect at the earliest.
- viii) Normal working will resumed only after maintenance staff repair the barrier and issue reconnection/fit memo for the same.

Note:

Authority to pass signals at 'ON' position as per rules shall also be issued to the drivers of both departing and arriving trains.

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 / AMB 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/ AMB shall issue a caution order to the Loco Pilot of a departing train.
- iv) He shall also advise the station Master/LJR at the despatching end, under exchange of private number, to similarly issue a caution order to the Loco Pilot before despatching an UP train into the block section from his end.

- v) Station Master/ AMB will advise S&T staff responsible for maintenance of winch/ key transmitter to rectify the defect at the earliest.
- vi) Normal working will resumed 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 key transmitter then gateman must immediately inform the SM on duty/ AMB on telephone, under exchange of PN.
- 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/ AMB shall issue caution order to the Loco Pilot of a departing train.
- v) He shall also advise the station Master/LJR at the despatching end, under exchange of private number, to similarly issue a caution order to the Loco Pilot before despatching an UP train into the block section from his end.
- vi) Station Master/ AMB 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 operate the switch GS to put back the signals to ON position and then shall 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/ AMB on duty, regarding the defects/obstruction at the gate, under exchange of private number.
- iii) The Gateman will advise to Station master/ AMB on duty 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 / AMB after two or three attempts, he shall first protect the gate and then inform on phone.
- v) Gateman shall then rush with detonators 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 Instructions 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 & reply these details to the SM/AMB 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/ AMB shall also inform the station Master/LJR 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/ AMB accordingly, under exchange of private number.
- x) Station Master/ AMB shall then issue a caution order to Loco Pilots 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 there after exhibit green hand signal, if the gate is not obstructed.

- xii) Station Master/ AMB 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/ AMB will adopt the procedure given under item No.7 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 obstructions.

9 **ACCIDENTAL ROLLING DOWN OF THE TRAINS:-**

When the gateman seen that a train is rolling down or immediately after reception of the information about accidental rolling down of the train the government shall:-

- i) First close the gate against the on duty.
- ii) Then immediately inform the SM on duty.
- iii) He shall not open the gate till he ensured that the train has completely stopped.

Correction Slip No.04 Date of Issue: 17.06.2022
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3.0 **GATE WORKING INSTRUCTIONS OF 'A' CLASS TRAFFIC INTERLOCKED LEVEL CROSSING GATE AT No RV-214 AT KM 263/33-264/3(UP), 263/34-264/2 (DN) OF AMB STATION YARD AT DKLU END.**

3.0 **GENERAL DESCRIPTION-**

3.1 **DESCRIPTION OF THE LEVEL CROSSING GATE: -**

1	No. of Level Crossing Gate	:	RV-214
2	Engineering or Traffic gate	:	Traffic
3	Under control of Station Master or PWI.	:	SM/ AMB
4	Location at Km.	:	263/33-264/3(UP), 263/34-264/2(DN)
5	At station	:	AMB
6	In between station	:	AMB-DKLU
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	:	EKT
12	Provision of gate signal at Km.	:	Up line –Nil, DN line-Nil
13	Signaling arrangement	:	MACLS
14	Means of communication Telephone.	:	Telephone connection from gate Goomty with SM office/ AMB
15	Width of the level crossing gate	:	5.5m.
16	Type of road (NH/SH/Others)	:	SH
17	Name of road	:	AMB Road
18	Metalled /Non-Metalled	:	Metalled
19	Approach road	:	Metalled
20	Width of the road	:	5.5 Mtrs
	Angle of road crossing (in case of the SKEW	:	----
21	gates)		
22	Road gradients (if any)	:	[a] North/ East Side – 1 in 1000 [b] South /West Side -1 in 1000
23	Road alignment (straight/Curve)	:	[a] North East Side: Straight [b] South West Side: Straight
24.	Provision of height gauges	:	Provided
25.	Type of barriers	:	Electrically operated Lifting barriers
26.	Length of check rails	:	7.5 Mtrs.
27.	Road surface in between level crossing gates.	:	Hexagonal RCC Block
28.	Length of rumble strip/ speed breakers.	:	5.5 Mtrs
29.	Road signs	:	Available
30.	Speed breakers indication board	:	Provided
31.	TVU	:	30527 on 10/2021
32.	Census next due on	:	10/2024
33.	Demarcation for placement of detonators.	:	Provided
34.	No. of gateman working	:	02(12 Hours shift)
35.	Nearest Railway Medical Assistance	:	Rayagada
36.	Nearest Private Medical Assistance available (if any)	:	AMBODALA
37.	List of equipment available (Yes/No)	:	Yes

3.2 **ESSENTIAL EQUIPMENTS:**

SI.No.	Description	Requirement	To be used as
1.	LED Tri colour hand signal lamps	Two	One for use and another for spare.
2.	Green Hand Signal Flag	One flag mounted on sticks	To hold in furled condition while passing train.
3.	Red Hand Signal Flag	Two flags mounted on sticks.	One to hold in furled condition and another for spare.
4.	Red Banner Flag mounted with sticks.	Double Line-2	In case of obstruction, it is to be displayed on either side of the line.
5.	Spare chains with padlocks.	2 chains with 2 padlocks.	For securing gate against road traffic in case of gate boom cannot be closed.
6.	Stop Boards.	2 retro reflective stop boards with stands.	To display towards road traffic when gate is secured by gate chains due to failure of booms.
7.	Padlock	One	To lock the door of the gate lodge in case of necessity.
8.	Detonators.	Ten (10) in a tin case.	For use in case of obstruction of track.
9.	Tommy Bar	One	For levelling the soil surface or to clean the channels of rails.
10.	Bucket	One	To keep water.
11.	Whistle	One	For alerting road users on approach of train and LP/ Guard to call their attention.
12.	Wall Clock	One	To note down the timings in PN/Log book.
13.	A small size chain for use in case of failure of gate boom lock.	Two	For securing boom in closed condition in case of failure of boom lock.

3.3 **RECORDS TO BE KEPT AT GATE LODGE:**

In addition to the above equipment, following records shall also be kept at the gate lodge.

1. Gate working Instructions in Hindi / English.
2. Gate working instructions in local vernacular language.
3. Gateman Rule Book in local vernacular language.
4. List for tools and books.
5. Duty Roster.
6. Certificate for working as Gateman
7. Bio-data particulars of Gateman, including date of passing vision test, Initial/refresher course, safety camp, etc.
8. Accident Register.
9. Record of last census of road traffic at level crossing gate.
10. Public Complaint Book.
11. 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.

3. **ROUTINE DUTIES OF GATEMAN:**

- i) Gateman shall ensure that red banner flag by day and red light by night is placed across the track whenever the Gate is kept in open condition in case of emergency and obstruction on the track.
- ii) Gateman shall ensure that Gate lamps and lamps of all gate signals 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 like 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 Loco Pilot 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) At the gate whose signal have become defective, the gateman shall close & 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 Loco Pilot to report the defect at the next station.
- x) Gateman shall wear badge and prescribed uniform while on duty at level crossing Gate.
- xi) Gateman shall ensure that he is having competency certificate in his possession while on duty.
- xii) Gateman shall work the Gate as per Gate working instructions and remain well conversant with these instructions.
- xiii) Gateman shall ensure that equipment supplied at the Gate is in good order and ready for immediate use.
- xiv) Gateman shall see that the channel for the flange of the wheel is kept clear.
- xv) Gateman must keep the road surface well-watered and rammed in case of unmetalled roads.
- xvi) Gateman must be vigilant to see that inconvenience to road users due to closure of Gates should be to the minimum possible extent.
- xvii) Gateman on electrified section shall watch that road vehicles/animals passing from 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 anything unusual with a passing train, he shall take following action:

- i) He shall take prompt action to warn the Loco Pilot /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 Loco Pilot /guard by whistling continuously, shouting, gesticulating & throwing ballast on the brake van or by any other means.
- iii) If Loco Pilot /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 Loco Pilot /Guard by whistling continuously, shouting, gesticulating, and by raising both hands vertically above, quickly parting them & bringing them together in repeated Up & 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, gateman shall maintain the gate signals, if an, in the 'ON' position
- ii) Thereafter, if he is unable to remove the obstruction, Gateman shall immediately advise the SM on duty 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. ON ELECTRIFIED SECTION.

- i) On noticing that, the whole or part of the OHE or a feeder or a cable facing down , the gate keeper shall ensure that , as far as possible, human beings, animals or vehicle etc. Are kept away in order to avoid any contact with the live equipment.
 - ii) As soon as it noticed that, Pantograph of an electric rolling stock getting damaged/or entanglement of the same with the OHE, he shall make every possible effort to stop the train and immediately inform the SM on duty.
 - iii) Any damage to the track or structures of the OHE comes to the notice of on duty GK, He shall immediately inform SM on duty and take all to be necessary measures for the portion of line as under.
- 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 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 and place 3 detonators on the track in 10 m apart. Having thus protected the line he shall return to the L.C. 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 Loco Pilot 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 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 a Manned, interlocked traffic L.C.Gate situated at the DKLU end of the yard in between UP Starters and UP Adv. Starter Signal at Km **263/33-264/3(UP), 263/34-264/2 (DN)**. Gatekeeper of Operating department under the control of SM/AMB operates the L.C gate. The level crossing gate is of electrically operated lifting barrier type and operated by means RED and GREEN push buttons from panel provided at the gate lodge. The normal position of the gate is open to road traffic.

The key "Y" of the LC remains in the EKT-2 when the gate is open condition. When it is necessary to close the gate, for taking off signals or for shunting operations, SM/AMB on duty shall inform the gate man to close and lock the gate. The gateman on duty shall close the barriers of the LC gate by pressing the RED push button provided on the panel till the gate is closed and locked against road traffic. Gate man will keep the red push button pressed till gate is closed against road traffic closed and locked indication appears in the panel. Then key "Y" is to be extracted from the EKT-2 in the panel after gate closed and locked indication (Red) appears on the panel. The key "Y" thus extracted from EKT-2 is inserted in EKT-1 & transmitted electrically to SM in conjunction with switch "GS" switch reversed thus releases concerned signals to take "OFF". Switch 'GS' is provided at the gate lodge to put back the concerned UP or DN signals 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.24 and Trans button and keep it pressed till such time the gate man extracts the control key 'Y' from the EKT-1 . After getting the Key "Y" from EKT-1 the gate man will insert the key in the EKT-2 in panel and press the push button green till the gate is fully opened. The closed and locked indication will be extinguished on the panel when green button pressed.

The gate man on duty shall operate the barrier-1 & barrier-2 switch for individual operation of barriers if required.

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). 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/AMB 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/AMB 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/ AMB 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/ AMB, which will enable him to take 'OFF' reception/Departure signals.
- iii) When sufficient time is not available because of greater frequency of train service, SM/ AMB will issue written authority to the train driver to pass the signal at 'ON' position.
- iv) In addition Station Master/ AMB shall also issue a caution order advising the Loco Pilot to whistle continuously and approach the gate cautiously.
- v) The train Loco Pilot shall be instructed to pass the gate cautiously, on before signaled by the gateman. If hand signal is not seen, driver should be prepared stop short of the gate and ensure that gate is closed following GR.3.73.
- vi) In case of an approaching train, the Station Master/ AMB shall advise the Station Master/DKLU or SM/VAL Plant Cabin, under exchange of private number, that the telephone at the gate has failed.
- vii) The station Master/ DKLU or VAL Plant Cabin shall then issue a caution order to the Loco Pilot before dispatching a DN 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 the 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/ AMB, 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 & 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 Loco Pilot of the approaching train.
- v) Station Master on duty/ AMB shall issue a caution order to the Loco Pilot of a departing train.
- vi) He shall also advise the station Master/DKLU/VAL Plant Cabin at the despatching end, under exchange of private number, to similarly issue a caution order to the Loco Pilot before dispatching a DN train into the block section from his end.
- vii) Station Master/ AMB will advise maintenance staff responsible for maintenance of lifting barriers to repair the defect at the earliest.
- viii) Normal working will resumed only after maintenance staff repair the barrier and issue reconnection/fit memo for the same.

Note:

S.SAINI
DSTE/SBP

BIJENDRA MEENA
DEN(South)/SBP

SANDEEP KUMAR
DOM(M)/SBP

Authority to pass signals at 'ON' position as per rules shall also be issued to the Loco Pilots of both departing and arriving trains.

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 key transmitter, then gateman must immediately inform the SM/ AMB 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 gate should be adopted.
- iii) Station Master on duty/ AMB shall issue a caution order to the Loco Pilot of a departing train.
- iv) He shall also advise the station Master/DKLU/VAL Plant Cabin at the despatching end, under exchange of private number, to similarly issue a caution order to the Loco Pilot before despatching a DN train into the block section from his end.
- v) Station Master/ AMB will advise S&T staff responsible for maintenance of key transmitter to rectify the defect at the earliest.
- vi) Normal working will resumed only after S&T staff repairs 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 key transmitter then gateman must immediately inform the SM on duty/ AMB on telephone, under exchange of PN.
- 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/ AMB shall issue caution order to the Loco Pilot of a departing train.
- v) He shall also advise the station Master/DKLU/VAL Plant Cabin at the despatching end, under exchange of private number, to similarly issue a caution order to the Loco Pilot before despatching a DN train into the block section from his end.
- vi) Station Master/ AMB will advise S&T staff responsible for maintenance of 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 operate the GS switch to put back the signals to ON position and then 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/ AMB on duty, regarding the defects/obstruction at the gate, under exchange of private number.
- iii) The Gateman will advise to Stationmaster/ AMB on duty to put the reception/departure signals back to 'ON' position..
- iv) If there is no response from the Station Master / AMB after two or three attempts, he shall first protect the gate and then inform on phone.
- v) Gateman shall then rush with detonators 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 & reply these details to the SM/AMB 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 SM/ AMB shall also inform the SM/DKLU/ VAL Plant Cabin 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 obstruction. After the track has been cleared of all obstructions the gateman shall inform the Station Master/ AMB accordingly, under exchange of private number.
- ix) Station Master/ AMB and DKLU/ VAL Plant Cabin shall then issue a caution order to Loco Pilots 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.
- x) 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.
- xi) Station Master/ AMB shall advise maintenance staff responsible for maintaining the lifting barriers to repair the same at the earliest.
- xii) Normal working will be resumed only after maintenance staff 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 SM/ AMB will adopt the procedure given under item No.7 above. If the obstruction fouls the L.C.Gate, gateman must keep the gates closed against road traffic till the track is cleared of the obstructions.

9 **ACCIDENTAL ROLLING DOWN OF THE TRAINS:-**

When the gateman seen that a train is rolling down or immediately after reception of the information about accidental rolling down of the train the government shall:-

- i) First close the gate against the on duty.
- ii) Then immediately inform the SM on duty.
- iii) He shall not open the gate till he ensured that the train has completely stopped.

4.0 **GATE WORKING INSTRUCTIONS OF “B2” CLASS ENGG. NON-INTERLOCKED LEVEL CROSSING GATE AT KM 264/41-43(UP), 264/42-44(DN) (No.RV-215) BETWEEN AMB-DKLU STATIONS.**

4.1 **GENERAL INSTRUCTIONS: -**

4.1.1 **DESCRIPTION OF THE LEVEL CROSSING GATE:**

1.	Number of Level Crossing Gate: -	RV-215.
2.	Engineering or Traffic Gate: -	Engineering.
3.	Under control of Station Master/PWI:	PWI.
4.	Location KM	264/41-43(UP), 264/42-44(DN)
5.	At. Station: -	---
6.	In between stations: - line.	AMB-DKLU& AMB-VAL refinery
7.	BG/MG/NG: -	BG.
8.	Single line/Double line/Multiple line: -	Multiple line.
9.	Normal Position: -	Closed to road traffic.
10.	Interlocked/Non Interlocked: -	Non-interlocked.
11.	Means of interlocking: -	NIL.
12.	Provision of Gate signal at Kms.	(i) Up line -NIL (ii) Dn line - NIL
13.	Signalling arrangement: -	NIL.
14.	Means of Communication:	Telephone connection from Gate Goomty to SM office/ AMB.
15.	Width of level crossing Gate: -	7.50 Meters.
16.	Type of road. (NH/SH/Others): -	Others
17.	Name of Road: -	Ambodala road.
18.	Metaled/Non-Metaled:	Metaled
19.	Approach Road: -	Metaled
20.	Width of the road: -	7.50 m.
21.	Angle of road crossing (In case of the skew Gates)	----
22.	Road gradient (If any)	(i) North/East side.- ----. (ii) South/West side.- ---
23.	Road alignment (Straight/Curve): -	(i) North/East side. Curve. (ii) South/West side. Curve.
24.	Provision of height gauges: -	Provided
25.	Type of Barriers: -	winch Operated Lifting barriers.
26.	Length of check rails: -	9.5 Meter.
27.	Road surface in between Level Xings Gates: -	C.C blocks.
28.	Length of speed breakers: -	7.50 Meters.
29.	Road signs: -	Provided.
30.	Speed breaker indication board: -	Provided.
31.	TVU: -	24780 on 10/2021.
32.	Census next due on: -	10/2024
33.	Demarcation for placement of Detonators: -	Displayed.
34.	No. of Gateman working: -	02(12 Hours shift).
35.	Nearest Railway Medical Assistance: -	TIG.
36.	Nearest Private Medical Assistance available (if any)-AMB.	
37.	List of equipment available Yes//No: -	Yes.

4.2. **EQUIPMENT:**

ITEMS	QUANTITY/NUMBERS
1. Tri Colour Torch	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 & 7 in case Hexable 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 Hexable section.)
6. Spare 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
20. 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 padlocks to be used in case failure of gate boom lock. 02	

4.3. **THE GATEMAN SHALL BE PROVIDED WITH FOLLOWING REGISTERS: -**

- i) Gate working instructions in Hindi / English.
- ii) Gate working instructions in local vernacular language.
- iii) Gateman Rule 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.

4.4. **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.

3. **ROUTINE DUTIES OF GATEMAN:**

- i) Gateman shall ensure that red banner flag by day and red light by night is placed across the track whenever the gate is kept in open condition for passage of road vehicles.
- 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 Loco Pilot on walkie – talkie or in 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 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 anything unusual with a passing train, he shall take following action:

- i) He shall take prompt action to warn the Loco Pilot/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 Loco Pilot/guard by whistling continuously, shouting, gesticulating, and throwing ballast on the brake van or by any other means.
- iii) If Loco Pilot/guard fails to take notice, gateman shall immediately inform the station Master/ AMB 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 Loco Pilot/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/ AMB 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 Station Master/ AMB on duty, regarding the defects/obstructions at the gate, under exchange of private number.
- iii) If there is no response from the Station Master/ AMB after three attempts, he shall first protect the gate and then inform on phone.

B. ON ELECTRIFIED SECTION.

- i) On noticing that, the whole or part of the OHE or a feeder or a cable facing down , the gate keeper shall ensure that , as far as possible, human beings, animals or vehicle etc. Are kept away in order to avoid any contact with the live equipment.
- ii) As soon as it noticed that, Pantograph of an electric rolling stock getting damaged/or entanglement of the same with the OHE, he shall make every possible effort to stop the train and immediately inform the SM on duty.
- iii) Any damage to the track or structures of the OHE comes to the notice of on duty GK, He shall immediately inform SM on duty and take all to be necessary measures for the portion of line as under.

The gateman shall protect the line as under: -

(A) ON DOUBLE LINE.

- i) If both the 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 arrives 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 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 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 Loco Pilot 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 stop the approaching train by waving his red flag by day red hand signal lamp by might 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 Station Master/ AMB and Permanent Way Inspector regarding the particulars and obstructions at the level crossing gate, through messenger or other means available.

4.5 ENGINEERING ITEMS:

Visibility: -

Direction	Side	Visibility Distance
UP	Right	600 m.
	Left	700 m.
DN	Right	250m
	Left	300 m.

- i) Speed Breaker: - Speed Breakers of approved design are provided on either side of this Level Crossing gate.
- ii) Periodical Census of traffic has been taken and the latest TVU is 24780 on 10/2021.

4.6 SPECIAL INSTRUCTIONS:

1. **MODE OF OPERATION:** This is a Manned & Non-interlocked Engineering L.C.Gate situated at Km 264/14 in between AMB-DKLU section covering the MVAA mid station also. This gate is provided with winch operated coupled lifting barriers and the gate is closed/opened by the gateman manually by winch operation. Telephone communication is provided between the L C. gate lodge with SM office of AMB station. The level crossing gate is normally kept closed and locked against road traffic. The Station Master/ AMB shall not permit any train to enter the block section, unless he is assured of the closure and locking of the gate by the gateman supported by exchange of private number. When the gateman desires to open the gate for passage of road traffic he should ensure that no PN has been exchanged with the Station Master/ AMB for the passage of train or the whole of the train with last vehicle indicator has passed over the level crossing gate for which the gateman has exchanged private number with the SM/ AMB. Before opening the gate for road traffic, he shall display banner flag/danger signal at either side of the track at a distance of 5 meters away from the gate.

2. **EXCHANGE OF PRIVATE NUMBERS.**

- (i) The normal position of level crossing gate being "Closed to Road Traffic" it should always be in closed condition against road traffic, except when, it is opened for passage of road traffic over the level crossing, subject to conditions prescribed below.
- (ii) The Station Master / AMB before permitting each train to enter into the block section, shall ask Gateman on the telephone by giving a Private Number whether, gate is closed against road traffic for the passage of train. The Gateman only after ensuring that the gate is actually closed and locked against road traffic shall give a Private Number to the Station Master / AMB in assurance of gate being closed and locked against road traffic.
- (iii) The Station Master / AMB shall not permit any train to enter the block section, unless he is assured of the closure and locking of the gate by the gateman supported by exchange of private number.
- (iv) When the gateman desires to open the gate for passage of road traffic he should ensure that:
- (v) He has not exchanged any private number with the SM / AMB as per (ii) above.
- (vi) If he has exchanged private number with the Station Master / AMB, the whole of the train with last vehicle indicator has passed over the level crossing gate and Station Master / AMB has not exchanged private number with him for any other movement immediately in rear of the train or on the adjacent line.
Before opening the gate for road traffic, he shall display banner flag/danger signal at either side of the track at a distance of 5 meters away from the gate. Then he shall open the gate for passing the road traffic, keeping a red flag / red hand signal lamp ready in his hand to stop approaching train if any.
- (vii) In case the Gateman is not responding on the telephone or in case the telephone becomes defective or private number is not received from the Gateman, the Station Master/ AMB shall adhere to the procedure prescribed in SR 16.03.04.

- (viii) In the event of failure of telephone, if the gate is required to be opened for the passage of road traffic, the gateman shall look out in both directions before opening the gate to ensure that no train is approaching from either end. He shall then plant a banner flag during day and a hand signal lamp with the red light during night, 5 meters away from the gate on the track on either side. He will thereafter, open the gate for passing the road traffic keeping a red flag / red hand signal lamp ready in his hand to stop approaching train if any.

3. **FAILURE OF TELEPHONIC COMMUNICATION:**

When Telephonic Communication fails or SM/ AMB does not get any response from the Gateman despite 2 or 3 attempts, the following procedure shall be adopted:

- a) SM/ AMB shall serve a caution order to the Loco pilot and the Guard of every train proceeding into the affected section giving the number and kilometreage of the level crossing and directing the loco pilot:-
- (i) To whistle frequently to attract the attention of the gateman,
- (ii) To proceed cautiously, and stop 30M. short of the level crossing and be guided by hand signal.
- b) (i)The Loco Pilot after stopping, if the gateman is available and apparently in a fit condition to continue his duty and the gates are closed, shall arrange to advise the station master / AMB as the case may be of the fact using the telephone provided at the gate. The Station Master/ AMB on receipt of such an advice from the Loco Pilot shall discontinue issue of caution order to the following trains provided the acknowledgement of the gateman is available over the telephone.
- (ii) In the above circumstance, the Loco Pilot should not stop his train at the next station to advise the Station Master.
- c) (i)If the loco Pilot does not find the gateman at the level crossing or if the gateman is apparently unfit for duty and the gates are not closed, he shall depute his Assistant, the Loco Pilot shall seek assistance of the Assistant Guard or Guard of the train. The same should be informed to the Station Master/ AMB on gate telephone.
- (ii) The Loco Pilot, after being hand signaled, shall pass the level crossing and stop clear of it by at least 2 bogie lengths to pick up the Assistant or Assistant Guard / Guard, as the case may be. The Railway servant deputed for closing the gate shall reopen it for road traffic after the passage of the last vehicle of the train.
- (iii) If, however, the telephone is out of order or the gateman is not available or is apparently unfit to continue his duty and intimation of the fact could not be given to the station/AMB from the gate, the Loco Pilot shall stop his train at the next station (even if it is through passing station) and give a memo to the Station Master/DKLU indicating the condition of the gateman, gate and telephone.
- (iv) The Station Master/ DKLU on receipt of the Loco Pilot's report regarding absence or unfitness of the gateman, shall advise the station Master/AMB VAL refinery cabin, the Notice Station, the Section Controller, JE/SE/SSE (P.Way) and AEN concerned and the Gangmate of the nearest gang for immediate posting of a gateman. He shall also inform the maintenance staff to attend and repair the telephone, if required. Issue of caution order should continue till normal working condition is restored.
- a) Before giving line clear to a train, the Station Master/ DKLU shall advise the Station Master/ AMB of the facts by message supported by a Private Number, and obtain his acknowledgement with a Private Number. The latter shall issue a caution order to the Loco Pilot as detailed in Para (a).
- b) Necessary entries shall be made in the Caution Order Register, Station Diary or Signal Failure Register as the case may be by Station Masters at either end of the affected station. The Section Controller shall also keep a note in his chart indicating the action taken by him.

4. **FAILURE OF LIFTING BARRIERS:**

- i) When the Gate cannot be closed due to failure of lifting barriers, The Gateman will immediately inform the Station Master on duty/ AMB, under exchange of Private number, and ensure that lifting barriers 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, he shall show green hand signal flag by day and green light by night to the Loco Pilot of an approaching train.
- v) SM on duty/ AMB shall issue caution order to the Loco Pilot of departing UP train.
- vi) SM/ AMB shall also advise the Station Master/ DKL / VAL refinery cabin at the despatching end, under exchange of private number, to similarly issue a caution order to the Loco Pilot before despatching a train into the block section from his end.
- vii) SM/ AMB should also advise maintenance staff responsible for maintenance of the lifting barriers to rectify the defect at the earliest.
- viii) Normal working will be resumed only after maintenance staff rectify the lifting barriers and issue reconnection/fit memo for the same.

5 **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/ AMB on duty regarding the defects/obstruction at the Gate under exchange of private number.
- iii) Stationmaster at AMB on duty shall be advised to put the departure signals back to 'ON' position, if taken 'OFF' for a train.
- iv) If there is no response from the Station Master / AMB after two or three attempts, he shall first protect the Gate and then inform him on phone.
- v) Gateman shall then rush with detonators 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 relay these details to the Station Master/ AMB who shall not allow 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/ AMB shall also inform the station Master/ DKL / VAL refinery cabin, 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 obstruction.
- ix) After the track has been cleared of all obstructions the Gateman shall inform the Station Master/ AMB accordingly under exchange of private number.
- x) Gateman shall secure the Gate against road traffic by means of safety chains and padlocks and thereafter exhibit green hand signal, if the Gate is not obstructed.
- xi) Station Master/ AMB shall advise maintenance staff responsible for maintaining the lifting barriers Gates to repair the same at the earliest.
- xii) Normal working will be resumed only after maintenance staff rectify the defective lifting barriers and issue reconnection/fit memo for the same.

6 **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/ AMB will adopt the procedure given under item No.5 above. If the obstruction fouls the level Crossing Gate, Gateman must keep the Gates closed against road traffic till the track is cleared of obstructions.

7 **ACCIDENTAL ROLLING DOWN OF THE TRAINS:-**

When the gateman seen that a train is rolling down or immediately after reception of the information about accidental rolling down of the train the government shall:-

- i) First close the gate against the on duty.
- ii) Then immediately inform the SM on duty.
- iii) He shall not open the gate till he ensured that the train has completely stopped.

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 II (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 Signaling.

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	18	BLACK	Cross-over point between DN and UP Main line at DKLU end.
2	19	BLACK	Cross-over point between UP and UP Main line at LJR end.
3	20	BLACK	Cross-over point between DN Main line and line No.4 (Common loop) at DKLU end
4	21	BLACK	Cross-over point between DN Main line and line No.4 (Common loop) at LJR end
5	22	BLACK	Cross-over point between UP Main line and line No.1 (UP loop) at DKLU end
6	23	BLACK	Cross-over point between UP Main line and line No.1 (UP loop) at LJR end
7.	28	BLACK	D/S on overrun line of goods Common loop line No. 5 at Alumina plant end for isolation with alumina plant line.
8.	29	BLACK	Cross-over point between DN main line and line No. 4 (common loop) at LJR end.
9.	30	BLACK	Cross-over point between overrun line of goods Common loop line No. 5 at Alumina plant end and sick line.
10.	31	BLACK	Turnout connecting common loop line No. 4 with line No. 5 at LJR end.
11.	32	BLACK	Crossover point between overrun line of goods common loop line No. 5 at Alumina plant end and sick line.
12.	33	BLACK	Crossover point between goods common loop line No. 5 and line No. 6 (goods Common loop) at LJR end.
13.	34	BLACK	Crossover point between common loop line No. 4 and line No. 5 (goods common loop) at DKLU end.
14.	35	BLACK	D/s on goods common loop line No. 5 at LJR end for isolation with common loop line No. 4.
15.	36	BLACK	Cross-over point between goods common loop line No. 5 and line No. 6 (goods common loop) at DKLU end.
16.	26	BLACK	Cross-over point between UP & DN Main Line at DKLU end.
17.	27	BLACK	Cross-over point between UP & DN Main Line at LJR 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 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 six 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	18 A / B.26A/B
2	CH2	BLUE	19A / B.27A/B

3	CH3	BLUE	20A/B, 21A/B& 29 A/B
4	CH4	BLUE	22A/B, 23A/B
5.	CH5	BLUE	3, 33A/B, 35
6.	CH6	BLUE	28, 30A/B, 32A/B, 34A/B, 36A/B

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. 1,2,4,5 & 6
02	C1	RED with WHITE DOT	UP calling on Signal for line No. 1, 2, 4, 5 & 6.
03	S2	RED	DN Home Signal for Line No.1,3, 4, 5 & 6.
04	C2	RED with WHITE DOT	DN calling on Signal for line No. 1,3, 4, 5, & 6.
05	SH3	YELLOW	Shunting towards line no.1,2 3, 4, 5, & 6.
06	SH4	YELLOW	Shunting towards line no. 1,2,3, 4, 5 & 6.
07	S7	RED	UP starter from line No.1
08	S8	RED	DN Starter from line No. 4
09	S9	RED	UP Starter from line No.4
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 DKLK.
13	S14	RED	Down Advanced starter signal towards LJR.
14	S40	RED	DN Home signal of VAL plant end.
15.	C40	RED with WHITE DOT	DN calling on Signal of VAL plant end.
16.	S41	RED	UP starter from line No. 6.
17.	C41	RED with WHITE DOT	UP calling on signal from line No. 6.
18.	SH 41	YELLOW	UP shunting towards DKLK end, Plant end and sick line from line No. 6.
17.	SH42	YELLOW	Shunting from plant end towards sick line, line No. 5 & 6.
18.	S43	RED	UP starter from line No. 5
19.	C43	RED with WHITE DOT	UP calling on signal from line No. 5.
20.	SH 43	YELLOW	UP shunting towards DKLK end, Plant end, sick line from line No. 5.
21.	SH44	YELLOW	Shunting from sick line towards line No. 5 & 6.
22.	SH 45	YELLOW	UP Shunting towards plant end from sick line.
23.	S46	RED	DN starter from line No. 6.
24.	S 47	RED	UP Advanced starter signal towards Alumina Plant end.
25.	S48	RED	DN Starter from line No. 5.
26.	S16	RED	DN IB signal No.16
27	S10	RED	DN Starter from line No. 1.

1.3.2. **SIGNAL INDICATIONS:** -

All signals in the yard are depicted on the panel alongside 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, L5 UN, L5 UN1, L6 UN, L6 UN1). Common route buttons are also provided for taking off starters (viz.: 13AT UN at DKLU end, 47 AT UN at Plant end. 14 AT UN at LJR end). An individual route button is provided for taking off Advance starter (Viz.: 13 UN, 14 UN, 47 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 Home signal for line No.1 (UP loop) setting overlap up to advanced starters.
2	L1 UN1	WHITE with BLACK dot	Common route button for UP Home overlap setting to dead end of overrun line or UP Calling-on or back shunts (SH-4) for Line No.1 (UP loop).
3	L2 UN	WHITE	Common route button for UP Home or UP Calling-on or back shunts (SH-4) 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 or SH-4), for line No.3 (DN Main Line).
5	L4 UN	WHITE	Common route button for DN Home signal on line No. 4 (Common loop) setting overlap up to advanced starter.
5.	L4 UN1	WHITE with BLACK dot	Common route button for DN Home, setting overlaps up to dead end of Over run line or DN Calling on or back shunts (SH-3 or SH-4) for line No.4 (Common Loop).
6.	L5 UN	WHITE	Common route button for DN Home signal(plant end) on line No. 5 (goods common loop) setting overlap up to advanced starter.
7.	L5 UN1	WHITE	Common route button for DN Home signal (DKLU end or plant end) on line No. 5 (goods common loop) setting overlap up to dead end of overrun line or DN calling on (DKLU end or Plant end) or back shunts (SH-3 or SH-4 or SH-42 or SH-44) for line No. 5 (goods common loop).
8.	L6 UN	WHITE	Common route button for DN Home signal (plant end) on line No. 6 (goods common loop) setting overlap up to advanced starter.
9.	L6 UN1	WHITE	Common route button for DN Home signal (DKLU end or plant end) on line No. 6 (goods common loop) setting overlap up to dead end of overrun line or DN calling on (DKLU end or Plant end) or back shunts (SH-3 or SH-4 or SH-42 or SH-44) for line No. 6 (goods common loop).
10.	13AT UN	WHITE	Common route button for UP Starter signal No. 7 or 9or 11 or 41 or 43 or calling on C41 or C43 or Shunt signal SH41 or SH 43 towards DKLU end.
11.	13 UN	WHITE	Route button for UP advanced starter signal No. 13 towards DKLU end.
12.	14AT UN	WHITE	Common Route button for DN starter signals No. 8 or 12 or 46 or 48.
13.	14 UN	WHITE	Route button for DN advanced starter signal No. 14.

14.	SL UN	WHITE	Common route button for shunt signal No. SH41 or SH 43 or SH 42 for shunting towards Sick line.
15.	47AT UN	WHITE	Common route button for UP starter signal No. 41 or 43 or calling on C41 or C43 or shunt signal SH 41 or SH 43 or SH 45 towards Alumina plant end.
16.	47 UN	WHITE	Route button for UP advanced starter signal No. 47 towards Alumina plant end.
17	16 UN	WHITE	Route button for IB signal No.16

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 DAIKALU- AMBODALA and AMBODALA – LANJIGARH in both UP and DN sections to check the complete arrival of trains. Similarly, Axle counters are also provided between AMB-Alumina plant cabin section to check the complete arrival of trains. The system is interlocked with respective Block Instruments. 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 resulting procedure of Axle counter)

4.0 **(A) POWER SUPPLY ARRANGEMENT FOR THE SIGNALLING INSTALLATION**

Power signalling and interlocking installations and the ancillary field units are fed from the following sources of power supply.

- i) Normally supply from UP AT/DN AT connected to OHE Traction distribution [230 V 50 Hz].
- ii) Stand by supply from Odisha State Electricity Board (OSEB) [Single phase 230V-50Hz].
- iii) Normal power supply [Single phase 230V-50Hz] to the Signalling & Interlocking installation at the station is drawn from the traction power sources. Whenever traction power supply fails SS/SM on duty shall operate the rotary change over switch provided in the CLS power panel at SM's office connecting the power supply from the healthy sources to the installation.

The SS/SM on duty however maintain the record of power failures either of the traction supply or local supply and he must promptly report the failure of any one or both the power sources immediately through the section controller and to the concerned Electrical Staff and S&T maintenance staff.

- a) A change over switch is provided in the SM's office with the three power supplies viz UP AT, DN AT and local power supply for changing the switch to the required supply position. The availability of the supply is indicated by luminous indicator above the circuit breaker for each supply.
- b) Normally the switch will be kept towards UP AT or DN AT position. Whenever the power block is to be given on the line, on duty SS/SM must ascertain the power is available on the other AT and change over the switch to desired position e.g if power block is to be given on the UP line, DN AT must be available and vice versa.
- c) In case of failure of one of the AT supply without any power block, on duty SS/SM has to check whether the circuit breaker has tripped. (Three circuit breakers are provided in the changeover switch board, one for each supply and their normal position is UP and when tripped, it goes DN). In case of failure of both AT supplies without any power block, the local supplies shall be utilized by operating the change over switch. If the circuit breaker is tripping, even after resetting, no attempts shall be made to hold it by any other means and

a message shall be given to the AEEE/GEN and CTFO/PSI/TRD/GEN for prompt rectification.

- d) Whenever there is a failure of power supply in one AT, the on duty SS/SM shall take prompt action to inform to all concerned for the rectification, The on duty SS/SM himself, during his daily checks, shall test the availability of power supplies on both AT's and make entry in station dairy duly initiating action for rectification of failure, if any.

(B) WORKING OF INTEGRATED POWER SUPPLY [IPS], INDICATIONS & ACTION TO BE TAKEN BY SS/SM ON DUTY

- i) Power supply to the signalling installation is fed through IPS installed in the S&T power supply room. The IPS is normally fed through UP AT/DN AT traction power selected by SS/SM on duty. Standby power supply is through OSEB local supply. One change over switch is provided in the SM's room for selection of output of either traction power supply or local power supply. The available traction/local supply is fed to the IPS through auto-change over switch provided in IPS.
- ii) The IPS system is connected with Battery as a back-up power source for safe working during transition of power and in case no 230v AC supply is available due to any reason.
- iii) In the event of failure of all the sources of 230V, 50 Hz AC supply, the signalling system shall be fed by power generated by back-up battery Bank connected to IPS for a limited power of 08 to 10 hours. The health of battery bank is monitored through one IPS monitoring Panel provided in the SM's room which shall be display the voltage 110V DC [Battery bank provided as back-up source of power supply].

Depending upon the health of the Battery Bank and the system, the following indication/alarm will appear on the Remote Monitoring Panel, their implications and action to be taken by SS/SM on duty is tabulated below.

SN	Instruction	Healthy of Battery Bank /Equipment	Visual Indication	Audio Indication	Action to be taken by SS/SM on duty
A	-	50% DOD (Depth of Discharge)	Red	Alarm	Alarm shall be acknowledged by SS/ SM on duty.
B	-	60% DOD	Red	Alarm	-Do-
C	System Shutdown	70% DOD	Red	Alarm	Signal feed cut off and all DC-DC converters to work. Audio alarm will continue till power supply is restored.
D	Call S&T Staff.	Equipment fault	Red	Alarm	Failure of any module will give the alarm in SM's panel. Alarm shall be acknowledged by SS/SM on duty for audio cut-off.

On duty SS/SM in each shift shall check and record the readings, indications, etc in the station dairy duly initiating rectification of failures of IPS system, if any.

In the event of failure of remote monitoring ASM console due to any reason when both traction power and local power failed the SS/SM on duty shall inform concerned Electrical staff

immediately. In case ' Call S&T staff' or 'system shut down' indication appear on the remote monitoring panel of IPS and/or mal-functioning of the remote monitoring panel SS/SM on duty shall inform the same to the concerned S&T staff immediately.

NOTE: In case of failure of all AC supply sources IPS Battery Bank can provide power supply maximum up to 08 to 10 hours before system shut down indication of IPS.

5.0 **EMERGENCY ROUTE RELEASE COUNTER**

This counter is provided to register the number of operations made for emergency cancellation of route. The 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 after breaking the seal 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 the point from the panel in case of failure of point controlling track circuit. A push button (Black with Red dot) for emergency point operation is provided on the top of the Panel. If such operation is necessary, the SM on duty, after ensuring that SM's point Key is 'IN' and no vehicle is standing on the concerned point zone shall press the emergency point operation button (by breaking the seal) along with relevant point button simultaneously. Then keeping point button pressed, emergency point button to be released and the point group normal button or point group reverse button is to be pressed for operating the point to 'NORMAL or REVERSE. Each emergency point operation should be recorded in the emergency point operation counter by registering the next higher number. All such operations and the new number should be recorded in the station diary counter register and in the train signal register. SM shall ensure resealing of Emergency point operation counter by S&T staff after completion of such operation.

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, 2AT and 40AT are calling-on track circuits. 18AT, 18BT, 19AT, 19BT, 20AT, 20BT, 21AT, 21BT, 22AT, 22BT, 23T, 28/30T, 31T, 32/34T, 33/35T, 36T are Point zone track circuits. L1T1, L1T2, L1T3, L2T1, L2T2, L2T3, L3T1, L3T2, L3T3, L4T1, L4T2, L4T3, L5T1, L5T2, L5T3, L6T1, L6T2, L6T3 are berthing track circuits. Other track circuits namely 1T, 1T1, 14T, 14AT, 2T, 2T1, 13T, 13AT, 40T, 47AT 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 authorised 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/CH5/CH6 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 and below starter signal nos 41 & 43 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/C40/C41/C43' (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 Advanced starter is interlocked with respective block instruments in sending position i.e., train going to position and by axle counter for last vehicle check.

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.

14.5.4. When the block instrument for section AMB-VAL Plant Cabin is under suspension, the authority to proceed will be PAPER LINE CLEAR TICKET and a pilot memo to pass the Starter at 'ON' on form T/369(3b). When the Block instrument is suspended in line clear position, the concerned advanced starter must also be treated as suspended and the train is to be piloted out.

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 on duty personally. For details refer SR3.69.06&3.70.02.

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: -**

SICK LINE : -

The sick line with CSL of 39.252 (SH to SH) at DKL end of the yard takes off from ORL of line No. 5. The crossover points at both end of sick line are operated from Panel. The station Master shall set the cross over point No. 32 and take off the shunt signal No. SH 43 C and SH 41 C of line No. 5 & line No. 6 respectively for entry into sick line from station side. Similarly cross over point No. 30 is to be set and shunt signal No. SH 42 C is to be taken off for entry of trains into sick line from VAL Plant side. Shunt signal No. SH 45 shall be used for shunting towards VAL Plant end and Shunt signal No. 44 A/B shall be used for shunting towards line Nos. 5/6. Crank Handle controlling button No. CH 6 shall be used in case of failure of sick line points. Reception signals i.e. 1/C1-D/E, 2/C2-C/D1 & shunt signals Nos. SH-41/A/B, SH 43C,

SH 44A/B, SH 42/A/B/C, SH 4E/F, calling on signal C41 A/B, C40 are electrically interlocked in such a way that these signals cannot be taken 'OFF' for dispatching train from line No. 6 to sick line by taking off the shunt signal No. SH 41 C. Reception signals i.e. 1D/E, C1D, 2/C2-C/D & shunt signals Nos. SH-41/A/B, SH 44A/B, SH 41C, CH 41A/B, SH 42A/B/C, SH 4E/F, Calling – on signal C43 A/B, C 40 are electrically interlocked in such a way that these signals cannot be taken 'OFF' for dispatching train from line No. 5 to sick line by taking off SH 43C.

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 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 handle keys 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 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 and 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 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 SM on duty must press the emergency route cancellation button after breaking the seal provided 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.

The Veeder counter registers the number of such emergency cancellation operations. 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.

20.2 **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.

20.3 **EMERGENCY GATE RELEASE OPERATION:**

Emergency gate release operation facility is provided in the panel when the route gets locked out of some failure. For emergency release of gate, the SM on duty shall breaking the seal shall press emergency gate release button and gate button no.24 for LC gate at km 263/33-264/3(UP),263/34-264/2(DN) and 25 for LC gate at km 262/49-51(UP),262/50-52(DN). After a lapse of 120 secs, a red light will glow over the emergency gate release button indicating that the operation is matured. The SM on duty shall then operate the push button no.24/25 and group Trans Button to release the key from RKT on gate. All such operation will be registered in the emergency gate operation counter. SM shall record this and all such operations in the station diary & in the register meant for it. Normally

the emergency gate release button is in sealed condition. The concerned S&T staff should be advised immediately to get the emergency gate release button sealed after rectification of fault if any.

21.0 **LOCKING OF RELAY ROOM: -**

(Refer para No.4.2 in main body of SWR)

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, 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 signals, any interlocking gear, SM's Panel at the station, the failure report should be communicated by the 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 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 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 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 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 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 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 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 cannot 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/CH3/CH4/CH5/CH6 and Group Trans button simultaneously. All signals will be locked in normal position as soon as the key is released. 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 rests 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 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 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 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 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 SM on duty will be personally responsible for setting and locking of points for reception or dispatch of all trains.
- 23.7 The Emergency Crank Handle Register is to be maintained vide OM 2.19 by the 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 controlled by the Block Instruments must be treated as suspended and trains shall be piloted 'OUT'.
- 24.1 The 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 cannot be kept burning, the 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 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 SM on duty 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. Care and lighting of signal lamps shall be bone vide GR-3.49.

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: -**

Refer page No.62 Para 4.0 of Appendix – 'B'.

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

Normal power supply to the Signalling and Interlocking installations at this station is drawn from AT supplies with change over switch arrangement. The Station Master however, maintains the record of power failure of local supplies and must promptly report the failure immediately to the section controller and to the concerned Electrical and S&T maintenance staff.

27.2 The 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 AMB-LJR and AMB-DKLU and AMB-Plant cabin 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 AMB 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 AMB towards DKLU cannot be taken OFF if axel counter of block section AMB-DKLU fails. UP last stop signal of AMB towards Plant cabin cannot be taken OFF if axle counter of block section AMB-Alumina plant cabin fails. Similarly DN last stop signal of AMB cannot be taken OFF if axle counter of block section AMB- LJR 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, SM at the other end of the concerned block section shall extend co-operation to the 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. SM on duty shall exchange private number with the 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, 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:-

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 before resorting to resetting operation 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 before resorting to resetting operation.

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 (Yellow) 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 to 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.

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

29. **TELECOMMUNICATION FACILITIES: -**

- 1) Telephone attached with Double line Lock and Block Instrument for either side Block Section and Telephone with Token less block Instrument for alumina Plant 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 BLGR-SPRD control circuit by a control telephone.
- 6) Station to station 25 Watt 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 gates at KM 261/11-13(UP)and261/12-14(DN), KM 262/49-51(UP) and 262/50-52(DN), KM 263/33-264/3(UP) and 263/34-264/2(DN) and KM 264/41-43(UP) and264/42-44(DN) respectively.
- 9) Telephone communication is provided between SM/AMB and DN IBS post at Km.256.68
- 10) Traction power control traction loco control of section SBP-SPRD.

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 above para from item (1) to (5) strictly in order of preference of 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 SR 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 SR 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 SR 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 as per SR 6.02.06 (1) (d) Chapter-III Part –II of Block Working Manual.
- 5) In the event of total failure of all communications between AMB-DKLU and AMB-LJR trains shall be worked vide SR 6.02.03. In event of total failure of all communications bet AMB-Vedant Alumina refinery plant cabin trains shall be worked vide SR 6.02.04.

APPENDIX - 'C'

ANTI COLLISION DEVICE (RAKSHA KAVACH)

NIL

APPENDIX - 'D'

1.0 STATION MANAGER (IN-CHARGE):

He is the over all In-charge of the station; He is responsible for the efficient discharge of duties devolving upon all the Staff employed at the station whether permanent or temporary according to Station Working Rules, Manuals & safe working Instructions. He shall get himself well conversant with the detailed working of Station and panel, points and signals etc.

He is responsible for maintaining the Assurance Register up-to-date. He shall conduct surprise night inspections and safety meetings/fire drills etc. as per instructions issued from time to time. He shall see that all the staff under his control working safely according to the rules in force.

He shall see that all signals, points, level crossing gates and the whole machinery at the station are in proper working order. He shall report all the defects to the concerned officials.

He shall satisfy himself that the staff employed under him are well conversant with Station Working Rules and perform their duties correctly. He is responsible for maintaining SWR, other Rule books and Assurance Register up to date.

He shall see that all safety records are maintained properly and all rules prescribed in GR & SR, Block Working Manual, Operating Manual and other relevant directions issued from time to time by competent authorities are followed rigidly by all concerned and any irregularities if noticed are reported promptly to the authorities concerned.

He shall see that all accidents are promptly reported, attended to and GA-3 along with accident message is submitted to the concerned officers in time. He shall see that the staff is civil and helpful to all users of railway.

He shall frequently visit the platform, Station, LC gate etc. in order to maintain an effective supervision over the said staff and their working. He shall see that station premises are kept neat and clean.

He is responsible for booking all staffs working under him for PME and Refresher Course / Safety camp in their due time. His Special attention is drawn out to chapter II of General and Subsidiary Rules and GR 5.01 to 5.08 with relevant Subsidiary Rules, Chapter – XXII of Operating Manual.

He shall see that all equipment, apparatus and instruments including signal and interlocking gears are in proper working order and all failures are promptly reported to officials concerned for repairs/rectifications.

He shall pay special attention towards passenger amenities & coaching trains punctuality and yard feasibility. He shall endeavor for minimizing detention to freight trains by judicious planning of trains staff. He shall pay attention to smooth functioning of goods train to eliminate detentions. He shall attend to all compliance by traveling/trading public.

He shall see that the law and order in the station area is taken care of with the help of G.R.P. and R.P.F and civil authorities as per need.

He shall ensure compliances of all Operating, Safety and Commercial records maintained at the station. He is responsible for overall supervision of the station.

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 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.

2.0 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.

- 2.1 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 SMR 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 them fully about their duties and responsibilities.
- 2.2 The Station Manager is responsible personally for maintaining the Assurance Register and for obtaining declaration of the staff working under him. The Assurance of staff 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 Manager.
- 2.3 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.
- 3.0 **USE OF PRIVATE NUMBER BOOKS & IDENTIFICATION NUMBER SHEET:** -
Sufficient Private Number books and I.D number sheets in sealed covers shall be kept always in the stock by Station Manager under lock and key. He shall maintain a register for this purpose.
- 4.0 **ACCIDENTS:**
Accidents shall be reported and immediate action shall be taken by the Station Manager in-charge in accordance with the instructions laid down in the Accident Manual. Whenever the Station Manager receives 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.
- 5.0 **TESTING OF POINTS AND SIGNALS:**
The Station Manager 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, Crank Handle, etc. and record the result in the Station Master's diary.
- 6.0 **DY.SS/STATION MASTER/ASSISTANT STATION MASTER:**
He shall work in 8 hrs. shift for train passing and booking of traffic etc. Coaching returns and other statements shall be prepared and submitted by him in time under the direction of the Station Manager. He shall assist the Station Manager for the up keep of the station in all aspects.
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.
He is responsible for working beyond this period when called upon to do so in the exigencies of services. He will follow SR 14.07.01. Their special attention is drawn to Chapter II of General(Amendment) & SR 2012 and GR 5.01 to 5.08 with relevant SRs. As an assistant to the SMR, he shall follow the instructions given to him by the Station Manager.
- 7.0 **HANDING OVER AND TAKING OVER CHARGE:**
The SS/Station Master/Assistant Station Master on duty shall record in the SM's diary the condition of all the running lines, the caution orders in force at the time of handing over and taking over of charge. These entries must be counter signed by the SMR/SS/Station Master/Assistant Station Master coming on duty while taking over charge. This will not, however, relieve any one of the SS/SM/ASM of his responsibility to ensure by physical check that the nominated line is clear of all obstructions before admission of any train on it.

8.0 TRAFFIC POINTSMAN:

He shall work under the instructions of SM on duty and follow the GR 02.05 to 2.11 and other relevant rules laid down in GR and SR. He shall remain responsible for:

- (i) Delivery of authority to proceed and caution order etc. to the driver of train.
- (ii) Correct setting and locking and crank handling of points for reception/dispatch and shunting operation under the supervision of Station Master/Guard.
- (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, Guard boxes 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, filling up the fire buckets with sand/water and getting train interact arrival register (T/1410) signed by the Guard as and when required.
- (xi) Serving messages and any other duties entrusted to them by the SMR/SM from time to time.
- (xii) Uses 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 and their special attention is drawn to chapter No.II of G & SR (Amendment) 2000 also.
- (xv) When necessary, they will work in the Goomties for observing and reporting the complete/incomplete arrival/departure of trains as per the order of the SM on duty in case of failure of Axle Counter/Track Circuit.

9.0 DUTIES OF TRAFFIC GATEMAN:

Mentioned in Gate working instructions of concerned L.C.gates in Appendix-A. In addition to that he shall follow the GR 2.05 to 2.11 and other relevant rules laid down in GR & SR.

GENERAL

- i. All staff should be in uniform while on duty and follow the rosters issued by DPO/SBP from time to time.
- ii. A set of Red and Green flags and Tricolor hand signal lamps will be part of the essential equipments of staff while on duty. They shall not leave the station except when required by the SM on duty or with his permission. They shall comply SR 4.42.02 (b) & (c).

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.

Sl. No.	Description	Quantity
1.	Detonators	10 in tin case
2.	Hand signal lamps/Tri colour torch	04 Nos.
3.	Hand signal flags	04 sets.
4.	Safety chains with pad locks	10 Nos.
5.	Wedges/Sprags	10 Nos.
6.	Fire buckets (with sand and water)	06 Nos.
7.	Clamps with padlocks	12 Nos.
8.	Reminder collars	10 Nos.
9.	"Motor Trolley on Line" boards	02 Nos.
10.	First aid Box	01 No.
11.	Stretcher	01 No.
12.	Blanket	01No.
13.	Fire extinguisher	02 No.
14.	Block Suspension Board	02 Nos.

APPENDIX-'F' TO STATION WORKING RULES OF AMBODALA STATION

RULES FOR WORKING OF DK STATIONS HALTS, IBH, IBS AND OUTLYING SIDINGS

- 1.0 **MID-SECTION OUTLAYING SIDING:**
There is no mid-section siding on either end of block section.
- 2.0 **INTREMIATE BLOCK STOP SIGNALS ON AMB-LJR SECTION:**
- 2.1 **DESCRIPTION:**
Intermediate Block Signal at Km. 256.75 on UP line and at Km. 256.68 on DN line of LJR-AMB Section are provided bifurcating UP and DN lines by means of Intermediate Block Signaling with Electronic axle counters and trains are works under Absolute Block System in accordance with General Rule No. 1.02 (7), (31) & (32), 3.11, 3.42, 3.75, 8.01 (1) (a), 8.01 (2) (a).
- 2.2 **SIGNAL DIAGRAM**
The Station Working Rule diagram no. SI/WRD/22063 ALT-F based on CSTE/East Coast Railway's Signal Interlocking Plan No. SI/22063, ALT-F shows the layout of Intermediate Block Signals, Distant Signal with all signaling features and gradients etc.
- 2.3 **TELEPHONE COMMUNICATION:**
Telephones fitted to Intermediate Block Home Signal Posts with socket provided for communications to the SM in rear i.e. SM/LJR in case of UP line and SM on duty AMB in case of DN line. The telephone on the Intermediate Block Stop Signal post is provided with two press buttons. The right hand side button is to be pressed by the Loco Pilot for calling the attention of the Station Master of the Station in rear and left hand side button is to be pressed for speaking and released for hearing.
- 2.4 **THE FOLLOWING SIGNALS ARE PROVIDED ON UP AND DN LINES AT IBS:**
(i) IB Home.
(ii) IB Distant and IB Inner Distant
- Legend Boards with legend "Backing is not permitted beyond this point" are provided 400 meters beyond UP and DN Intermediate Block Stop Signals on AMB-LJR Section.
- 2.5 **DETAILS OF BLOCK SECTIONS ON SECTION: (AMB-LJR)**
The UP and DN Block sections between LJR-AMB are split into two portions namely (i) Rear Section (ii) Advance Section. Each constituting of separate block section by provision of Intermediate Block Signaling which are controlled and operated by block station i.e. LJR in case of UP line and AMB in case of DN line on LJR-AMB section vide GR 1.02 (31) and (32).
- 2.6 **INTERLOCKING OF SIGNALS:**
- i) The Intermediate Block Stop Signals are interlocked with Lock and Block instruments Concerned in such a way that the same cannot be taken 'OFF' unless "Line Clear" has been received from block station concerned in advance of the Intermediate Block Stop Signal concerned with the needle of the Lock and Block Instrument indicating "Line Clear" position.
 - ii) The DN Advanced Starter of AMB is Interlocked with Axle counter in such a way that the same cannot be taken 'OFF' unless the block section in advance of the signal controlled by axle counters is clear and the DN IBS section on SM panel shows "clear" indication.
 - iii) Track circuits are provided beyond Intermediate Block Stop Signals and Advanced Starter Signals in order to restore these signals to their normal positions automatically when a train passes over them and the IB signals cannot assume "OFF" aspect until and unless "Line Clear" is received for a subsequent train.

2.7 **CLOSURE OF INTERMEDIATE BLOCK SIGNAL POST:**

In the event of suspension of Lock and Block Instrument or failure /suspension of intermediate Block Home or failure/suspension of Advanced Starter or Axle counter panel/mechanism, failure of track circuits of the Intermediate Block Stop Signal on UP or DN line, concerned section shall be suspended, then Intermediate Block Posts concerned shall be deemed to be closed and sections between the station on either side of the Intermediate Block Post concerned shall be treated as one Block section. Refer to GR 3.70, 3.75 and 14.14. The authority to pass the Advanced Starter and Intermediate Block Stop Signal concerned at 'ON' shall be issued by the SM immediately in rear of such signal.

2.7.1 **DESCRIPTION OF AXLE COUNTERS AND PANEL INDICATIONS PROVIDED AT AMB IN CONNECTION WITH IBS FOR AMB-LJR SECTION:**

2.8.1 **AXLE COUNTING SYSTEM:**

Axle counters are provided in the following sections:

(e) **IB SECTION LJR-AMB UP LINE:**

A pair of Digital axle counter is provided on UP line to monitor the IB section from UP Advanced Starter Signal No. 13 of LJR to 400 meter beyond the UP IB Home signal No. 29 of LJR.

(f) **IB SECTION AMB - LJR DN LINE:**

A pair of Digital axle counter is provided on DN line to monitor the IB section from DN Advanced Starter signal of No. 14 of AMB to 400 meter beyond DN IB Home signal No. 16 of AMB.

(g) **LV SECTION UP LINE**

A pair of digital axle counter is provided between LJR-AMB on UP line one just beyond UP IB Home signal No. 29 of LJR on 29T track circuit and another on the track 1T1 just beyond UP Home signal of AMB to monitor LV section.

(h) **LV SECTION DN LINE**

A pair of digital axle counter is provided between AMB-LJR on DN line one just beyond DN IB Home signal No. 16 of AMB on 16T track circuit and another on track 2T1 just beyond DN Home signal of LJR to monitor LV section

2.8.2 **IB PUSH BUTTONS/PANEL INDICATIONS PROVIDED IN SM/ AMB:**

i) **DN TRAIN RUN AWAY MUTING BUTTON:**

This is to be operated for acknowledging and stopping the ring of the buzzer in case of DN train passing DN IBH (Signal No.16) at 'ON' position.

ii) **DN TRAIN RUN AWAY AUDIBLE BUZZER:**

This will ring when "DN train run away" indication appears on the panel.

iii) **DN TRAIN ENTERING LOCK & BLOCK SECTION BUZZER:**

This rings with the passage of every DN train past DN Intermediate Block Stop Signal and operates track circuit beyond it indicating that the DN train has entered the Block Section between DN Intermediate Block Stop Signal and LJR.

iv) **DN TRAIN ENTERING LOCK & BLOCK SECTION BUZZER MUTING PUSH BUTTON:**

This is to be operated for acknowledging the passage of DN trains past DN Intermediate Block Stop Signal on DN line.

v) **ACKNOWLEDGEMENT BUTTON FOR DN LINE:**

This is to be operated after receipt of permission from SM/LJR for resetting IB section axle counting system on DN line.

vi) **DN IB SECTION RESET KEY:**

This is provided to control the re-setting the axle counting system of DN IB section and to be kept in the personal custody of the SM on duty AMB.

- vii) **DN IB SECTION RESET PUSH BUTTON:**
This is to be operated by SM on duty SM/AMB for re-setting the axle counting system of DN IB section between AMB-LJR on the DN line.
- viii) **DN IB SECTION RE-SET VEEDER COUNTER:**
This registers the next higher number every time the reset push button is operated for re-setting the DN IB section axle counting system on DN line. Relieved and incoming SM should jointly record the number on the counter and sign in the Train Signal Register while taking over charge.
- ix) **UP TRAIN RUN AWAY BUZZER MUTING PUSH BUTTON:**
This is to be operated for acknowledging the passage of UP trains past UP intermediate Block Stop Signal on UP line at 'ON' position.
- x) **UP TRAIN RUN AWAY AUDIBLE BUZZER:**
This will ring when "UP train run away" indication appears on the panel.
- xi) **PERMISSION – BUTTON FOR IB SECTION OF UP LINE:**
This is to be operated for granting permission to SM/LJR for resetting the axle counting system on UP line.
- xii) **PERMISSION GRANTED VEEDER COUNTER FOR IB SECTION OF UP LINE:**
This registers the next higher number every time Permission button is operated for resetting axle counting system on UP line. Relieved and incoming Station Master should jointly record the number on the counter and sign in the Train Signal Register while taking over charge.
- 2.8.3 **IB INDICATIONS ON PANEL:**
The following luminous indications are displayed on the SMs panel:
- i) **DN train running away:** "DN train running away" indication appears only in all cases of a train passing DN Intermediate Block Stop Signal at 'ON' position.
- ii) **DN IB section Resetting Permission received from LJR:** "Permission received from LJR" appear when acknowledgement button is pressed after permission is received from the SM/LJR.
- iii) **DN IB Axle Counting Section occupied in RED:** DN Axle counting section occupied in "RED" will appear when the section DN Advanced Starter to DN Intermediate Block Signal section is occupied by a train.
- iv) **DN IB Axle Counting section clear in GREEN:** DN Axle counting section clear in "GREEN" will appear when the section DN Advanced Starter to DN Intermediate Block Stop Signal Section is clear.
- v) **DN Advanced Starter track circuit occupied/failed in RED:** DN Advance Starter track circuit when occupied/failed "RED" indication will appear and when the track circuit is clear/working no indication will be there.
- vi) **DN Intermediate Block Stop Signal track circuit occupied/failed in RED:** DN Intermediate Block Stop Signal track circuit when occupied/failed "RED" indication will appear. When the track circuit is clear/working, no indication will be there.
- vii) **DN train entering Lock and Block section:** "DN train entering section" indication appears in all cases of DN train passing DN IBS track circuit.
- viii) **UP train running away:** "DN train running away" indication appears only in case of a train passing UP Intermediate Block Stop Signal at 'ON' (When the section in advance is occupied).

- ix) **Permission granted to LJR:** “Permission granted to LJR” indication appears when permission granted to LJR button is pressed for resetting UP IB section axle counting system on UP line.
- x) **UP train entering Lock and Block Section:** “UP train entering section” indication appears in all cases of an UP train passing UP IBS track circuit.
- xi) **Block Handle free:** “Block Handle Free” indication appears when an UP train arrives completely within the station section. The “Block Handle” then becomes free and the instrument can be normalized.
- xii) DN Intermediate Block Stop Signal at ‘ON’ in RED.
- xiii) DN Intermediate Block Stop Signal at ‘OFF’ in GREEN.
- xiv) DN Intermediate Block Distant Signal at “ON” shows YELLOW indication.
- xv) DN Intermediate Block Distant Signal at “OFF” shows GREEN indication.

NOTE:

Normal aspect of Intermediate Block, DN Distant Signal is YELLOW. The Distant signal is provided with “P” Marker and Green aspect are controlled by DN Intermediate Block Stop Signal. When the DN Intermediate Block Stop Signal is GREEN, DN Intermediate Block Distant Signal will be “GREEN”.

The failure of axle counting system should be recorded in the Train Signal Register, SM’s Diary & failure register at SM’s office at AMB & LJR.

3.0] **NORMALIZATION OF IB AXLE COUNTER AND RESTORATION OF BLOCK WORKING BY RESETTING FEATURE:**

- i] No train should be allowed to leave station in any particular direction unless IB track clear indication is available for the relevant track circuited portion of IB section and last stop signal cannot be taken off also.
- ii] A Resetting arrangement for the resumption of IB Axle counter, under failure condition through co-operative feature of both the SM on duty at either end station of the Block section is provided, which should only be resorted to after the train that was sent last has arrived fully at the receiving station and is certified in this respect by the SM at the receiving station through exchange of private number.
- iii] For monitoring of IB section working & re-setting of IB Axle counters, Track Indications and Re-setting arrangements are provided on the panel of AMB and LJR stations. Counters are also provided for the purpose of recording of each act of re-setting for the IB Axle Counters in case of failures in IB section.
- iv] The SM on duty at AMB station shall maintain a separate register for use for resetting of IB Axle Counters wherein every operation of the resetting shall be recorded giving details of date of use, train number, time, number registered in the counter on Veeder Counter and reasons for resetting and initial for each such entry.
- v] The procedure for resetting of the IB Axle counters in terms of clause G(ii) above shall be as follows:

SECTION AMB-LJR:

	DISPATCHING STATION [AMB]		RECEIVING STATION [LJR]
1	<p>In case of failure of axle counter between sending station and IB signal then SM on duty of sending station shall call the attention of SM of receiving station through Telephone for granting Permission to re-set IB Axle counter as well as Train Passed signal with Danger [train run away condition] giving details of last train left the station into the section.</p>	1	<p>SM on duty at receiving station shall after verifying that the said dispatched train arrived fully and exchange private number with SM on duty of sending station and gives permission to re-set by clicking on the 'Reset Permission Button' provided on the Panel. Then a flashing yellow indication will appear on the panel.</p> <p>For each such operation the permission granting counter shall increase by one digit.</p> <p>SM on duty shall make an entry of changed permission granting counter number in counter register</p>
2	<p>On getting permission to reset from receiving station, a flashing yellow indication will appear on Permission Received indication which shall be acknowledged by SM on duty by acknowledging 'Permission Ack Button' and then flashing indication will become steady.</p> <p>Now SM on duty has to manually reset the near end axle counter. He shall insert the reset key, turn right and press on the panel simultaneously with reset button for about 5 seconds.</p> <p>On doing the above process for resetting preparatory reset indication will appear on both Panel and panel. First train has to be piloted out. On passing of the first train IB, Axle counter will get reset.</p> <p>For each such operation, the IB. reset counter provided shall increase by one count. SM on duty shall make an entry of changed Reset counter number in re-setting register.</p>	2	<p>After completion of reset procedure Permission granting indication will go blank at the receiving station.</p>
3.	<p>In case of train passed IB signal at danger, train run away indication will appear on the panel along with buzzer. SM on duty shall then acknowledge the same. He shall call the attention of SM of receiving station through telephone for granting Permission to reset the runaway indication giving details of last train left the station into the section.</p>	3	<p>SM on duty of receiving station shall also get run away indication on the panel along with buzzer. He shall then acknowledge the same. After verifying the complete arrival of last train he shall give a private number to the sending station that the section is clear. He shall then grant permission to reset the train run away indication.</p>

4.	<p>SM of the sending station shall acknowledge the permission granted. The trains run way indication will go blank and the system is normalized.</p> <p>In such case there is no need of piloting out of the first train.</p>		
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4.0] **NORMALIZATION OF LVV AXLE COUNTER AND RESTORATION OF BLOCK WORKING BY RESETTING FEATURE:**

	DISPATCHING STATION [AMB]		RECEIVING STATION [LJR]
1	<p>In case of failure of axle counter between IB signal and receiving station, SM on duty of sending station shall call the attention of SM of receiving station through telephone giving details of last train left the station into the section.</p>	1	<p>SM on duty at receiving station shall after verifying that the said dispatched train has arrived fully and exchange private number with SM on duty of sending station.</p>
2	<p>On duty SM at sending station shall then make IB Reset 'key IN' on the panel and turn right and then press the permission granting reset Push Button approximately for 5 seconds.</p> <p>On doing the above resetting process, preparatory reset indication will appear on Panel. T/369(3b) shall be issued to loco pilot of the first train to pass IBS at ON. On passing of the first train LVV Axle counter will get reset.</p> <p>For each such operation, the LVV reset counter provided shall increase by one count. SM on duty shall make an entry of changed Reset counter number in re-setting register.</p>	2	<p>Now SM on duty has to manually reset the near end axle counter. He shall insert the reset key, turn right and press on the panel simultaneously with reset button.</p> <p>On doing the above resetting process, preparatory reset indication will appear on panel. After passage of the first train the preparatory reset indication will go blank.</p> <p>For each such operation, the LVV reset counter provided shall increase by one count. SM on duty shall make an entry of changed Reset counter number in re-setting register.</p>

5.0] **DISPATCH OF TRAINS:**

Dispatch of trains is governed by the provision of GR 3.42, 3.70 & SR there to and Block working manual rules. For dispatching trains with last vehicles/trains without guard/banking engine in rear, JPO and safety circulars issued along with relevant GR & SRs to be followed.

From AMB towards LJR.

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.

AMB TO IBS ON DN LINE:

The 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 and shall also ensure any non-isolated shunting at their respective ends suspended and shunting authority issued if any is withdrawn and kept in his custody. SM on duty shall advise the Station Master at the station in advance, of the train no. and description of such train

intended to be dispatched and shall take his assent and shall then set and lock the route and take off the Starter and Advanced Starter.

DN IBS SIGNAL TO LJR:

The SM on duty AMB shall obtain line clear through lock & Block instrument from the station in advance to dispatch a train in to section and pass the IBS signal through by taking off the IBS signal no. 16 of AMB for DN line.

After the train passes the DN IBS a buzzer will ring at both the receiving and dispatching stations. On hearing the buzzer/bell the SM must acknowledge the same by pressing train entering section [TES] muting button to stop the buzzer/bell and then send train entering section report to the station master of the station in advance who in turn will turn the 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 AMB into the Block section, 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. The SM on duty will then inform the matter to SCR on duty and concerned S&T official.

The above 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 Signal Register and SM's diary book of both the Stations.

(i) Dispatch of trains towards LJR station in case of failure of the DN Advanced Starter signal due to failure of "IB Axle Counter" device or otherwise-

If the failure of the DN Advanced starter of AMB due to the failure of IB axle counting device or the indication showing 'Red' light either due to power failure or due to any other reason, the SM should resort to the resetting procedure mentioned in para 3 (v).

If it is not possible to restore normal working of the IBS by use of the resetting procedure, 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 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 SM concerned and ask him to reset the IB axle counter by following the reset procedure mentioned in the para 3(v). SM on duty shall follow the resetting procedure after ensuring that all the trains which had left his Block Station had arrived complete and intact at LJR (by exchanging of P.N with SM/LJR confirming this) for resumption of normal working.

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 SM of AMB 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 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 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 SM, Following train shall not be allowed to leave AMB unless the complete arrival of the receiving train is certified by the SM on duty at LJR 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.

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 SM on the Block station immediately in rear of an intermediate Block Signal is aware that DN intermediate Block Signal is defective shall before Dispatching a train verify that all trains which had left his Block Station had arrived complete and intact at LJR station by exchanging Private Number with SM/LJR and shall follow the resetting procedure mentioned in the para 3(v). 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. After each such resetting process, next higher number is registered on the veeder Counter and the SM should record this, giving the details of the occasion with timings in the Veeder Counter register kept in the station.

6.0] **SPECIAL INSTRUCTION IN CASE OF A TRAIN PASSING IBS AT 'ON' POSITION:**

- l] In case train run away indication appears the SM of receiving Station shall not turn the block instrument handle to line clear position and SM at sending station shall not take any action to

dispatch the third train unless the second train which passed the IB signal at 'ON' position has actually arrived complete and 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.
- III] When train run away indication appears at the dispatching Station without any train in the section, then SM should resort to train run away resetting procedure. If the same could not be reset the IBS system should be treated as failed and Signal Maintainer should be advised. All the subsequent trains shall be Piloted OUT after taking line clear and treating entire section as one Block section as per GR 3.75(4).
- IV] Whenever a train after having obtained line clear passes IBS at "ON" position the train run away indication appears at the dispatching station and also at receiving station. Under such circumstances no further train shall be allowed in the section till the said train arrives completely at the receiving station and its complete arrival report has been received at the receiving station 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 receiving station, the train run away indication will appear at both receiving and dispatching station. Under such circumstances the SM in the receiving station shall not turn the Block instrument to Line Clear position and SM at sending station shall not dispatch the (3rd) train, unless the 2nd train which passes the IBS at 'ON' position has actually arrived and its complete arrival is verified by the receiving station.
- VI] Resetting procedure is to be followed as detailed in para G(v) after verifying that the last vehicle of the runaway train has arrived intact and ensured by exchange of private number with the SM of the receiving station.
- VII] Whenever a train run away indication appears when there is a train in the section, no further train should be allowed in the section till resetting is done.
- VIII] Before any resetting 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 exchange of private number that the last train has arrived complete at the 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 work treating the entire section up to the Block Station immediately ahead of the IBS Post as one block section as per GR 3.75(4).
- 7.0] **ACTION TO BE TAKEN WHEN A TRAIN PASSES INTERMEDIATE BLOCK STOP SIGNAL AT 'ON'**

a) **By SM of receiving Station.**

- I] Shall not turn the Block Instrument commutator to "Line Closed" Position until 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.

- 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 commutator 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" at 'ON' position arrives complete and its complete arrival is verified.
- b] **By the 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 (a) above, the SM of the receiving station shall communicate the same to the SM of the sending station supported by a Private Number which shall be acknowledged by the later by issuing Private Number. Thereafter the SM of the dispatching station and the SM of the receiving station shall resort to Resetting procedure. This simultaneous operation will cause the 'counter' to increase by one count at both the stations and SM shall record the next higher number in the register mentioned for the purpose and details of it.
 - II] After completion of resetting procedure and normalization of IBS the SM of the Block Station in rear shall then take steps or authorize Station master of the receiving station supported by a Private Number to normalize the block instrument.
 - III] In the event of failure of IBS signal in the "OFF" position or fails to go to "ON" position immediately after passage of 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.

8.0] **RUNNING OF MOTOR TROLLEYS ON IBS ZONE:**

- i) While allowing motor trolley/4 wheeler tower wagon/material trolley etc., entire section between AMB-LJR 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.

9.0] **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.

10.0] **NORMAL POWER SUPPLY TO IBS GOOMTIES :**

Power signaling and interlocking installations and the ancillary field units are fed from the following sources of power supply.

- i) Normal power supply is drawn from 25 KV AC RE supply.
- ii) AC supply from Odisha State Electricity Board (OSEB) [Single phase 230V 50 Hz] to charge the IPS battery i.e. signaling & interlocking system for IBS.
- iii) Power supply of 110V DC to the signaling and interlocking installation at the IBS is drawn from IPS. Minimum back up time of IPS battery is 10 hrs during failure of normal power supply.
- iv) The minimum backup time of IPS battery is ten hours during failure of AC power

11.0 **HALT STATION:**
NIL.

12.0 **DK STATION:**
NIL

APPENDIX - 'G'

RULES FOR WORKING OF TRAINS IN ELECTRIFIED SECTIONS