East Coast Railway

Waltair Division

STATION WORKING RULES

SILAKJHORI (SZY)

East Coast Railway / Waltair Division

Station Working Rules of

SILAKJHORI (SZY)

Index of Correction Slips

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EAST COAST RAILWAY
WALTAIR DIVISION

STATION WORKING RULES OF SILAKJHORI [SZY] [BROAD GAUGE]

Date of Issue
Date brought in force:

Ref: Lr No: 2000/Safety (A&R)/19/36 of Rly. Board dated 27.10.05.

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

1. STATION WORKING RULE DIAGRAM:

The Station Working Rule diagram no: SI/WRD/23156 ALT-"B"
based on CSTE/E.Co.Rly Signal Interlocking Plan No.SI-23156 ALT-"B" shows the complete layout of the yard, normal position of points, the Signaling and Interlocking arrangements, Gradients within the station limits. This must be referred to for giving details of the points and Signals when reporting accidents.

2. DESCRIPTION OF STATION:

SILAKJHORI (code: SZY) is a Standard-II R, 'B' Class station with MACLS on the KOTTAVALASA-KIRANDUL Double Line B.G. Section of E.Co.Rly on 'D' Special route. It is situated at km 341.276 from KTV and provided operated centrally with VDU.

2.1. GENERAL LOCATION:

a)	Name of the station	**SILAKJHORI**
b)	Class of station	'B' CLASS
c)	Section	KOTTAVALASA-KIRANDUL
d)	Double line/Single line	DOUBLE LINE
e)	Electrified/Non Electrified	**ELECTRIFIED**
f)	Gauge BG/MG/NG	BG
g)	Railway	EAST COAST RAILWAY
h)	Route	'D' SPECIAL
i)	Situated at	KM 341.276
j)	Reckoned from	KOTTAVALASA
k)	Operation	CENTRALLY OPERATED VDU.

2.2. BLOCK STATIONS, IBH, IBS ON EITHER SIDE AND THEIR DISTANCE AND OUT LYING SIDINGS:

S.No	ADJACENT BLOCKSTATION	DISTANCE IN KM	DIRECTION
1.	DILIMILI **(DMK)**	11.296	KTV END
2.	KUMHARSODRA **(KMSD)**	09.244	KRDL END
3.	PROVISION OF IBS	NIL	
4.	AUTOMATIC SIGNAL	NIL	
5.	DK STATION/OUTLAYING	NIL	

S.No	ADJACENT BLOCKSTATION	DISTANCE IN KM	DIRECTION
	SIDINGS		
6.	PASSENGER HALT	NIL	

2.3. **BLOCK SECTION LIMITS ON EITHER SIDE OF THE STATION ON DIFFERENT DIRECTIONS:**

BETWEEN STATIONS	THE POINT FROM WHICH THE BLOCK SECTION COMMENCES	THE POINT AT WHICH THE 'BLOCK SECTION' ENDS
SZY-DMK DN.	FROM DN ADVANCED STARTER SIGNAL NO. 18 OF SZY.	POINT NO. 32-A OF DMK.
SZY-DMK UP.	FROM UP ADVANCED STARTER SIGNAL NO. 25 OF DMK.	POINT NO. 21-A OF SZY.
KMSD-SZY DN	FROM DN ADVANCED STARTER SIGNAL NO.26 OF KMSD	POINT NO 22-A OF SZY
SZY- KMSD UP	FROM UP ADVANCED STARTER SIGNAL NO 17	BSLB BOARD OF KMSD

2.4. **GRADIENTS:**

a) FROM THE CENTRE OF THE STATION BUILDING TOWARDS DMK (DN LINE):

CHAINAGE IN MTRS FROM CSB		STRETCH	GRADIENT
From	To		
0.000 F/CSB	756.00 M	756.00 M	1 in 400 Raising
756.00 M	856.90 M	100.90 M	Level
856.90 M	2048.80 M	1191.90 M	1 in 100 raising
2048.80 M	2250.80 M	202.000 M	1 in 131.561 Raising
2250.80 M	2762.80 M	512.00 0M	1 in 117.864 Raising
2762.80 M	3176.80 M	414.00 0M	1 in 110.429 Raising
3176.80 M	3742.80 M	566.00 0M	1 in 129.401 Raising
3742.80 M	In to section	--	1 in 117.489 Raising

b) FROM THE CENTRE OF THE STATION BUILDING TOWARDS DMK (UP LINE):

CHAINAGE IN MTRS FROM		Stretch	Gradient
From	To		
0.000 F/CSB	756.00 M	756.00M	1 in 382.205 Raising
756M	839.80 M	83.80 M	1 in 268.59 Raising
839.8M	1696.80 M	857.00M	1 in 104.487 Raising
1696.8M	2062.80 M	366.00M	1 in 100 Raising
2062.8M	2222.50 M	159.70M	1 in 135 Raising
2222.5M	3912.70 M	1690.20M	1 in 115 Raising
3912.7M	In to section	---	1 in 135 Raising

c) FROM THE CENTRE OF THE STATION BUILDING TOWARDS KMSD (DOWN LINE):

Chainage in Mtrs from		Stretch	Gradient
From	**To**		
0.000 F/CSB	514.00 M	514.00 M	1 in 400 Falling
514.00 M	703.10 M	189.10 M	1 in 940 Falling
703.10 M	926.70 M	223.60 M	1 in 125 Raising
926.70 M	1307.20 M	380.50 M	**LEVEL**
1307.20 M	2175.20 M	868.00 M	1 in 140 Falling
2175.20 M	2607.20 M	432.00 M	**LEVEL**
2607.20 M	2807.20 M	200.00 M	1 in 200 Falling
2807.20 M	In to section	----	1 in 100 Falling

a) FROM THE CENTRE OF THE STATION BUILDING TOWARDS KMSD (UP LINE):

Chainage in Mtrs from		Stretch	Gradient
From	**To**		
0.000 F/CSB	514.00M	514.00M	1 in 382.205 Falling
514.00 M	788.00 M	274.00M	**LEVEL**
788.00M	1088.00M	300.00M	1 in 150 Raising
1088.00M	1291.00M	203.00M	**LEVEL**
1291.00M	1687.00M	396.00M	1 in 100 (C) Falling
1687.00M	2145.00M	458.00M	1 in 150 Falling
2145.00M	2744.00M	599.00M	**LEVEL**
2744.00M	In to section	----	1 in 100 Falling

2.5. **A) <u>LAY OUT</u>:**

Running Lines:

a)	Number of Running Lines	:	Four
b)	Platforms	:	One High level passenger platform on Line No 4 measuring 400 M x 10M in length
		:	One Medium level passenger platform on Line No 1 measuring 276.30 M x 6.10M in length

Sl no	Running/Non Running line	Electrified/Non Electrified
1.	Line no-1 (UP Loop)	Electrified
2.	Line no-2 (UP Main Line)	Electrified
3.	Line no-3 (Common Loop)	Electrified
4.	Line no-4 (DN Main Line)	Electrified

2.5.1. <u>RUNNING LINES, & HOLDING CAPACITY IN CSL:</u>

S.No	Running lines	Name of the Line	Clear Standing Line	Electrified/ Non Electrified
1.	Line No 1	UP Loop	**742** M (From STR to SS)	Electrified
2.	Line No 2	UP Main Line	**724** M (From STR to SS)	Electrified
3.	Line No 3	Common Loop	**706** M (From STR to STR)	Electrified
4.	Line No 4	DN Main Line	**905.50** M (From STR to SS)	Electrified

2.5.2. NON RUNNING LINES AND THEIR CAPACITY IN CSL:

NIL

2.5.3. ANY SPECIAL FEATURES IN THE LAYOUT:

NIL

2.6. **LEVEL CROSSINGS**:

NIL

3. SYSTEM AND MEANS OF WORKING:-

System of working in force	:	Absolute block system.
Double Line / Single Line	:	Double Line. Trains are worked under "Absolute Block System" in accordance with provision of GR 7.01 (1) (a), 8.01 (1) (a) & (c) 8.01 (2) (b), 8.03 (2) (a) (b) (c) (ii), 14.01 to 14.07, 14.08 (b), 14.09 to 14.13, and Block Working Manual Chapter-IV part I
Block instruments	:	SGE type Double Line Lock block instruments. S.G.E Type (Non Co-operative) Double Line Lock and Block instrument is provided for SZY-DMK& SZY-KMSD block section in the Station Master's room vide BWM 5.01 (b) and GR 14.01.01 (a). The Lock and Block instruments are operated by Station Master on duty as per the provisions of GR Chapter-XIV of G & SR and Block Working Manual Chapter-V. a) Taking "OFF" of the Last Stop Signal is the authority for the loco pilot to take his train into the concerned block section vides GR 14.08 (a). b) The Block instruments are provided with double locking arrangement. One key of the block instruments must be in the personal custody of Station Master on duty and other key will be with S&T maintainer. The double line Block instruments are equipped with attached telephone communication connected to adjacent block station of the section concerned
Co-operative/non-cooperative	:	Non co-operative.
Provision of Block telephone	:	Attached with block instruments.
Custody of keys of Block Instruments.	:	SM is responsible for operation of the Block instruments. The Station Master on duty is the only authorized person to

		operate the instruments and their keys shall be in the personal custody vide GR 5.08 and 14.12(a). Block instrument is provided with double locking. One key will be with SM and other key will be with S&T maintainer.

SYSTEM OF SIGNALLING AND INTERLOCKING:

1.	Standard of Interlocking	Standard II (R) "B" class
2.	Type of Signaling.	Multiple Aspect Colour Light Signals. The aspects and indications of the MACLS is governed by GR.3.08 (4) (b) & 3.07 (4).
3.	Mode of the operating the signals.	The Station is provided with central Electronic Interlocking (EI). All signals and points are electrically operated from the central VDU provided at SM's Office. ***Method of operation:*** Central VDU is provided with a stand by VDU in the Station Master's office to centrally control all signals, points and crank handles etc. The SM's Key which is provided with SM's Key box shall always remain in the personal custody of the station master on duty in terms of GR 3.36 (3). The details of operation from VDU are given under APPENDIX-'B'.
4.	Provision of calling-on Signals.	Calling-on signals are provided below Home signal (i.e. in both UP & DN lines) as per GR.3.13 (1) (b), (2) (3) (4) & (6) (b). To take off Calling-on signal the train must come to stop at the foot of the home signal, occupying the track circuit (1AT, 2AT as the case may be) in rear of the Home signal. When a train occupies the track circuit, a RED light strip will appear on the Panel/VDU. The particular route on which the train is intended to be received shall be set by selecting and setting desired route through Panel by SS/SM on duty. After a lapse of 60 seconds, the Calling-on signal clears i.e. white light glows at the concerned Calling-on signal on the Panel. **NOTE:** SS/SM on duty to ensure that no through signals are given while receiving a train on Calling-on. Before taking off Calling –on signal during failure of track section, the route and the clearance of the track over which train would pass including fouling track showing Red shall also be verified by physically SM on duty
5.	Provision of shunt signals	Independitent Shunt signals SH-3A/B, is provided towards DMK end SH -4 A/B/C is provided towards KMSD end respectively for the purpose of shunting . There is no indipindendent Shunt signals at this station.

6.	Emergency cross over	Nil.
7.	Track circuits	Track circuits are provided in the yard as 1AT, 1T, 1T1, 18T, 18AT, 21/23T, 23/25T, 25AT, 22/24T, 17AT,17T,2T1,2T2, L1T1, L1T2, L1T3, L2T1, L2T2, L2T3, L3T1, L3T2, L3T3, L4T1, L4T2, L4T3, L4T4, 26BT, 24/26T , 22AT, 17T 17AT, 2AT,2T1,2T2. Axle counters 1AXT are provided for section SZY-DMK on both UP & DN lines and for section SZY-KMSD single line for last vehicle verification.
8.	Axle counters	Entire Block Sections between SZY-DMK & SZY-KMSD is provided with High Availability Single Section Digital Axle Counters (HASSDAC). **For section: SZY-DMK :-** A pair High Availability Single Section Digital Axle Counters (HASSDAC) is provided between SZY-DMK on DN line, one just beyond DN advanced starter No.18 of SZY and another one at just beyond point No 32A on 2T tack for block proving DN LVV for section SZY-DMK. Similarly another High Availability Single Section Digital Axle Counters (HASSDAC) is provided near UP Advance starter Signal No 25 on 25T and another one is provided near point No 21 A on track circuit No 1T1 of SZY UP LVV for section DMK-SZY. **For section: SZY-KMSD :-** A pair of digital axle counter is provided between KMSD-SZY on DN line, one just beyond DN advanced starter No.26 on 26T of KMSD and another one on near first facing point No 22A on track 2T2 of SZY for block proving DN LVV for section KMSD-SZY. Another pair of digital axle counter is provided between SZY-KMSD on UP line, one just beyond UP advanced starter No.17 of SZY on 17 T. and another one just beyond BSLB of KMSD on track circuit No 1T2 of KMSD for block proving UP LVV for section SZY-KMSD The position of the block section whether ‘clear’ or ‘occupied’ is reflected on the axle counter reset box provided in the Station Master’s office which shows ‘GREEN’ when the block section is clear and ‘RED’ when block section is occupied. Whenever a train enters into the block section “Block section clear” indication ‘GREEN’ for the particular block section disappears and ‘RED’ indication appears. After complete arrival of the train the ‘RED’ indication disappears and ‘GREEN’ indication appears. If after complete arrival of the train ‘RED’ indication does not change to ‘GREEN’ it should be assumed as Block instrument failure for the particular section and necessary action as per GR 14.13 is to be followed. The axle counters are interlocked with the respective

		block instruments for that section. If axle counter fails, advanced starter signal/IB Home Signal cannot be taken off for next train and the concerned instrument shall remain locked in last operated position. A resetting arrangement is provided in the SM office to reset the system to normal position in case of failure of axle counter. The resetting is to be initiated by the SM at the receiving station only after physical verification of complete arrival of train by exchanging private number. The resetting can be accomplished only with the co-operation of SMs at either end of the block section. If a train passes through the station without confirming the last vehicle indicator, the Station Master on duty shall advise the station in advance to stop the train for last vehicle verification and he need not to withhold closing of block section in rear. He shall obtain confirmation under exchange of private number about the complete arrival of the train with its last vehicle from the station in advance and subsequent trains may be dispatched. In case of failure of Axle counter the SM on duty shall obtain complete arrival certificate from the TMR of the train in the complete arrival Register (T/1410) maintained at the station for stopping train. For through passing train the SM on duty shall satisfy himself the complete arrival of the train by verification of the Last Vehicle Indicator vide GR 4.17 (1) that the train had arrived completely. In case a train passes incomplete, action shall be taken as per SR.4.17.02, the "Train out of Block Section" report shall be withheld to the station in rear until complete arrival Certificate is received from the station in advance supported by a private number. Train passing on adjacent line shall be stopped and TMR & Loco pilot shall be issued with caution order to proceed cautiously and stop sort of any obstruction as per SR.4.17.03. On occasions when motor trolley follows a train the points shall not be operated until the following motor trolley is admitted on the same line. In event of motor trolley is delayed in the section the SM on duty shall take action in terms of SR.15.25.03 (b) (vi). NOTE:
		Before taking off reception and dispatch signals for UP or DN directions the SM on duty shall ensure that the entire route including overlap and berthing portion is clear of all obstructions by observing the Track indication/Axle counter indication.

<table>
<tr><td>9</td><td>Crank Handle</td><td>When any point fails to operate normally by the Route Setting operation through Panel/VDU 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. The procedure for use of crank handle for motor operated points shall be followed as per operating manual chapter-2, para-2.18 & 2.19 and Para No. 9 of Appendix-B.
<table>
<tr><td>CRANK HANDEL</td><td>CONTROL POINTS</td><td>CRANK HANDEL</td><td>CONTROL POINTS</td></tr>
<tr><td>CH-1</td><td>21A/B</td><td>CH-5</td><td>26A/B</td></tr>
<tr><td>CH-2</td><td>22A/B</td><td>CH-6</td><td>25A/B</td></tr>
<tr><td>CH-3</td><td>24A/B</td><td></td><td></td></tr>
<tr><td>CH-4</td><td>23A/B</td><td></td><td></td></tr>
</table></td></tr>
<tr><td>10.</td><td>Emergency Point operation</td><td>Emergency point operation facility is provided to operate the point from the Panel in case of failure of point controlling track circuit. Each operation of emergency point operation shall be recorded in the station diary and in the register meant for this purpose. (Detailed procedure for operation of emergency point operation is laid down in Para No.3.0 of Appendix-B)</td></tr>
<tr><td>11</td><td>Block Instruments</td><td>a) SGE type Double line Lock Block Instruments are provided for block section SZY-DMK and SZY-KMSD.
b) Telephone attached to Block instruments and Block Panels connecting the adjoining block stations concerned.
c) ‘ON’ aspect of UP/DN Home & UP/DN Adv.str signals proved with respective block instruments.
d) Custody of block instrument keys: One key will be with SM on duty and the other with S&T maintainer.</td></tr>
<tr><td>12</td><td>Emergency Route Release operation</td><td>This 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 pressing the Signal cancellation button and the concerned signal button. Then the emergency route release button (white with red dot) positioned in the top of panel is to be pressed by breaking the seal and</td></tr>
</table>

		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 the route has been released. In case the route illumination (a white strip of lights) does not disappear, 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 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 TSR, station diary and the register meant for this purpose.
13.	Emergency crank handle release.	Emergency crank handle release operation facility is provided to operate the point by using the crank handle in case of Route locked condition. Each operation of emergency crank handle operation shall be recorded in the TSR, station diary and in the register meant for this purpose.
14.	Emergency Gate Release:	Not Applicable.
15.	Operation of Control Panel/VDU	A two position switch is provided on the control panel through which SM on duty can select the mode of operation (i.e. from Panel or VDU). The position of all points, signals and running lines are available in the Panel/VDU. Remainder Block collars are provided for use on push button which shall be placed on the point button and /or route button to prevent operation of the button in case of concerned line is blocked. The VDU is provided with SM's key user name and password which shall always remain with the personal memory of the Station Master on duty.
16	Emergency cross over	Nil.
17	Level Crossing Gates	Nil.
18	Operation of Points	All the running Lines are Motor Operated Points. Except speicified.

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

Custody of Relay room key/relay hubs/goomties/Gate goomties/cabin housing and procedure for its handover and taking over between SM and S&T staff has to follow the procedure as per JPO issued by COM and CSTE vide No. JPO/02/2012 dated 29.08.2012 and JPO issued by AM/Traffic & AM/Signal vide No. 2021/Sig/21/Safety Performance dated 10.06.2023. Relay room/ relay hubs/goomties/Gate goomties/cabin housing are provided with two independent locks. The key of one lock shall be in the personnel custody of Station Master on duty and the key of other lock shall be in the custody of S&T Maintainer. In the event of necessity such as for attending failure, or regular maintenance, on being requisitioned by S&T maintainer, SM shall hand over the key to the Maintainer. On completion of the work, maintainer shall lock the relay room/ relay hubs/goomties/Gate goomties/cabin housing and shall return the key to SM. The particulars of such transactions shall be entered by the SM in the relay room key register vide OM 2015 Para No.13.16 and in case of relay hubs/goomties/Gate goomties/cabin housing in the register meant for this purpose.

3.2. **POWER SUPPLY:**

i) The station works on 230V single phase power supply. The normal power supply is from the auxiliary transformer connected to OHE traction distribution.
ii) Standby power supply: (a) 1st standby power supply: Chattishgarh State Electricity Board Supply. (b) 2nd stand by power supply: DG set.
iii) An Auto changeover switch is provided in the Station Master's Office with the three power supplies viz., UPAT, DN AT and Local for changing the switch to the required supply position. A luminous indicator above the circuit breaker for each supply indicates the availability of the supply.
iv) Normally the switch will be kept in auto mode. If the switch kept towards UP AT or DN AT position, whenever power block is to be given on the line, the on duty SM must ascertain that power available on the other AT. Eg: if power block is given to the UP line, DN AT must be available and vice-versa.
v) In case of failure of one of the AT Supply without any power block, the 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 down). In case of failure of both AT supplies, the Local supply shall be utilized by operating the switch. If the circuit breaker is tripping even after resetting, no attempt shall be given to the AEE and CTFO/PSI for prompt rectification.
vi) For IPS system that provides to EI, a manual changeover switch is provided at SM's Office with the two power supply viz., selected supply from CLS panel and DG supply for changing the switch to required supply position.
vii) Normally manual changeover switch is kept in selected supply from CLS panel position, if in case any emergency changeover switch is changed to DG supply position.
viii) There is a remote monitoring ASM box provided at the station to monitor the health of IPS.

REMOTE MONITORING SM BOX: Remote monitoring ASM Box gives alarm to the ASM for the following fault conditions:-

a) 50% depth of discharge (DoD) of battery. In this condition audio/visual alarm comes, which can be acknowledged with audio cut-off.
b) 60% DOD, which warns for emergency. The alarm for this condition is same as for condition 1.
c) 70% DOD, which signals system, shut-down. In this condition signal feed is cut-off and all DC-DC converters continue working. Audio alarm continues till power supply is restored.
d) Any of the module fails, which calls for 'call S&T'.

e) Whenever there is a failure of power supply in AT or Local 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 AT and Local and make an entry in the Station Diary duly initiating action for rectification of failure, if any.

4. TELECOMMUNICATIONS:

i). Telephones attached to SEG Block Instruments connected to adjacent stations on either side.
ii). Telephone communication is provided between adjacent stations i.e., DMK and KMSD Stations.
iii). The station is connected to KRPU-KRDL control Circuit.
iv). The station is connected to KRPU-KRDL traction power control circuit.
v). Telephone communication is provided between Station Master on duty to UP CH locations and to DN CH Locations.
vi). 25w VHF set is provided at the station for emergency communication.
vii). CUG telephone is provided at this station.
viii). An auto telephone is provided for communication at this station.

4.1. FAILURE OF COMMUNICATION: -

a) In the event of total failure of communications between the adjacent block stations G&SR 6.02.02 & 6.02.03 shall be observed for working the train.

b) In the event of partial interruption/failure of communications between the adjacent block stations SR 6.02.06 shall be observed for working the train.

5. SYSTEM OF TRAIN WORKING:

5.1. DUTIES OF TRAIN WORKING STAFF:

The movement of trains is controlled by section controller on duty whose orders shall be complied with provided they do not contravene any provisions of General Rules, Subsidiary Rules, Station Working Rules, Block working manual and any 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 Stations and shall be responsible to ensure that there is no undue delay to train operation in general.

5.1.1. TRAIN WORKING STAFF IN EACH SHIFT:

STAFF IN EACH SHIFT:

Station Master	1
TPM/TP	1

The above staff shall work as per roster issued from time to time by Divisional Railway Manager (P) and these rosters shall be conspicuously displayed in the Station Master's office.

5.1.2. <u>RESPONSIBILITY FOR ASCERTAINING CLEARANCE OF LINES AND ZONES OF RESPONSIBILITY</u>:

The SM on duty is responsible to ascertain the clearance of the nominated line from home signal to advanced starter signal in each direction.

Sufficient Private Number books and identification number sheets in sealed covers shall always be kept in stock by SM under lock and key by maintaining register for this purpose

5.1.3. <u>ASSURANCE OF THE STAFF IN THE ASSURANCE REGISTER:</u>

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 the SWR thoroughly and understood the system of working in force at the station and must sign such declaration.

No Railway servant shall be entrusted with any duty involving the safety of the public unless the SS/SM (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/SM (In-Charge) is responsible to see that all the staff are well conversant with the Station Working Rules of the Station 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 Class-IV staff, their signature/thumb impression must be obtained after explaining full about their duties and responsibility.

The SS/SM (In-Charge) is personally responsible for maintaining the Assurance Register and for obtaining declaration from the staff working under him. The Assurance Register must be maintained in two parts one for Group-'C' staff and other for Group-'D' staff & duplicate copy of the Assurance Register must be maintained and kept in the personal custody by the SS/SM (In-Charge).

Fresh assurance shall be obtained in the Assurance Register when:
He joins at the station as a new member.
There is any change in the Station Working Rules.
He resumes duty at the station after an absence of 15 consecutive days or more.

5.2. **<u>CONDITIONS FOR GRANTING LINE CLEAR:</u>**

A) The trains are worked under Absolute block system of working with Double line between SZY-DMK and SZY-KMSD with MACLS signaling vide GR 8.03.

B) Adequate distances for reception of trains at SZY.

LINE NO.	DN TRAINS		UP TRAINS	
	FROM	TO	FROM	TO
LINE NO. 1 (UP loop)	---	---	Starter No. 7	The end of Sand hump or Advanced starter No 17
LINE NO. 2 (UP main line)	---	---	Starter No. 13	Advanced starter No 17
LINE NO. 3 Common Loop	Starter No 9	Advanced starter No 17	Starter No. 08	The End of the over Run Line or Advanced starter No.

				18
LINE NO.4 DN (main line)	Starter No. 14	The end of Advance Starter No 18	---	---

5.2.1. <u>ANY SPECIAL CONDITIONS TO BE OBSERVED WHILE RECEIVING OR DESPACTHING A TRAIN</u>:-

a) To receive an UP train on line No-3 Signal Over Lap to be reckoned from foot UP starter Signal No.9 to end of the sand hump when point No. 22&24 are normal.

b) To receive a DN train on line No-3 signal Over Lap to be reckoned from foot of the DN starter signal No. 8 to end of the Over Run Line when Point No. 23&25 Normal.

[[

5.2.1.1. <u>SETTING OF POINTS AGAINST BLOCKED LINE:</u>

When a running line is blocked by stabled load wagon, vehicle or by a train which is to cross or give precedence to another train or immediately after the arrival of a train at the station etc., the points at either end should be immediately set against the blocked line except when shunting or any other movement is required to be done on that line [Refer SR.3.51.06 (a)]. If all the lines of a station happen to be blocked, when line clear has been granted to a train, the points should be set for the line occupied by a stabled load or a goods train in that order so that, in case of mishap, the chance of causalities are minimized [Refer SR.3.51.06 (b)]. In case of all the lines are occupied by passenger train, points should be set for a loop line to negotiate which the speed of incoming train would be reduced which in turn, would minimize the consequences/causalities.

The above precautions shall be taken in addition to the observance of other precautions [Refer SR 5.04.01 & SR 5.23.01].

Safety Point Alarm:-

A safety point alarm is provided on the Table of the Duty SM with different indications.

On complete arrival of a train at the station, the SM has to set the points against the occupied line.

In case the SM forgets to alter the points, after the time lag of two minutes, an audible buzzer will be heard from this instrument along with the RED indication of the line on which the train has arrived. The SM shall then 'ACK' button to mute the buzzer, and immediately set the required points against the line on which the train has arrived.

On setting the points against the occupied line, the RED indication will disappear.

In case the SM fails to set the required points against the occupied line, a fault message will be triggered, SMS will be sent to the concerned Station Mobile and all concerned staff. Action will be taken against.

If all the lines of a station happen to be blocked, when line clear has been granted to a train, then the Safety Point Alarm will not work. Then, the points should be set for the line occupied by a stabled load or a goods train in that order so that, in case of mishap, the chances of causalities are minimized.

In case of all the lines are occupied by passenger train, points should be set for a loop line to negotiate which the speed of incoming train would be reduced which in turn, would minimize the consequences / causalities vide SR 3.51.06(b). These precautions shall be taken in addition to the observance of other precautions as contained in SR 5.04.01 and SR 5.23.01. Block Collars to be placed on the concerned button of blocked line.

To Block / Un Block a particular line, displays 'Block' 'Unblock' option on the menu. Select line block option. After selecting the line block option, that particular line will be blocked and Red color indication will be displayed on the line.

6.2.1.2 RECEPTION OF A TRAIN ON BLOCKED LINE:

Trains are to be admitted on a blocked line, by taking off calling-on signal as per GR 5.09(2) (a) or if calling signal cannot be taken off, trains are to be piloted in on a written authority on Form T/509 given by SM on duty and delivered by a competent railway servant to the Loco Pilot of the train as per GR 5.09 (2)(C)(3)(4)(5) and SR 5.09.01.

6.2.1.3 RECEPTION OF TRAIN ON NON-SIGNALLED LINE:

Not Applicable

6.2.1.4 DESPATCH OF TRAIN FROM NON-SIGNALLED LINE:

Not Applicable

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

NIL

6.2.1.6 ANY SPECIAL CONDITIONS:

a) SPECIAL RESTRICTIONS:

NIL

b) SPECIAL INSTRUCTIONS:

i) Starter Signal No. 7, 8, 9 and 14 are placed 3M from glued joint as per Railway Board's Letter No.(i) 2012/SIG/SEM-II/MISC, Dated 10.10.2012 (ii) 2012/Safety (A&R)/19/5 dated 13.06.2013.

5.3. **CONDITIONS FOR TAKING "OFF" APPROACH SIGNALS:-**

i) Conditions for taking off approach signals are governed by GR 3.40(1) (a), 3.40(3) (b) and relevant SRs there to.

ii) Calling-on signal may be taken off for the admission of train in the event of failure of Home signal in terms of SR 3.69.02(a) or for the admission of a train on obstructed line in terms of GR 5.09 and SRs thereto.

5.3.1. RESPONSIBILITY OF STATION MASTER FOR RESTORATION OF SIGNALS TO "ON":

Station master should ensure that signal is put back to 'ON' after passage of the train as per GR 3.36(2) (B), and SR 4.17.01.

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5.4. **SIMULTANEOUS RECEPTION/DESPACTH, CROSSING AND PRECEDANCE OF TRAINS:**

The following simultaneous reception and dispatch facilities are provided at this station.

1.	Reception of an UP train on Line No.1 setting overlaps to Sand Hump.	AND	Reception of a DN train on Line No.3 setting to overrun line or on Line No.4. ***OR*** Dispatch of another UP train from Line No.2 or 3.
2.	Reception of a DN train on line No.3 setting overlap to overrun line.	AND	Reception of an UP train on Line No.1 setting overlaps to Sand Hump. Or Line No 2. OR Dispatch of another DN train from Line No-4

ADEQUATE DISTANCE: (SIGNAL OVERLAP)

To take off the Home signals for admission of a train, the adequate distance (overlap) as mentioned below shall be kept clear. [Refer GR.3.40 (3) (b) and SR thereto]

CLEARANCE OF ADEQUATE DISTANCE (SIGNAL OVERLAP)

FOR UP TRAINS		
Line No.	**From**	**To**
1	UP starter Signal No.7	The end of Sand Hump or UP advanced starter signal No.17.
2	UP starter Signal No.13	UP Advanced Starter Signal No.17.
3	UP starter Signal No.9	The end of Sand Hump or Up Advanced Starter Signal No.17.
FOR DOWN TRAINS		
Line No.	**From**	**To**
3	DN starter Signal No.8	The end of overrun line or DN advanced starter signal No.18.
4	DN starter Signal No.14	DN advanced starter signal No.18.

5.5. COMPLETE ARRIVAL OF TRAINS:

The entire block section between SZY-KMSD and SZY-DMK double line section on both UP and DN Lines are monitored by axle counter system and the position of the block section whether ‘Occupied’ or ‘Clear’ is indicated on VDU at SM’s office. As soon as train enters in to that block section the RED indication appears on VDU. After whole train clears the block section GREEN indication appears on the VDU. This confirms the complete arrival of train and the SM on duty shall give ‘Train out of Block Section’ report on seeing the section clear indication GREEN on the VDU.

If a train passes through the station without confirming the last vehicle indicator, the Station Master on duty shall advise the station in advance to stop the train for last vehicle verification and he need not to withhold closing of block section in rear. He shall obtain confirmation under exchange of private number about the complete arrival of the train with its last vehicle from the station in advance and subsequent trains may be dispatched.

In case of failure of Axle counter the SM on duty shall obtain complete arrival certificate from the TMR of the train in the complete arrival Register (T/1410) maintained at the station for stopping train. For through passing train the SM on duty shall satisfy himself the complete arrival of the train by verification of the Last Vehicle Indicator vide SR 4.16.05 that the train arrived complete. In case a train passes incomplete, action shall be taken as per SR.4.17.02, the “Train out of Block Section” report shall be withheld to the station in rear until complete arrival Certificate is received from the station in advance supported by a private number.

Train passing on adjacent line shall be stopped and TMR & Loco pilot shall be issued with caution order to proceed cautiously and stop sort of any obstruction as per SR.4.17.03. On occasions when motor trolley follows a train the points shall not be operated until the following motor trolley is admitted on the same line. In event of motor trolley is delayed in the section the SM on duty shall take action in terms of SR.15.25.03 (b) (vi).

5.6. **DESPATCH OF TRAINS:**

(1) To dispatch a train, the Station master on duty having obtained line clear for that train, shall set the route for the outgoing train correctly and satisfy him by observing the visual indication on the Panel Board/VDU. He shall suspend all non-isolated shunting and then shall take "OFF" the concerned route starter and advanced starter signal. The 'OFF' aspect of the advanced starter is the authority to proceed into the block section.

As soon as the train passes the advanced starter signal, the SM will then send the train entering given section signal to the station in advance. Refer GR 3.38, 3.42, SR 3.36.04(b), 3.42.04 and BWM 2.07.5 Dispatching of trains governed by the provisions of GR. 3.42 and SRs 3.36 04(b), 3.42.04; 3.42.01(a) and BWM 2.07(5)(a)(e)(f) & (g) and other relevant provisions of G & SR, BWM and SWR.

(2) ISSUE OF CAUTION ORDERS:

Whenever in consequent of the line being under repairs or for any other reasons special precautions are necessary, a caution order detailing the kilometer and speed at which train should run with reasons for taking such precautions shall be handed over to the TMR and Loco pilot in terms of GR 4.09 and SRs thereto.

6.7 TRAINS RUNNING THROUGH:

In addition to the procedure detailed in paras ''Reception and Dispatch of trains'' rules laid down in GR 3.40, 4.17, 4.42 with relevant SRs 3.42.02 (a) (iii) and other relevant provisions of G&SR, BWM, OM shall be followed. (Refer GR 4.1, 4.11(2)).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 and Subsidiary Rule. [Ref GR 3.42, 4.17 4.42, & SR 4.42.02 (b) (i), (ii), (iii), c & (d)]

6.8 WORKING IN CASE OF FAILURE:

PROCEDURE TO BE FOLLOWED FOR WORKING OF TRAINS DURING FAILURE /SUSPENSION OF INTERLOCKING /SIGNALS/ POINTS:

Track Circuits	In case of failure of track circuits, the clearance of the concerned line should be ensured physically before a train is piloted.
Axle Counters	If the axle counter fails between the block sections, resetting procedure should be adopted as per Para 6.1 of SWR (APP-B). If the axle counter indication does not appear 'GREEN & continues to show 'RED' condition after resetting, the concerned block section shall be suspended & failure intimation to be given to sectional signal Maintainer /JE/SE (signal) for their rectification.
Block Instruments	SGE type Lock and block instruments are provided for SZY-DMK & SZY-KMSD section. 'ON' aspect of UP/DN Home & UP/DN Adv.str, DN IB signals are proved in respective block instruments. Custody of block instrument keys: One key will be with SM on duty and the other with S&T maintainer.

Reception of a train on obstructed line	When a train is to be dispatched from the station yard on signals, the Station Master on Duty must ensure that the route between the starter signal and the Advance Starter is clear of any obstruction (which includes point zones track circuits) before he takes off departure signals.
Reception of a train on non-signaled line	NIL
Defective Signals	Whenever signals become defective, the procedure laid down in GR 3.68 to 3.71, 3.80 and SR 3.68.01 (c) shall be followed. 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 laid down in GR and the relevant SRs (Refer 3.57, 3.69, 3.49 (4), 3.68 to 3.77).
Defective Interlocking	When interlocking becomes defective the SS/SM on duty shall be responsible and personally supervise the setting, clamping and pad locking of all required facing and trailing points for admission or dispatch of trains and procedure laid in GR 3.68 to 3.71 and SRs there to shall be followed.
Defective/Damaged Points	When any point fails to operate normally by the route setting operation or individually through VDU 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 the use of crank handle.
Defective IBS signal	Not Applicable

6.9 PROVISIONS **FOR WORKING OF TROLLIES/ MOTOR TROLLIES/ MATERIAL LORRIES ETC":**

Motor trolleys are to run in accordance with rules laid down in SRs. Material Lorries will work in accordance with SR. [Rules laid down in BWM. Refer SR 15.25.03 to 15.25.07, 5.11(2), 5.12, 5.13 of BWM].

a) The section where Axle Counters are provided in Lieu of track Circuits, trolleys, Motor trolleys, Lorries etc., which are not insulated, shall not be allowed to run except on Line clear.
b) Motor trolleys shall be worked as per GR 15.25 and SR thereto, BWM 6.11, 6.12, 6.13, 6.14(2) and circulars and orders issued from time to time.
c) Material Lorries shall be worked as per GR 15.27 and SRs thereto and in accordance with the provisions of Block Working Manual.
d) Tower Wagon/OHE cars shall be worked as per GR 17.08 and SR thereto and BWM 6.11.
e) Push trolleys shall run under block protection only vide SR 15.25.09(e).
f) 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 those laid down for motor trolleys while running under block protection or following another light motor trolley.

Note: Trolleys which are to be run on track circuit area shall be insulated as per SR 15.20.02.

6. BLOCKING OF THE LINES:

When a running line is blocked by stabled load, wagon, vehicle or by a train which is to cross or give precedence to another train or immediately after the arrival of a train at the station etc., the points in rear on double line sections and at either end in single line sections should be immediately set against the blocked line except when shunting or any other movement is required to be done on that line.

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 to prevent rolling down of vehicles. [Refer SR 3.36.3(b), GR 5.23 and SR 5.23.01].

A) SECURING OF VEHICLES: -

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

Note: Special care should be taken to secure special type vehicles fitted with roller bearing while standing in siding or in running lines. [Refer GR 5.23 & SR 5.23.01]

B) USE OF REMINDER BLOCK COLLARS :-

Whenever any running line is blocked or when a train is stopped to cross another train or detained for any other reason, even for a short while or
During shunting operations, reminder collars shall be used by the SM on duty on the push buttons concerned.

7. SHUNTING:

7.1. 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, 5.13,5.14,5.16 to 5.23, 8.05,8.06, 8.14 and 8.15] with relevant SRs and OM 7.01, 7.07, 7.08, 5.1(2) (B) shall be followed.

NOTE:

For any non signaled movement physical verification of the clearance of the crossover points shall be ensured by the TMR/SM on duty for supervising shunting operations.

The SS/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. The overrun line may be used as shunting neck.

8.2 SHUNTING IN FACE OF AN APPROACHING TRAIN:

Shunting in the face of an approach train is strictly prohibited vide GR 8.09 and SR thereto.

8.3 PROHIBITION OF SHUNTING ANY SPECIAL FEATURES IF ANY:

(i) Hand shunting is prohibited at both ends of the yard vide GR 5.20.
(ii) Fly shunting is prohibited at both ends of the yard vide SR 5.21.01 (c).

8.4 SHUNTING ON SINGLE LINE:

Not applicable.

8.5 SHUNTING ON DOUBLE LINE:

a)	Block back	The procedure of Block Back given in BWM 3.21 & 6.15 shall be followed
b)	Block Forward	GR 8.05 & SRs there to and BWM 3.21 & 6.15 shall be followed.
c)	During failure of Block Instrument	Shunting in the block section in advance/in rear shall not be performed unless the section is clear of all obstructions and the block section is Blocked back/Blocked forward as the case may be. SM shall fix the line block collars on respective Block Instrument.
d)	Up to IBS	Not Applicable
e)	Beyond the IBS	NIL

Shunting or obstruction for any other purpose shall not be permitted in the block section in advance unless it is clear and block forward vide G&SR 8.06(3).

8.6 SHUNTING IN THE SIDING TAKING OFF FROM THE STATION YARD :

Not applicable

9 ABNORMAL CONDITION:

(a) RULES TO BE OBSERVED IN THE EVENT OF ABNORMAL CONDITION:

(i) During partial interruption of communication between the adjacent block station, SR 6.02.06 shall be observed.
(ii) In the event of occupation of block section due to accident or obstruction SR 6.02.05 shall be observed.
(iii) In the event of trains delayed in the block section, GR 6.04 and relevant SRs shall be followed.
(v) Failure of Axle counter block/BPAC: Procedure to be followed as laid down in **Appendix-"B" in para No 6 & 6.1.**
(vi) Failure of MTRC: Not applicable.

(b) i. **Procedure for emergency operation of points by Crank Handle.-**

The detailed Procedure for emergency operation of points by Crank Handle of motor operated points shall be followed.

Crank handle operation is interlocked with the signaling and interlocking system at this station. Key of crank handles normally locked inside the RKT instrument at the respective Crank Handles Locations. Crank handle keys can be taken out only when all signals leading over the points 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 control push button simultaneously. When this key is taken out, no signal to the concerned point can be taken 'OFF' in the yard. This key can be electrically transmitted at both ends of the yard.

On account of the doubtful operation of any track circuit by a light vehicle including self propelled vehicle such as Motor trolley or light Diesel/electrical engine or tower wagon, indicating the occupancy of the track. It is necessary that SM on duty satisfies himself that the said vehicle has cleared point zone track circuits by observing the track indications of the track on either side of the cross over by positively checking the entrance and exit track circuits are showing occupancy and clearance in accordance with the train movement.

CRANK HANDEL	CONTROL POINTS	CRANK HANDEL	CONTROL POINTS
CH-1	21A/B	CH-5	26A/B
CH-2	22A/B	CH-6	25A/B
CH-3	24A/B		
CH-4	23A/B		

ii. <u>Procedure for emergency operation of points with point zone axle counter/Track circuits failure and emergency route release:</u>

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. Every emergency point operation shall be recorded in the station diary and in the register meant for this purpose. Each such emergency operation of points is registered by next higher number in the counter provided for this purpose. SM shall ensure sealing of Emergency point operation button after completion of each such operation by S&T staff.
Rules regarding locking of points and damaged points vide GR 3.39 and GR 3.77 to be followed.

c) <u>Certification of clearance of track before Calling –On Signal operation in initiated:-</u>
Before taking OFF Calling On signal during failure of track circuit/axle Counter, the route and the clearance of the track over which train would pass to be verified by SM on duty.

d) <u>Reporting of failure of points, Track circuits/axle counter and interlocking:-</u>

i) Whenever there is a 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 and only after receipt of the written memo from the Signaling Maintainer for rectification of the fault, SM should restore the normal working.
ii) The entries in failure register to be done with message to the section controller.

9.1 <u>TOTAL FAILURE OF COMMUNICATION:</u>
Rules and regulations for working of trains during total interruption of communication on single line section shall be followed vide SR 6.02.03 and instructions laid down in BWM.

9.2 TEMPORARY SINGLE LINE WORKING ON DOUBLE LINE SECTION:

In the event of failure of single line working on a double line section when communication is available, the provision laid down in SR 6.02.01 shall be followed. Last stop signal of the station shall not be taken off but an authority to pass the last stop signal at 'ON' shall be issued on T/369 (3b) noting the private number & the identification number received from the block station in advance on form T/D/602 vide SR 6.02.01.

9.3 DESPATCH OF TRAINS UNDER AUTHORITY TO PROCEED WITHOUT LINE CLEAR OR TO ASSIST THE CRIPPLED TRAIN:

(i) In the event of total failure of communications, trains shall run on the authority to proceed without line clear in terms of SR 6.02.03.

(ii) In the event of necessity to send a train to assist the crippled trains, SR 6.02.05 shall be followed.

9.4 VISIBILITY TEST OBJECT:

The signal lights of UP starter signal No.7 and DN Stop signal No.12 of Line No.1 are ear marked to serve as visibility test object during day and night vide GR 3.61.02 (b) (iii) & SR's thereto.

10 ESSENTIAL EQUIPMENT AT THE STATION:

(Details are given in Appendix-'E')

11 FOG SIGNAL MEN NOMINATED TO BE CALLED IN CASE OF FOG:

In case of thick, foggy or tempestuous weather impairing visibility, whenever it is necessary to indicate to the Loco Pilot of an approaching train the locality of a signal, the SM on duty at station shall arrange for signaling in terms of General Rules 3.61 and Subsidiary Rules thereto. The assurance of the staff shall be obtained in the month of OCTOBER every year in the Fog Signal Register vide SR.3.61 as a token of their acknowledgement in fog signaling Rules.

Fog signalmen shall be detailed for duty at stations being recruited partly from the station traffic staff and partly from Engineering Gang man and must not be substitutes or casual labor but regular employees of the railway.

11.1 STATION DETONATOR REGISTER (OPT/124)

A Register regarding detonator is maintained at the station.

11.2 INSTRUCTIONS:

a) This register contains the following parts.

Part. - I	:	Particulars of fog signal men posted at the station from time to time.
Part – II	:	Particulars of receipt and stock of detonating (fog) signals at the station to be filled in whenever detonators are used or received.
Part – III	:	Periods of fogs, fog signalmen on duty and details of detonators used.
Part – IV	:	Particulars of issue and testing of fog signals at the station.

b) In charge of the station shall ensure that the information maintained in the register is kept up to date and is accurate in all respects.

c) Transportation inspectors shall check the registers and also the stock of detonators on hand each time they visit the station and initial with date as an indication having done so.

12 APPENDICES:

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

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APPENDIX 'A'

WORKING OF LEVEL CROSSING GATES

---------- NIL----------

APPENDIX 'B'

(Detail description of signaling and interlocking installations, instructions for working them normally and in emergencies etc. including power supply arrangements).

1. BRIEF DESCRIPTION OF THE SIGNALLING AND INTERLOCKING INSTALLATIONS:

SILAKJHORI is a Class 'B' station provided with Standard-II (R) Interlocking. The station is provided with Route setting type Electronic Interlocking between points, signals, track circuits and other signaling gears. The station is equipped with Multiple Aspect Colour Light Signaling. All points and signals are power operated through a central **Visual Display unit (VDU)** installed in the SM's Office.

2. DESCRIPTION OF OPERATOR CONSOLE CUM VISUAL DISPLAY UNIT (VDU):

The Operator Console cum Visual Display Unit (VDU) is provided for operation of Signals, points, Crank handles and controls etc. A mimic yard diagram based on SI plan No. SI/23156 ALT-'B' will be displayed on the VDU. The VDU is used for controlling and monitoring the station. Indications on the station yard mimic diagram of VDU will be dynamically updated.

3. SYSTEM OVERVIEW

The PC-based (**operator VDU**) for the operation of Signals, Points, Crank Handles and Siding Controls, etc. The SM of a station (*hereinafter referred as* **operator**) required to be familiar on the specific station's SWR (station working rules).

Operator VDUs consists of CPU with a color monitor, keyboard and pointing device (mouse). Through communication the exchange of control and indication messages takes place with operator VDU. The Software is installed to display the Station Yard Mimic Panel diagram on the operator VDU and it allows access to all functions by selecting menus with a right click of mouse on the corresponding function icon. By selecting the menu, the function (Signal clear and cancellation, Route release, Point operation, Gate release etc.,) can be executed.

The operator VDU is used for controlling and monitoring the station, however, indications on the Station yard mimic diagram of operator VDU will be dynamically updated.

3.1. DUAL VDUs – MODE OF SELECTION:

The privilege has been given with the operator to control the station through VDU-1 or VDU-2 by selection through switch provided on the SM's table. The operator VDU is having controls to operate the field gears from the Mimic panel diagram. A Mimic panel diagram displayed on the operator VDU will be an exact replica of yard suits SI plan.

3.2 SM KEY

a) **SM Key IN operation can be achieved through operator PC as follows**:

Operator shall right click on the SM Key icon, and shall select the SM key IN option in the menu, which will enable the password window to appear. After the valid entry of user name

and password the SM KEY IN operation will be enabled.

b) **SM key OUT operation can be achieved through operator PC as follows**:

Operator shall right click on the SM Key icon, and shall select the SM KEY OUT option in the menu, which will enable the conformation window for SM KEY OUT. After providing the conformation, SM KEY OUT operation will be enabled. This will lock all the controls in operator VDU except thr Signal cancellation facility.

4. CONTROL(S) & INDICATION(S):

4.1. ICONS AND INDICATIONS PROVIDED ON THE VDU:

In addition to mimic yard diagram including signal, points, track circuit, Axle counters, L.C. gates, sidings as indicated in the WRD, various other ICONS and indications have been provided on the VDU. A brief description of the same are described below.

SN	ICONS	INDICATIONS	FUNCTIONS	REMARKS
1.	PC Control	Yellow light when key is 'IN'	Ensures operation of VDU by authorized person	Protected by pass word
2.	---	Emergency Route release – UP & DN	Flashing indication appears when Emergency route release operation is initiated.	
3.	Emergency Point operation key	Yellow light when key is 'IN'	Ensures emergency point operation by authorized person	For each operation concerned counter shall register one count higher.
4.	Point failure Ack. button	Red	Flashing indication appears when any point fails. SM has to left click on the icon to acknowledge.	Buzzer will sound. On acknowledgement buzzer stops. After verification at site inform S&T staff Immediately.
5.	Signal failure Ack. button	Red	Flashing indication appears when any signal fails. SM has to left click on the icon to acknowledge.	Buzzer will sound. On acknowledgement buzzer stops. Inform S&T staff Immediately.
6.	CH-1, CH-2, CH-3, CH-4, ------, buttons	Yellow lamp indicates 'KEY IN'. Red lamp indicates ' CH LOCKED'	In normal condition yellow lamp will be lit. Whenever the crank handle is locked in route or otherwise red indication will glow.	
7.	'DN Train Entering Section' muting	Yellow - acknowledged	On getting alarm/buzzer SM shall left click on the button icon to acknowledge it.	

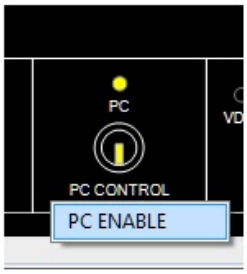
SN	ICONS	INDICATIONS	FUNCTIONS	REMARKS
	button			
8.	'UP Train Entering Section' muting button	Yellow - acknowledged	On getting alarm/buzzer SM shall left click on the button icon to acknowledge it.	
9.	UP Block release button	Yellow – Prepared for Block release.	On getting indication SM shall left click on the button icon which shall release Block Handle.	After complete arrival of train this will be activated
10.	DN Block release button	Yellow – Prepared for Block release.		
11.	Line Block button	Red when blocked	SS/Dy. SS shall point the curser on the icons provided on the berthing track and right click. One drop menu will appear indicating line blocked and un-blocked, SS/Dy. SS has to select the required menu.	When line block is selected the concerned berthing portion of track will appear as thick Red line.

4.2. SM KEY:

SM key is physically provided on VDU change over panel, outside the VDU on SM's Table. This key when inserted in the lock [provided on VDU change over panel] and turned right the VDU becomes operative. The key when inserted in the lock and either turned to left or extracted out from the lock renders the VDU inoperative except for putting back the signals to 'ON' position in case of emergencies. When SM's key is inserted and turned to right a red indication lit above the SM's Key.

PC Control:

If any one of VDU has shut down for maintenance or in case of failure, after resumed to normal working or rectification, for getting the operations from the VDU, first enable the PC which is virtual SM's Key. To enable the PC, right click on the PC icon which enables the PC enable option.



Then click on the PC enable option which will enable the password window to appear. After the valid entry of user name and password the PC will be enabled.

4.3. ELECTRONIC INTERLOCKING (E.I) SYSTEM INDICATIONS:

a) Vital Interlocking Computer Status:

In EI, two Vital Interlocking Computer cards are available normally. The status of each of the VIC is provided on VDU as following.

VIC – A Indications

VIC-A is Active

VIC-A is Stand By

VIC–A is Not Available

VIC –B Indications

VIC–B is Active

VIC–B is Stand by

VIC–B is Not Available

If there is any change in VIC's status, its changed status will be displayed along with OK button and a buzzer is turned on to alert the operator. The Buzzer stops and the indication message disappear when the OK button is pressed by the Operator.

Action by SM: If at least one VIC is available it will be in Active State and EI shall continue to function. On observing the fault, SM shall acknowledge the fault and immediately inform EI Maintainer.

b) Link Status Indication:

The EI VDU receives the data from EI Room through two OFC channels. The Link Status Indication for the same is provided on the VDU.

When Channel – A or Channel – B link is healthy, corresponding yellow indication will be flashing continuously. When Channel – A or Channel – B link is faulty, corresponding red indication will be shown steady.

Channel –A Link Status is Healthy

Channel – A Link Status is Faulty

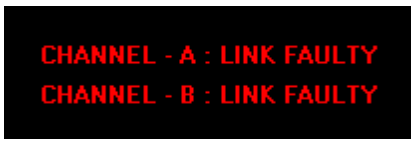
Channel – B Link Status is Healthy

Channel – B Link Status is Faulty

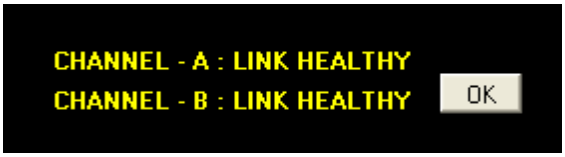
Buzzer and Acknowledgment:

When Channel A link or Channel B Link fails, a Buzzer is turned on to alert the operator. To acknowledge the fault, right click on this control, a pop- up menu is displayed and then click on the Ack menu option. The Buzzer stops when the fault is acknowledged by the Operator.

When any of the channels link fails, an indication is shown in red color.



When any of the links is recovered, the indication is shown in yellow color along with one OK button. The indication message disappears if OK button is pressed.



Action by SM: If at least one of the Communication Channels is Healthy, EI VDU shall continue to provide Indications. On observing any communication channel faulty indication, SM shall acknowledge the fault and immediately inform the EI Maintainer.

c) EI Equipment Critical Fault:

If EI is shut down due to any critical fault, a message is displayed in red color along with OK button and a buzzer is turned on to alert the operator. The Buzzer stops and the indication message disappear when the Operator presses the OK button.

Action by SM: SM shall acknowledge the fault, inform the EI Maintainer.

4.4. Function Lock & Unlock Operation Details: Lock/Unlock Operation and Indication:

Lock Operation allows disabling of operation for the selected functions. The operations can be enabled again by unlocking the locked function operation.
Lock Indication:

Default Indication (When nothing is locked or no menu item is checked)

Lock Indication (When any one item is locked or menu item is checked)

Lock or Unlock Operation:

Right Click on this image, a pop- up menu is displayed this menu is called Button Lock/Unlock Menu. To Lock or Unlock the required button go to the required menu and click on it. This shall be explained in detail below.

Lock/Unlock Menu:

OPERATION
Main Signal
Shunt signal
Calling-on signal
Point
Route

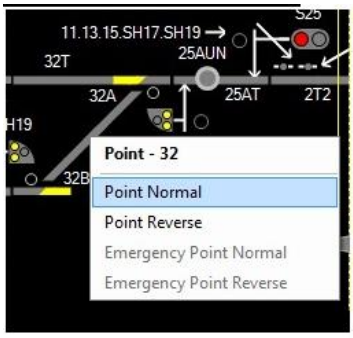
- Click on this menu option to lock /unlock all the items in the menu.
- When a menu option is clicked, it will be checked i.e. a tick mark will be shown if it is previously unchecked or else it will be unchecked if it is previously checked.
- If a menu item is checked its main menu or parent menu will also be checked as shown below and color of Lock/Unlock image will be changed to yellow.

4.5. VDU ACTIVE INDICATIONS:

Whenever the VDU is in active condition a RBG sequence will be running in the bottom left corner of the screen. That is in a flashing sequence in the screen.

4.6. OPERATION AND INDICATION OF POINT:

To operate the point, the operator needs to track the mouse on to the concerned points then click the right button on the mouse. After clicking by the right button on the mouse a pop-up menu will appears as below. Then select the Normal/Reverse option on the menu appearing at the point in the operator VDU.



4.6.1. REVERSE TO NORMAL OPERATION:

Click on the **POINT NORMAL** in the menu appearing at the point in the operator VDU, Normal flashing indication will appear, the indication will be steady after the point is set to Normal.

4.6.2. NORMAL TO REVERSE OPERATION:

Click on the **POINT REVERSE** in the menu appearing at the point in the operator VDU, a Reverse flashing indication will appear, the indication will be steady after the point is set to Reverse.

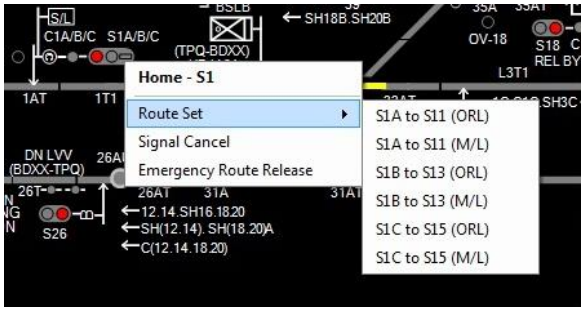
4.6.3. POINT INDICATIONS:

When the point is free a steady yellow strip of light will appear either in the normal portion of point zone (In case of cross over at both ends) or in the reverse portion of point zone depending up on the position of point, indicating that the point is set. When the point is operated from the normal to reverse the strip of light in the normal portion is disappears and starts flashing in the reverse portion and becomes steady when the point is set and detected. Similarly when the point is operated from the reverse to normal the strip of light in the reverse portion is disappears and starts flashing in the normal portion and becomes steady when the point is set and detected. When the point is engaged in a route a yellow light will

appear near the point and red indication appears in the point lock indication indicating that the point is locked and cannot be operated now.

4.7. SIGNAL OPERATION:

To take-off a signal with the desired route the operator needs to Right click the mouse on the concerned signal on the operator VDU. After clicking on the Signal, a pop-up menu will appear as below for route set, signal cancellation and route cancellation operations.



4.7.1. SETTING A ROUTE:

To set a route of a signal, track the mouse on the 'Route set' sub menu which will appear all the possible routes of the signal, then click the left button of mouse on the required route on route set sub menu. After doing so the route gets initiated & Red flashing indication will appear on the replacement track of the signal. All the relevant points Normal/ Reverse set indications will start flashing if favorable point detection is not available. After setting of points in the route, overlap and isolation in required condition flashing indication will be steady and a complete yellow 'Route set' indication will appear over the route right from replacement track of the signal to the last track of overlap section of the route. Also the point lock indication will appear through Red indication near the point. Finally a route locked yellow steady indication will appear immediate rear of the signal. Now the signal will be taken-off. The yellow route set indication will turn to red when the train occupies the concerned track circuit.

4.7.2. SHUNT SIGNAL OPERATION:

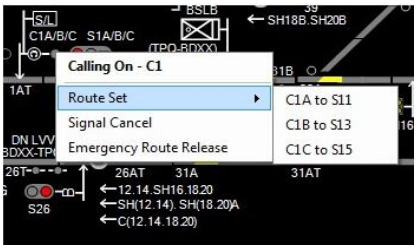
To set a route of a shunt signal, the same procedure as main signal has to be followed as explained above. To set the signal route for shunt signals SM on duty shall put the pointing device on the Shunt signal icon and right click on the same. After clicking on the Signal, a pop-up menu will appear as below for route set, signal cancellation and route cancellation operations. Track the mouse on the 'Route set' sub menu which displays all the possible routes of the signal, then click the left button of mouse on the required route on route set sub menu. After doing so, desired route will be initiated and the Shunt signal will be taken off.

4.7.3. CALLING ON SIGNAL OPERATION:

Calling on signal route set operation follows the same procedure as mentioned for the main signal. For calling on Signal, route is set after a train occupies the approach track circuit in immediate rear of the stop signal. The calling on Signal is cleared after a lapse of 60 Seconds provided other conditions are fulfilled.

To take "OFF" Calling-on signal the train must come to a stop at the foot of the Home signal, occupying the track circuit (1AT & 2AT as the case may be) in rear of the signal. When a train occupies the track circuit a RED light strip will appear on the VDU. The

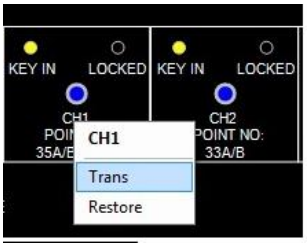
particular route on which train is intended to be received shall be set by tracking the pointer in VDU on to the signal below which the calling on signal is provided. Right click on the calling on Signal which will appears a pop-up menu as follows.



Then the SM must drag the pointer and click over the 'route set' sub menu which displays all possible routes then click over the particular Calling on route amongst the various options displayed in the sub menu by the left button of the mouse as a result of which the calling–on signal will blink for 60 seconds. For all home signals the time delay is 60 seconds, the Calling on signal clears i.e. a white light glows at the concerned calling-on signal on the VDU. This action will be recorded in a respective counter of the counter box provided on SM's table. Every such operation shall be recorded by the SS/SM on duty along with the reasons to do so. The calling-on signal route can be released after complete arrival of the train by Signal cancellation only.

4.8. CRANK HANDLE CONTROL OPERATION:

To Transmit or Release control of the Crank Handle, right click on the concerned Crank handle control button provided on the operator VDU.



For Transmitting the Crank Handle KEY to the field personnel, right click on the Crank Handle and select the **Trans** in the menu appeared. After transmission, the KEY IN indication will start flashing; now the KEY can be extracted from the EKT. After extracting the key from the EKT, the key IN indication will disappear. This action will be recorded in a respective counter of the counter box provided on SM's table. The counter will increment the number for each and every such action and also, this number should be recorded by the SM on duty who shall record the details of the Crank Handle operation along with the latest counter number in a register.

When the Manual point operation is completed, after putting the KEY in the EKT, corresponding Crank Handle KEY IN flashing indication will appear on the VDU. Now the operator has to Release the control for the steady indication, for that right click on the Crank Handle and select the **Restore** in the menu appeared.

A Crank handle locked indication (Red) will appear, when the particular point is locked through the signal route set over it or engaged on route setting in any other way.

CRANK HANDLE	CONTROL POINTS
CH-1	21A/B
CH-2	22A/B
CH-3	24A/B
CH-4	23A/B
CH-5	26A/B
CH-6	25A/B

4.9. OVERLAP TIME RELEASE:

Separate indications for each overlap are provided near the starter signal to indicate the free or locked condition of overlap. This indication light will glow when overlap is locked by any Home Signal route and there will be no light when overlap is free. The locked indication starts flashing when the approaching train clears the rear end point zone track and occupies the berthing track. After a time release of 120 seconds the white flashing light will disappear indicating concerned overlap is free.

5. **EMERGENCY OPERATIONS:** To carry out different emergency operations the following procedures are to be followed.

5.1. CANCELLING A ROUTE/ EMERGENCY ROUTE RELEASE:

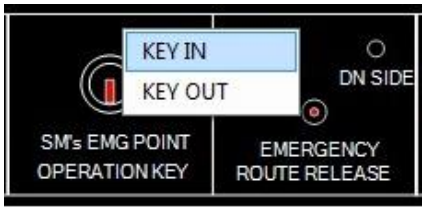
To cancel a signal route when the route is set and the signal in taken-off, click on the signal. After clicking by the right button on the mouse a pop-up menu will appear as shown in Para 4.7 above. Click on the Signal cancel menu (Main/ Calling on) of the concerned signal, the signal will immediately go to 'ON' aspect, after doing so click on the Emergency Route release menu the route locked indication will starts flashing for 120 sec & the Emergency Route Release Indication (UP/DN as the case may be) will flash for the entire time interval. After the completion of 120 sec, the locked route will be released. This action will be recorded in a respective counter of the counter box provided on SM's table. The counter will increment the number for each and every such action and also, this number should be recorded by the SM on duty who shall record the details of the Route cancellation along with the latest counter number in a register.

5.2. EMERGENCY POINT OPERATION:

When the point zone track circuits failed without any point lock condition through respective signal route(s), a point can be operated by the Emergency Point operation.

Note: *Before resorting to this operation SM on duty shall verify that the point zone is clear of any vehicle occupying the track section and the same is clear of any obstruction.*

Before doing the emergency operation, SM on duty shall made the Emergency Point Operation Key is to be 'KEY IN'. To 'KEY IN' the Emergency Point Operation key right click on the SM's Emergency point operation key a pop-up menu will be appears as follows.

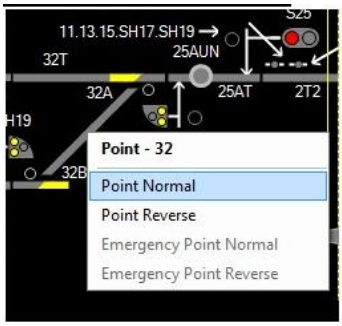


Click on the KEY IN in the menu appeared and shall provide User name and password for the same as follows.

The user name of this station is 'ECOR' and password of this station is SZY. Then point operation can be done to either normal or reverse as per requirement.

5.2.1. EMERGENCY NORMAL OPERATION:

Right click on the point, so that a pop-up menu will appear as follows.



Click on the emergency point normal from the menu then normal flashing indication will appear at the point. Flashing will stop and steady indication will appear after the point is set to Normal. This action will be recorded in a respective counter of the counter box provided on SM's table. The counter will increment the number for each and every such action and also, this number should be recorded by the SS/SM on duty who shall record the details of the Emergency Point Operation along with the latest counter number in a register.

5.2.2. EMERGENCY REVERSE OPERATION:

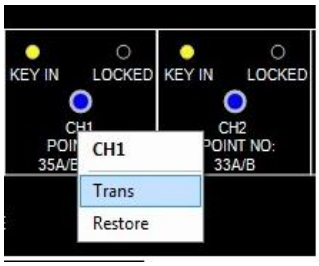
Right click on the point, so that a pop-up menu will appear as shown above, select the emergency point reverse from the menu then reverse flashing indication will appear at the point. Flashing will stop and steady indication will appear after the point is set to Reverse. This action will be recorded in a respective counter of the counter box provided on SM's table. The counter will increment the number for each and every such action and also, this number should be recorded by the SS/SM on duty who shall record the details of the Emergency Point Operation along with the latest counter number in a register.

After the completion of the Emergency point operation, the Key to be 'KEY OUT'. Same procedure as mentioned for KEY IN shall be followed for KEY OUT. To 'KEY OUT' the Emergency Point Operation key right click on the SM's Emergency point operation key a pop-up menu will be appears as shown in the Para No.5.2 above. Click on the KEY OUT in the menu appeared and shall provide User name and password. The user name of this station is 'ECOR' and password of this station is SZY.

Note: *The Emergency Point Normal and Emergency Point Reverse options are normally in disabled mode. These are enabled only when the Emergency Key is in position.*

5.3. EMERGENCY CRANK HANDLE RELEASE OPERATION:

When a crank handle is locked due to route set earlier is not released or otherwise to Transmit or Release control of the Crank Handle, SM on duty shall cancel the relevant signal first and then right click on the crank handle control button icon provided like the following on the VDU. On clicking, the appearing pop-up menu gives details of the possible commands on the Crank Handle.



For Transmitting the Crank Handle KEY to the field personnel SM on duty has to click on '**Trans'** menu. After transmission the 'KEY LOCKED' (Red) indication will start to flash for 120 seconds & 'KEY IN' remains steady. After a lapse of 120 seconds the 'KEY LOCKED' indication will vanish & 'KEY IN' indication will start to flash. After extracting the key from the RKT, the 'KEY IN' indication will disappear. When the Manual point operation is over, after putting the emergency crank handle key in the RKT, flashing 'KEY IN' indication will appear on the VDU, now the SS/DY. SS on duty shall Release the control for the Steady indication by clicking **'Restore'** menu.

This action will be recorded in a respective counter of the counter box provided on SM's table. The counter will increment the number for each and every such action and also, this number should be recorded by the SM on duty who shall record the details of the Emergency Crank Handle Operation along with the latest counter number in a register.

5.3.1 EMERGENCY CRANK HANDEL RELEASE DURING FAILURE OF BOTH THE VDU (ACTIVE & STAND BY)

When both the VDUs (Active & Stand by) provided for operation of signals & points in EI station cease to work at the same time due to power failure or whatever the reason, the SS/SM on duty shall turn the key (ECH) to right provided in the key box fixed on the top of the counter box by resorting to this, timer is initiated and all the crank handles are released at a time after 120 seconds. The on duty SS/SM can set the required point through crank handle manually by extracting the key/keys from EKTs provide in the location boxes.

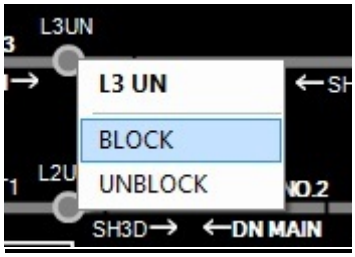
After that immediately should inform the same to signaling staff regarding the failure for rectification of the same.

5.4. LINE BLOCK AND UNBLOCK (REMINDER COLLAR):

When SM on duty requires demarcating a line as Blocked/free line he shall adopt the following procedure.

5.4.1. LINE BLOCK:

To provide the Line block collar/ Reminder collar, single right click on the concerned Line block Icon on the VDU ex: L1UN, L2UN etc. which enables two options i.e Line block and Line unblock as shown below.



Then select the Line block option. After selecting the Line block option that particular line will be blocked for all the possible track circuit section on that particular line. The Line block 'RED' colour indication will be displayed after the successful application of such a blocking process on the VDU.

5.4.2. LINE UNBLOCK:

To release the set the block of any particular line, the SM on duty should select the Line Unblock option. After selecting the line unblock option that particular line will be available for the train movement leading to the all possible track circuit section.

6. HASSDAC: High Availability Single Section Digital Axle Counter

High Availability Single Section Digital Axle Counter are provided as a Last Vehicle Checking Device (LVCD) for Last vehicle verification on Both UP and DN block section between SZY-DMK and on block section between SZY-KMSD.

The position of the Block section whether cleared or occupied are reflected in the VDU diagram provided in the Station Master's office which shows 'GREEN' when the Block Section is clear and 'RED' when occupied. Whenever a train enters into the Block Section, "Block Section Clear" indication 'GREEN' for the particular block section disappears and 'RED' indication appears.

After complete arrival of the train the 'RED' indication will disappear and 'GREEN' indication will appear. If after the complete arrival of a train the 'RED' indication does not change to 'GREEN' it should be assumed as Block Instrument failure for the particular section and necessary action as per GR.14.13 is to be followed. The axle counters are interlocked with the respective block instruments for that section. If Axle Counter fails, Advanced Starter signal shall not come to 'OFF' and the concerned instrument shall remain locked in last operated position for section.

A resetting arrangement for resumption of the system, in case of failure of Axle Counter, has been provided in the SS/SM office of the adjacent Block stations. After being assured by both the SS/DY. SS that the last vehicle has arrived completely at the receiving station, the

resetting procedure shall be initiated after exchanging Private Number vide G&SR 4.17, 4.17.01.

A Reset Box is provided on SS/SM's table for each LVCD section to reset the Axle Counter in case of failure LVCD. Reset Box gives the status of the section LVCD i.e. Clear (GREEN), occupied (RED), preparatory reset (GREEN) and power on indications (WHITE). It also having the Reset Key, push button for resetting the LVCD and a counter is provided for record the operation.

6.1. <u>RESETTING OPERATION FOR LVCD (HASSDAC):</u>

i) HASSDAC Whenever after complete arrival of train, the HASSDAC axle counter continue to show 'RED' on the panel board & VDU, the on duty SS/SM at both ends of the section shall resort to reset the axle counter. For this purpose SS/SM at receiving end shall first verify that Block section is clear of trains. If the failure has occurred after arrival of train, SS/SM shall obtain signature from the TMR of stopping train on the train intact register (vide GR &SR 4.17, 4.17.01) or by exchanging signal with the TMR of through train, so that he can ensure that the train has arrived completely before resorting the HASSDAC axle counter. SS/SM of receiving end shall inform the failure of axle counter to on duty SS/SM of dispatching end for UP/DN section.

ii) SS/SM at receiving end then sends an operating person to verify that the last vehicle is clear of Block section. After verifying the clearance of last vehicle of concerned block section, the operating person exchanges private number.

iii) On exchanging private number the SS/SM at both ends will insert the reset key for corresponding section and shall press the nominated reset button. By this operation HASSDAC Axle Counter will reset and associated counter will change to next higher number at both ends.

iv) SS/SM at both ends shall record the counter number so changed due to reset of axle counter in the reset register and also in the Train Signal Register mentioning the purpose of reset. After the reset operation is completed, preparatory reset indication will appear on panel/reset box at both ends which suggests that the reset operation is successfully completed and the first train has to be piloted out.

v) On arrival of the piloted train the axle counter track cct zone of the section shows clear and normal working shall be resumed. Even after arrival of piloted train, LVV axle counter zone does not show clear indication, S&T staff to be informed for getting rectified the failure of axle counter.

vi) It is mandatory that every reset operation of HASSDAC axle counter first train after reset process shall have to be piloted out.

Single section Digital Axle Counters are provided on both UP & DN lines for SZY-DMK section. High Availability Single Section Digital Axle counters with dual detection are provided on both UP & DN lines in SZY-KMSD section. The position of Block Instrument weather Closed or occupied is reflected in the VDU provided in the SMs office which shows 'GREEN' when block section is clear and 'RED' when block section occupied. Whenever a train enters into block section "Block Section Clear" indication 'GREEN' for the particular block section disappear and 'RED' indication appears.

After complete arrival of train, if the LVCD of the section does not clear or LVCD section free indication (Green) does not appear in the panel, the receiving station SM shall apprise the sending station SM through telephone for resetting giving details of last train that has arrived complete at his station and the block section is clear.

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

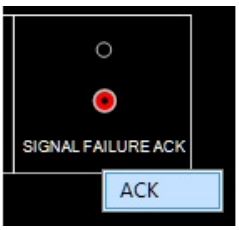
Then the SM on duty shall adopt the following the resetting procedure at both the sending and receiving stations individually.

a) On being advised by SM of SILAKHJORI Station, SM of KUMHARSODRA/DILIMILI Station inserts the key in the Reset Box, turns right and presses both the key and the Push Button (Red) simultaneously with the SM of SILAKHJORI. The Counter on the Reset Box at SILAKHJORI Station and KUMHAR SODRA/DILIMILI Station registers the next higher number and after five seconds miniature green Preparatory Reset indication appears on the Reset Box both at SILAKHJORI and KUMHAR SODRA/DILIMILI Station. The step by step procedure shall be followed as given in "b" to "i".

b) SS/SM of SZY Station and KUMHAR SODRA/DILIMILI Station shall then Insert SM's LV reset key, and turn right.
c) Press simultaneously Push button and Reset Key which are provided on the Reset Box.
d) Release SM's Reset Key and Push button.
e) Turn left the SM's Reset Key and removes it.
f) The system obtains preparatory reset state and preparatory reset indication (Green) glows on the Reset box. 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 in the section to make the system normal.
i) The SM on duty shall record it in the Train Signal Register indicating the resetting operations in detail i.e. train number, time, Private Number exchanged with SM of sending station and giving reasons for the resetting operation.
j) If the axle counters functioning properly now, then Block Section cleared indication 'Green' will appear on the Reset box and on VDU and the concerned Block working will be normalized.
k) If the LVCD section indication does not appear 'Green' and continues to show 'RED' indication, the concerned Block section shall be suspended and failure intimation to be given to sectional signal Maintainer/JE/SE (Signal) for early rectification.

7. SIGNAL LAMP FAILURE INDICATION AND BUZZER ACKNOWLEDGMENT:

LED signal lamps have been used for all signals at this station. In case failure of LED signal aspect will be indicated by the appearance of 'RED' light on VDU along with audible buzzer, which can be acknowledged and muted by pressing the 'SIGNAL FAILURE ACK' button icon. However the RED light will continue to glow until the lamp is replaced by a new lamp. For rectification of failure SM on duty should inform the concerned S&T staff.



8. <u>POINT FAILURE INDICATION (RED), POINT FAILURE BUZZER AND POINT FAILURE ACKNOWLEDGEMENT:</u>

Whenever there is failure of point due to non-setting, point failure indication flashing light appears near the point button icon along with point failure Buzzer. The buzzer stops when the point failure acknowledgement button icon is pressed, but the flashing light above the ACK button shall continue to glow.

The flashing light at the concerned point zone can identify the defective point. After the failure is rectified, the flashing light above the 'POINT FAILUR ACK' button will disappear.

9. <u>COUNTERS:</u>

The following counters are provided in the Counter Box on SM's table for record the actions such as emergency point operation, emergency route release etc.

1. Emergency Route Release Counter.
2. Emergency Point Operation Counter.
3. Emergency Crank Handle Release Counter.
4. UP Calling on Counter.
5. DN Calling on Counter.

In addition to the above counters, a counter is provided on the Reset Box of each Block section LVCD. The increment in counter number for each and every such action should be recorded by the SS/SM on duty who shall record the details of the Operation along with the latest counter number in a register.

10. <u>TRACK CIRCUITS:</u>

Both UP and DN main lines, UP loop, Common loop and all the point zones are track circuited as 1AT, 1T1, 18T, 18AT, 21/23T, 23/25T, 25AT, 22/24T, 17AT,17T,2T1,2T2, L1T1, L1T2, L1T3, L2T1, L2T2, L2T3, L3T1, L3T2, L3T3, L4T1, L4T2, L4T3, L4T4, 26BT, 24/26T, 22AT, 2AT, & 1AXT.

Approach track circuits 1AT & 2AT of 5 Rail length for Calling on Signal are provided in rear of the UP and DN Home signals respectively. In addition there are short length track circuits 1T, 1T1 in advance of UP Home Signal and 2T in advance of DN Home Signal are also provided. Similarly there are 5 Rail length track circuits 18T & 17T beyond DN & UP

Advanced Starter Signals respectively for replacement of Last Stop Signal. From the last trailing point/fouling mark in either side of yard to Advanced Starter Signals are also track Circuited i.e 18AT and 17AT in DN and UP directions respectively.

Indications for the above track circuits are available on VDU. Yellow Strip on VDU indicates Route is set and track is clear and Red strip indicates Track is occupied condition.

On account of the doubtful operation of any track circuit by a light vehicle including self-propelled vehicle such as motor trolley or light engine or tower wagon etc., indicating the occupancy/clearance of track, it is necessary that the Station Master on duty satisfies himself that the said vehicle has cleared the point zone track circuits by observing the track indications of the track on either side of the cross overs by positively checking the entrance and exit track circuits are showing occupancy and clearance in accordance with the train movement.

11. RELEASE/CANCELLATION OF ROUTE:

Normally when a train is received on any route or dispatched, the route illumination will disappear automatically after passage of the train suggesting that the route is released. When the route is not released automatically after passage of train over it or when on SM on duty intends to cancel the route set by him shall follow the procedure for cancellation of route described in Para No.5.1 of Appendix-B above.

Note: *UP & DN Calling on Signals and UP & DN Advanced Starter Signals are to be* manually cancelled after the passage of the train to release the route. In both the cases after passage of train cancel the signal to release the route.

12. REPLACEMENT OF SIGNALS TO 'ON':

Signals are replaced to 'ON' automatically by the passage of a train beyond 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 SM on duty shall follow the Para No.5.1 of Appendix-B.

13. PILOTING OF TRAINS IN TO STATION YARD:

Whenever Home signal becomes defective, trains can be admitted by taking off Calling-on signal. Whenever both Home signal and Calling-on signal failed, all trains will be piloted in vide SR. [Refer SR 3.69.03(a) & (c)].

The SM on duty shall nominate a clear line and shall advise the TPM on duty at station to set the nominated route with the help of crank handle if the points cannot be set from the VDU. Then the TPM shall set the facing and trailing points and clamp and padlock the same under the supervision of SM on duty.

The SM on duty shall then hand over the written authority (T/369(3b) to the TPM for piloting the train. While going towards Home signal the TPM shall check the points and satisfy himself that the route is correctly set.

After the train has brought to a dead stop at the Home signal the TPM shall hand over the pilot memo to the Loco pilot, board the engine and display proceed hand signal to pass the Home signal.

NOTE:

a) The Station Master on duty shall personally supervise the correct setting, clamping and padlocking of the facing points, if any and ensure clearance on the nominated route vide SR [Ref. SR 3.69.03(c)].

b) The keys of padlock of the clamps put ON to the points on the route for piloting In or piloting OUT shall be in the personally custody of the SM on duty or any other authorized operating officials till such time the train / engine / vehicle has utilized the route or alternatively such movement is cancelled.

14. PILOTING OF TRAINS - OUT OF STATION YARD:

When the starter signal has become defective, the Station Master on duty shall advise the on duty TPM to set all points correctly for the outgoing trains. Then he shall clamp and padlock the same under the supervision of SM on duty. Then the SM on duty shall hand over the pilot memo T/369(3b) (along with the other authority if necessary) to the on duty TPM. The TPM on duty shall hand over the authority to the Loco pilot of the train and display proceed hand signal at the foot of the starter vide SR. [Refer SR 3.70.01].

In case the advanced starter signal has become defective, such signal shall be passed on the written authority on the form T/369(3b). The TPM shall hand over the pilot memo in form T/369(3b) to the Loco pilot after the train stopped. [Refer SR 3.70.02].

15. SHUNTING:

Caution aspect of starter signals for shunting up to Advanced Starter. Shunt Signal SH11 is provided on Line No.4 for Shunting from Line No.4 and up to Advanced Starter toward KMSD end. For back shunting individual shunt signal No.3 and 4 are provided at East and West side of the yard respectively for shunting back to the station yard in desired direction. For taking OFF Shunt signals please refer Para No. 4.7.2 of APPENDIX-B.

16. 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 shall be kept 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 DY.SS/SM on duty personally through VDU indications and/or physical verification 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. OBSERVATION OF TRACK CIRCUIT AFTER 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. Station Master 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 the Station Master 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 to be informed to attend.

18. MAINTENANCE OF S & T INSTALLATION AND ADHERENCE TO MAINTENANCE SCHEDULES:

Regular maintenance of the S&T installations, adherence to schedules of maintenance testing of points, track circuits, 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., shall confirm 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.

19. RECTIFICATION AND CHECK BEFORE RESUMING NORMAL WORKING:

After receipt of the failure information, the sectional Maintainer shall attend to the failure after giving a 'Disconnection Memo'. After rectification of the fault, the Sectional Maintainer shall give 'Reconnection Memo' detailing the rectification. Thereafter the Station Master on duty shall personally check this 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) and (D).

20. PROCEDURE FOR CARRYING OUT PLANNED MAINTENANCE WORK:

Whenever any normal maintenance or special works for major renewals etc., are involved, the Signal and Telecom department should pre-plan these works. Field staff and the Inspector of the section should give to the Station master in writing 'Advance Intimation' about this work in terms of G and SR.15.08.01.

21. EMERGENCIES:

Notwithstanding, anything contained in the aforesaid paras when equipment is found defective and unsafe for passage of trains, the Signal and Telecom staff must at once suspend the working of the equipment and associated installations and issue 'Suspension Memo' explaining the seriousness of the defect or damage to the interlocking installation to the Station master and take the Station Master's acknowledgement. After this, the usual practice of exchange of disconnection memo and reconnection memo can follow. The Station Master 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's according to extant instructions as contained in GR and SR.3.77.

22. PROCEDURE TO BE FOLLOWED IN CASE OF FAILURE OF SIGNAL POINTS AND USE OF EMERGENCY CRANK HANDLE:

1. Whenever a Signal or a Point becomes defective any movements over the Points on the running lines should be made after clamping and padlocking both the facing and trailing Points by Station Master on duty personally for all trains at the Station.

2. In case of failure of Signal or a Point and in case the Point cannot be operated from the Panel, the emergency Crank Handle which is Interlocked with the system has to be extracted and the following procedure has to be observed.

3. One common emergency Crank Handle is provided for all the Motor operated Points. This is mechanically riveted to the Key of HKT. This Key along with Crank Handle can be released from the HKT by pressing the Common HKT Push Button after cutting the seal between HKT and the Crank Handle. The Station Master on duty in case of Point Motor failure will take out the Crank Handle set the Point manually by inserting Crank Handle on the Motor.

4. When the Crank Handle is removed from HKT for operation of the defective Motor Operated Points, the responsibility for its safe custody re-sets with the ASM/SM on duty till it is replaced back in HKT and sealed by Signal Maintainer.

5. The case of failure of Motor Operated Points should be promptly reported to the concerned Signal Inspector/ESM for immediate rectification.

6. Whenever an emergency Crank Handle is required to be used by a Signal Official for maintenance of work attending to failure, the Signal Official will give a disconnection memo to the Station Master on duty and after making necessary entries in the emergency Crank Handle register, the Station Master on duty will obtain acknowledgement of the Signal Official in the emergency Crank Handle Register and then handover to him the emergency Crank Handle for the Points concerned. All the Points will be treated as defective till the Emergency Crank Handle is returned back to Station Master on duty.

7. Before parting with the Emergency Crank Handle either for attending failure or for Maintenance work by Signal Maintenance Officials, the Station Master on duty will ensure that the reception and departure Signals are put back to on position. The Points of all the lines should be treated as Non-interlocked and the Station Master on duty is responsible for introduction of Non-interlocked working and the trains will piloted IN and OUT duly clamping and Padlocking the Points, both in facing and trailing directions over which the train is to pass, as per GR 3.69 and 3.70 with relevant SR's. The Station Master on duty will be personally responsible for setting and locking of Points, for reception and dispatch of all trains.

8. The Emergency Crank Handle Register is to be maintained in the following pro-forma by the Station Master on duty wherein the particulars of usage of the Emergency Crank Handle must be recorded:

   a. Date:
   b. Point Number which failed or required to be tested:
   c. Time failure:
   d. Disconnection memo number received from S&T Staff:
   e. Signature of SM/Signal Official to whom the Emergency Crank Handle is handed over:
   f. Time Emergency Crank Handle is sent out:
   g. Individual Point numbers, and Line number nominated for admission of dispatch for which Points are set, Clamped and Padlocked:
   h. Train number to be admitted or dispatched:
   i. Signature of the Station Master on duty to ensure correct setting, Clamping and Padlocking of the Points:
   j. Date and Time fault rectified.
   k. Time of Emergency Crank Handle received back by SM on duty:
   l. Signature and Designation of the Signal Official who rectified the fault:

23. INTERLOCKING OF SIGNALS WITH BLOCK INSTRUMENTS:

23.1. INTERLCOKING WITH HOME SIGNALS:

All the UP and DOWN HOME Signals are Electrically interlocked with the respective DLBI so that the handle of the DLBI Instrument cannot be turned from LINE CLOSED position of UP or DOWN direction as the case may be unless the respective Home Signals is put back to NORMAL position and the respective Block Section monitored by Axle Counter is clear of trains.

23.2. INTERLCOKING WITH ADVANCED STARTER SIGNALS:

The DN Advanced Starter Signals No.18 is electrically interlocked with respective DLBI of section SZY-DMK so that this Signal cannot be taken OFF until the Handle of the concerned Block Instrument is in' LINE CLEAR' position.

The UP advanced starter signal No.17 is electrically interlocked with DLBI of section SZY-KMSD so that this Signal cannot be taken OFF until the Handle of the concerned Block Instrument is in "LINE CLEAR" position.

23.3. SUSPENSION OF LAST STOP SIGNALS:

When the Double line block instrument for section SZY-DMK and SZY-KMSD is suspended with its handle in any position for whatever reason the concerned Last Stop Signals controlled by the DLBI must be treated as suspended and trains shall be Piloted Out.

24. NORMALISATION OF THE BLOCK AXLE COUNTER AND OF BLOCK WORKING BY RESETTING FEATURE:

1. High Availability Single Section Digital Axle Counters (HASSDAC) are provided on UP and DN Block Sections between SZY-DMK and SZY-KMSD.
2. The occupation and clearance of the axle counter section are indicated on the VDU by 'RED' and 'GREEN' light.
3. If any Block proving Axle Counter [LVCD] section fails, the Last Stop Signal at the rear station cannot be taken 'OFF' and Block instrument at Advance Station cannot be turned to 'Line Closed' position after arrival of a train and in such case, resetting of last Vehicle Checking Device is to be resorted to either Section.
4. No train shall be allowed on signal to leave a station in any particular direction unless:
5. Track clear indication is available for the relevant Axle Counter track circuited portion and Last Stop Signal is taken OFF. [Refer Para No: 6.1 of appendix 'B' for procedure of resetting of LVCD Axle counter].

25. POWER SUPPLY ARRANGEMENT FOR SIGNALLING INSTALLATIONS:

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

i). Normal supply from UP AT/ DN AT connected to OHE traction distribution [230V 50HZ].

ii). Stand by supply – (a) 1st standby power supply: Chattishgarh State Electricity Board Supply. (b) 2nd stand by power supply: DG set.

Normal power supply [Single-phase 230V-50 HZ] to the signaling and interlocking installation at the station is drawn from the traction power sources. Whenever traction power supply fails the SM on duty shall operate the changeover switch provided in the SM's office connecting the power supply from the healthy sources to the installation.
The 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 Elect. Staff and S&T maintenance staff.

i). A change over switch is provided in the SM's office with the three power supplies viz., UP AT, DN AT and local for the 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.

ii). Normally the switch will be kept in Auto Mode. If the Switch kept towards UP AT/DN AT position, whenever power block is to be given on the line the on duty SM on duty must ascertain that power is available on the other AT and change over the switch to the desired position.

NOTE: If power block is to be given on the UP line DN AT must be available and vice versa.

iii). In case of failure of one of the AT supply without any power block the 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 down and when tripped it goes UP].

In case of failure of both AT supplies without any power block the local supply shall be utilized by operating the changeover switch. If the circuit breaker is tripping even after resetting, no attempt shall be made to hold it by any means and a message shall be given to concerned SSE [Elect.] and SSE/PSI [OHE] for prompt rectification.

iv). Whenever there is failure of power supply in one AT the SM on duty shall take prompt action to inform to all concerned for rectification.

The on duty SM himself during each shift shall check & test the availability of power supply on both ATs and make an entry in the station dairy duly initiating for rectification of failure if any.

v). For IPS system that provides to EI, a manual changeover switch is provided at SM's Office with the two power supply viz., selected supply from CLS panel and DG supply for changing the switch to required supply position.

vi). Normally manual changeover switch is kept in selected supply from CLS panel position, if in case any emergency changeover switch is changed to DG supply position.

vii). There is a remote monitoring ASM box provided at the station to monitor the health of IPS.

26. <u>WORKING OF INTEGRATED POWER SUPPLY [IPS, INDICATIONS & ACTION TO BE TAKEN BY SM ON DUTY:</u>

Power supply to the signaling installation is fed through Integrated Power Supply System [IPS] installed in the S&T power supply room. For IPS system, a manual changeover switch is provided at SM's Office with the two power supply viz., selected supply from CLS panel and DG supply for changing the switch to required supply position. Normally manual changeover switch is kept in selected supply from CLS panel position, if in case any emergency changeover switch is changed to DG supply position. There is a remote monitoring ASM box provided at the station to monitor the health of IPS.

The IPS system is connected with battery as a backup power source for safe working during transition of power and in case no 230 AC supply is available due to any reason.

In the event of failures all the sources of 230V 50HZ AC supply, the signalling system shall be fed by power generated by backup battery bank connected to IPS for a limited power of 8 to 10 hours. The health of the battery bank is monitored through one IPS Monitoring Panel provided in the SM's room which shall display the voltage of 110 V.DV battery bank provided as backup source of power supply. Depending upon the health of the battery bank and the system the following indications/alarm will appear on the remote monitoring panel. The indications/alarm, their implications and action to be taken by SM on duty is tabulated below:

SN	Instruction	Health of Battery Bank/Equipment.	Visual Indication	Audio Indication	Action to be taken by SM on duty
A	-	50% DOD	Red	Alarm	Alarm shall be acknowledged by 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 ASM's panel. Alarm shall be acknowledged by SM on duty for audio cut off.

On duty 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 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 SM on duty shall inform the same to concerned S&T staff immediately.

NOTE: [i] DOD indicates depth of discharge of battery bank of IPS [ii] In case of failure of all AC supply sources IPS battery bank can provide power supply maximum up to 3 to 4 hours before system shut down indication of APS.

27. WORKING OF AUTOMATIC FIRE ALARM DETECTION SYSTEM:

- In case of any alarm in any particular area due to fire or dust-Zone number on the LCD display can be seen.
- Note down the zone No. and panel display name, by referring display chart.
- Once you find the zone number rush to that particular area where the detector gives alarm.
- The moment the smoke detector detects any smoke particles, the RED LED will blink along with the alarm.
- Once you reach the area where the detector is giving the alarm, check whether the alarm is due to the fire or for any other reason.
- To alert the people in case of emergency press "*" sign which is present inside the key pad together for few seconds. This will enable you to hear the panel alarm.
- To reset the panel press "OFF" button and enter the code 1111 (1 digit four times).
- The control panel will get reset and siren muted.
- If the power fails on this will enable us to see the red indicator on the panel.
- In case of failure in power and if the battery is fully charged, the panel can function effectively as long as the charge in the battery is present.

AUTO DIALLING:

If you hear alarm from the panel, this system will dial the telephone/mobile number you fed. The prerecorded messages will be heard on the phone. If you want to make two way communications, press "6" on your mobile. You can have this communication for 50 seconds. If you want to talk more, press again "6" before completion of 50 seconds for another 50 seconds or you can acknowledge the receipt of call by pressing "2" on SSE/Signal mobile, in case number "2" is not pressed the system will dial again the same telephone number as per the programmed dial attempt and still if acknowledgement not come from 1st number then panel will dial 2nd number till the time acknowledgement comes it will keep on dialing.

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APPENDIX 'C'

TO STATION WORKING RULES OF SILAKJHORI STATION ANTI COLLISION DEVICE [[RAKSHA KAVACH]:

-NIL-

APPENDIX 'D'

DUTIES TO BE PERFORMED BY THE STAFF AT SILAKJHORI STATION:

STATION MASTER (IN CHARGE):

The duties prescribed in OM 2015, Para no. 2.02 (a) to be followed in addition to the duties prescribed below.

i) He shall come on duty after taking complete rest and shall not perform his duty under the influence of liquor, drugs or intoxicants.
ii) He shall handle the block instrument himself when on duty and shall not permit any unauthorized person to manipulate or handle the block panel/block instrument and block telephone.
iii) He shall keep the station master's control keys of block instruments in his personal custody whenever, he is required to leave his office even for a short duration.
iv) He shall maintain TSR and other connected record/documents in good Shape and ensure that all entries are completed and are up to date.
v) He shall attend the control and given arrival departure of trains promptly and shall carry out instruction given by superiors provided these do not Violate safety rules & procedures.
vi) He shall inform the Technician/JE/SE(Sig) through a written message, any failure of signal or block working etc. and invariably enter these failures in Signal Failure Register.
vii) In case of any accident, he shall inform the Section Controller & Station Manager/Station Superintendent immediately. He shall give all the information available with him in regard to the nature, places, cause and assistance etc. in respect of the accident.
viii) He shall communicate reasons for late start of outgoing trains and late arrival of incoming trains to control.
ix) He shall keep his reference books (trains working manuals) up to date, Posted with latest correction slips and shall keep himself fully conversant with the extant rules. He shall keep his books readily available for Inspection when asked to do so.
x) He shall not absent himself from duty without prior permission of his superiors. He shall not leave his duty unless properly relieved by his reliever and shall not exchange his duty without prior permission of his superiors.
xi) He shall not consider himself relieved of duty unless, he has completed transactions of trains for which he has given /obtained line clear till the complete arrival of such trains.
xii) He shall always obey the lawful orders of his superiors so long as they do not contravene any of the extant rules in force.
xiii) In case of any abnormal working, he shall also perform the duties assigned to VDU ASM/SM.

STATION SUPERINTENDENT /STATION MASTER:

He is responsible for trains passing during his shift as per OM 2015 Para No.2.02 b) and 2.02 c).

i) He shall come on duty after taking complete rest and shall not perform his duty under the influence of drugs or intoxicants.
ii) When on duty or when called upon to do so, in case of emergency, he shall be responsible for obtaining and granting line clear to trains as per SWR &GR.
iii) He shall handle the control panel himself when on duty and shall not permit any unauthorized person to manipulate panel.

iv) He shall keep the SM's control panel in his personal custody whenever, he is required to leave his office even for a short duration.

v) While coming on duty, he shall ensure that all points and signals are in good working order and all the registers, records, pertaining to train passage are completed in all respect before taking over the charge.
vi) He shall personally ensure that conditions for taking 'off' the reception signals are fulfilled and the clearance of line is verified as per SWR before actually pressing the relevant button for taking off the signals.
vii) He shall ensure from indications available in the panel that the signals are burning brightly and are giving correct indications.
viii) He shall ensure that proper indications of points, signals, track circuits crank handle, level crossing gate etc., are displayed at their proper places.
ix) He shall ensure that all Shunting operations are carried out as per extant orders and GR 5.19 and SRs thereof.
x) He shall inform the Technician/JE/SE (Sig) in writing or through a written message, any failure of track/signals/points/keys or panels etc. and shall invariably enter these failures in Signals Failure Register.

TRAFFIC POINTSMAN/TOKEN PORTERS:

He shall work under the orders of SS/SM on duty as per OM 2015 para No.2.02 f).

i) He shall obey all lawful orders of the ASM/SM/SS on duty or official in- charge supervising the shunting during the course of shunting operations including coupling or uncoupling of vehicles, wagons, fixing rubber washers, closing wagon doors, displaying hand signals etc.
ii) He shall exhibit danger signal to the official supervising the shunting if vehicles are fouled during the shunting operation.
iii) He shall pilot the trains in case of abnormal working and when ordered by the SS on duty.
iv) He shall be in proper neat and clean uniform while on duty.
v) He shall come on duty after taking complete rest and shall not perform duty under the influence of liquor, drugs, or intoxicants.
vi) Neither shall he absent himself from duty nor shall he exchange his duty without prior permission of his superiors.
vii) He shall not leave his duty unless properly relieved or authorized by his superiors.
viii) He shall set the points properly in non-interlocked yard and man them for all shunting movements and shall not interfere with the points while the vehicles are standing and or passing over them.
ix) He shall be responsible to see that fouling marks are kept clear after completion of shunting.
x) He shall always commence his duty equipped with hand signal lamps during night and flags during day.
xi) He shall verify the correct setting of route before delivering required papers to the Loco Pilot either though taking 'OFF' the relevant shunt signal or by personal observation.
xii) In case of track failure he shall assist the SM to ascertain the clearance of line.
xiii) He shall be responsible for lighting up of the indicators in the evening and putting out in the morning time fixed by DRM office and ensures that these are burning brightly at night.

APPENDIX 'E'

TO

STATION WORKING RULES OF SILAKJHORI STATION:

ESSENTIAL EQUIPMENT:

A list of essential equipment's is given below which shall be maintained in good Working order.

Sl. No	Description	No of Items
1	Detonators	20
2	Battery operated LED based flashing Hand Signal lamps	3(1 spare)
3	Hand Signal Flags	3(1spare)sets
4	Safety chains with Pad locks	6
5	Clamps with Padlocks	8
6	Fire Extinguishers DCPT	2
7	Fire & Sand buckets	5
8	First Aid Box	1
9	Stretcher	1
10	Blanket	1
11	Iron skids	6

APPENDIX 'F'

TO STATION WORKING RULES OF SILAKJHORI (SZY)

WORKIG OF D.K.STATIONS, HALTS, IBS AND OUTLYING SIDINGS:

---NIL----

APPENDIX- ‘G’

SILAKJHORI STATION

RULES FOR WORKING OF TRAINS IN ELECTRIFIED SECTIONS:

DETAILS OF WORKING RULES OF 25KV AC TRACTION.