



WORK STUDY REPORT
ON
REVIEW OF C&W ASSISTANT (GROUP 'D') STAFF
OF MECHANICAL DEPARTMENT ENGAGED IN COACH CLEANING
AND DEPOT PREMISES CLEANING ACTIVITIES
UNDER SSE/C&W NDLS
OVER
DELHI DIVISION
2019-20
WORK STUDY TEAM

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No. 16-CP/12/WS/2019-20

Central Planning Cell
Northern Railway,
Headquarters Office,
Baroda House, New Delhi.

EXECUTIVE SUMMARY

This study was allotted to Central Planning Cell, HQ Office on the directives of SDGM/NR to identify redundant/unproductive activities with a view to eliminate wasteful expenditure and to improve manpower productivity of C&W Assistant (Group 'D') staff of Mechanical Deptt engaged in coach cleaning and depot premises cleaning activities working under SSE/C&W NDLS of Delhi Division.

STAFF POSITION

The sanctioned and on roll strength of C&W Assistant (Group 'D') staff working under SSE/C&W at NDLS controlled by Sr.DME/C&W/NDLS over Delhi Division is as under:-

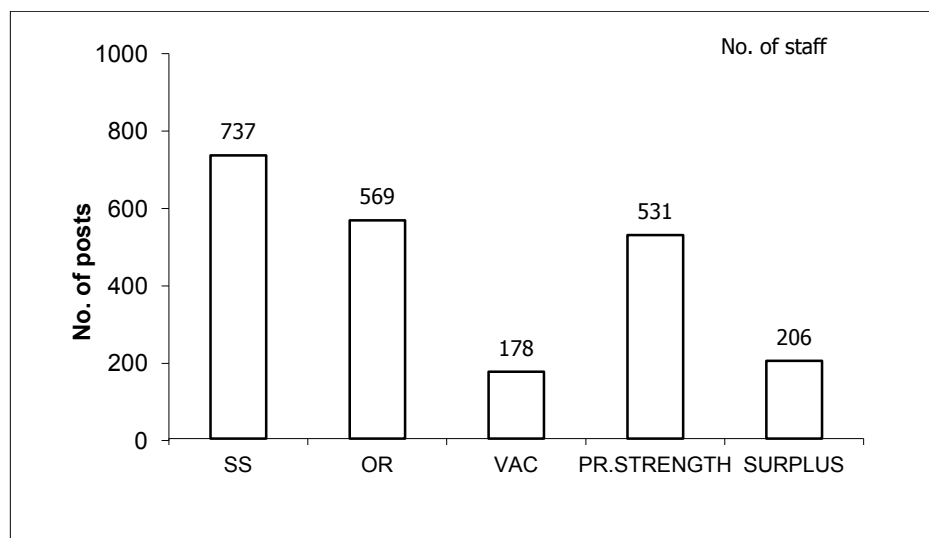
S.N.	SSE C&W Depot	Category	S/S	O/R	Var.
1	NDLS	C&W Cleaner	737	559	-178
Total			737	559	-178

No. of posts identified as surplus and recommended for surrender:-

Gr. 'D' = 206 posts
Total = 206 posts

FINANCIAL IMPLICATIONS

Anticipated recurring savings = ■ 1036.85 lakh per annum.
Capital saving = Nil
Total = ■ 1036.85 lakh per annum



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SYNOPSIS

Indian Railway is the principal mode of transport in the country. It provides safe, transport at reasonable cost and at the same time maintains financial viability of the system. It carries about 15 million passenger daily on its wide spread network of near 65000 routes kilometers.

With the introduction of modern techniques of working, the closure of piece meal loading and introduction of point to point loading of full rakes long haul loads, introduction of LHB, RCF coaches mechanized cleaning, change in working pattern i.e., outsourcing of washing and Mech. Cleaning of coaches & OBHS, have resulted in eliminating the wasteful expenditure. This not only reduces the stress of the workman but also reduce the workload to some extent.

Keeping above in view, SDGM/NR has assigned the work study to Central Planning Cell, HQ Office to conduct a review of C&W Assistant (Group 'D') staff of Mechanical Deptt engaged in coach cleaning and depot premises cleaning activities under SSE/C&W NDLS over DLI Division, with a view to eliminate the wasteful expenditure.

The team visited the C&W Depot situated at NDLS and after thorough review of existing workload via-a-vis sanctioned strength, the team identified 206 posts of C&W Assistant (Group 'D') staff as surplus and recommended for surrender. After implementation of the recommendations made in the report in toto, the administration is likely to achieve a net recurring saving to the tune of ■ 1036.85 lacs per annum.

SUMMARY OF RECOMMENDATIONS

S.N. & Recom No.	Recommendations	Refer para No.	Accepting/ implementing authority.
1	It is proposed that 206 posts of C&W Assistant (Group 'D') staff of Mechanical Deptt engaged in coach cleaning and depot premises cleaning activities in Gr. ■. 5200-20200-1800 are identified as surplus under SSE/C&W New Delhi and recommended for surrender as all the coach cleaning/premises cleaning activities have already been outsourced.	2.5.1	ADRM/ADMIN/NDLS Sr.DME/C&W/NDLS Sr.DPO/C/NDLS

ACKNOWLEDGEMENT

The work study team is highly grateful to Shri Vikas Purwar, ADRM/ADMIN/NDLS, Sh. Prashant Kumar, Sr.DME/C&W/NDLS and Sh. Devender Singh, Sr.DPO/C/NDLS and other functionaries in providing relevant data/information and giving valuable guidance and cooperation to the team during the conduct of study.

1.0.0 INTRODUCTION

1.1.1 Carriage & Wagon Department is responsible for scheduled maintenance to ensure safe running of the rolling stock and proper cleaning of the coaching stock. After attending the due schedule of rolling stock and coach cleaning work, the maintenance staffs ensure the reliability and punctuality of the train. The C&W wing is entrusted the workload of coach cleaning which provide hygienic condition atmosphere and satisfaction to the rail users during the spell of their journey.

1.2.0 Due to modernization in every sphere of railway working, modern coaches and equipments have been introduced to increase the productivity. The series of modernization, outsourcing of comprehensive coach cleaning, depot premises cleaning activities, electronic, automatic equipment, like vacuum cleaners, surface cleaner, mopeds, wipers etc. have been introduced in the field of cleaning activities which has resulted in improved quality and standard of cleanliness and minimized time and manpower.

1.3.0 Consequently, SDGM/NR assigned the work study to conduct a review of C&W Assistant (Group 'D') staff of Mechanical Deptt engaged in coach cleaning and depot premises cleaning activities of C&W Depot NDLS of DLI Division with a view to reduce the redundant and unproductive and surplus manpower after adoption of modern techniques. Efforts have been made to reduce the unproductive and obsolete activities and suggest ways and means to improve the technological up-gradation and advancement in the system.

1.4.0 TERMS OF REFERENCE:

The following terms of reference have been adopted to conduct the study:-

- i) To review staff strength vis-à-vis existing workload.
- ii) To suggest ways and means to identify redundant/unproductive activities to eliminate wastages expenditure.
- iii) To suggest ways and means to improve the system economically in view of modernization and system development.

1.5.0 METHODOLOGY ADOPTED

The following method study and work measurement techniques were adopted:-

- i) Collection of Data and its critical analysis.
- ii) Physical checks, spot observations and work sampling, analytical estimation and yardstick in vogue, if any.
- iii) Held discussions at various levels.

2.0.0 BRIEF DESCRIPTION, STAFF POSITION, WORKLOAD, CRITICAL ANALYSIS, PROPOSED REQUIREMENT OF STAFF & RECOMMENDATIONS.

2.1.0 BRIEF DESCRIPTION:

The coaching depots were set up to up keep the rolling stock and carry out the various maintenance schedule i.e., primary, secondary maintenance repairs/en-route passing examination, sick line attention, cleaning and watering etc. at nominated coaching depots/stations. C&W Assistant are responsible to carry out the Following activities:

- Complete interior and exterior cleaning of coaches
- Washing of coaches,
- Internal dry cleaning,
- Watering in coaches,
- Pit cleaning,
- Garbage removal & disposal,
- Depot premises cleaning,
- Escorting of trains,
- Pad locking/unlocking and linen management etc.

2.1.1 The study is confined to C&W Assistant (Group 'D') staff of Mechanical Deptt engaged in coach cleaning and depot premises cleaning activities of C&W Depot at NDLS of DLI Division.,

2.1.2 With the introduction of new technological upgradations in the sphere of cleanliness, like jet cleaning machines, jet steam cleaner, floor cleaning mops, brush or banister, washing down brush with handle, izol spray pumps etc. have affected the working of cleaning staff. This has not only reduced stresses and workload of the cleaning staff but has also improved the standard of cleanliness. Due to adoption of modern techniques in cleaning activities, a huge expenditure is being incurred which necessitate the review of cleaning staff with a view to eliminate wasteful expenditure.

2.2.0

STAFF POSITION

The team collected the details of staff position of C&W staff working under SSE/C&W/NDLS Depot which is placed as Annexure No.II in the report and the summarized position is given as under:-

S. No.	C&W Depot	Category	S/S	O/R	Variation
1	NDLS	Gr 'C'	951	850	101
		Gr 'D'	737	559	178
TOTAL			1688	1409	279

The table reveals

- That the on roll position of C&W Assistant (Group 'D') staff is 559 against the sanction strength of 737 and 178 posts of C&W Assistant (Group 'D') are lying vacant under SSE/C&W Depot, New Delhi.
- That the total on roll staff position of C&W staff (Gr 'C' & Gr 'D') is 1409 against the sanctioned strength of 1688 and 279 posts are lying vacant.

2.3.0

WORKLOAD

During the conduct of study, the work study team visited the C&W depot at NDLS over DLI Division and collected the workload in terms of type of coaches maintained/day.

S. No	Activity	Type of Coach	Coaches/day
1	Primary based coaches	Shatabdi Rajdhani M/Exp.	166.9 49.0 73.71
2	Secondary based coaches.	Rajdhani Duranto Mail.exp	131.7 30.0 71.0
3	Terminal/originating RPC-4	M/Exp. Shatabdi Garibrath	593.4 15.71 7.71
4	Enroute train passing, turn round terminating, originating trains inclusive of cleaning and examination at platforms (UP & DN pair of trains to be counted as one rake)	S/Fast M/Exp. Pass	56.0 334.85 20.0
5	Inspection carriages i.e., RA	--	NIL
6	Coach Holding	AC=504 Non AC=98	

2.4.0. CRITICAL ANALYSIS

During the conduct of study team collected the workload as supplied by the Depot Incharge and studied carefully. The team observed that due to introduction of modernization, mechanized cleaning and outsourcing in the sphere of cleaning has decreased the workload of C&W assistant staff to great extent. During the conduct of study, the work study team observed that the mechanized coach cleaning work and depot premises cleaning work is going on contract basis for which the contractor is paid Rs.13,84,59,916.81 per annum for mechanized coach cleaning & depot premises cleaning vide Contract No.197-5/92/DRC-OBHS/NDLS/18-II/MC-IV dt.25.03.19 .

2.4.1. During the conduct of study, the work study team collected the details of outsourcing of comprehensive coach cleaning and depot premises cleaning four years which are depicted as under:-

S.No.	Activity	Total Quantity	Unit per coach	Estimated Rate	
				Unit rate	Total Amount
1	External coach cleaning (Primary maintenance)	141411	Per coach	131.80	18637969.80
2	Internal coach cleaning (Primary maintenance Rajadhani AC coach	74460	Per coach	428.81	31929192.60
3	Internal coach cleaning (Primary maintenance (mail Exp AC coaches)	12723	Per coach	387.74	4933216.02
4	Internal coach cleaning (Primary maintenance (All trains NAC/Power Car/Pantry Car)	54229	Per coach	281.42	15261125.18
5	External coach cleaning (Secondary maintenance trains) all coach	378140	Per coach	129.53	48980474.20
6	Internal coach cleaning (secondary maintenance trains(AC coach)	253414	Per coach	275.44	69800352.16
7	Internal coach cleaning (secondary maintenance trains) Pantry car	124726	Per coach	189.26	23605642.76
8	Cleaning of coaches (Terminal attention trains)	756489	Per coach	122.40	92594253.60
9	Cleaning of washing line daily	20440	Nos.	1328.09	27146159.60
10	Cleaning of stabling lines daily (terminal)	13140	Nos	128.52	4316752.80
11	Cleaning of stapling lines (Idle)	8760	Nos	328.52	2877835.20
12	Mechanized sweeping & cleaning of depot premises complex area	19177100	2 Nos.	0.5	9588550.00
13	Provision of plastic wheeled bins of 120 ltrs capacity in depot complex	300	Nos	2885	865500.00
14	Disposable bags for disposal of garbage @ 75 bags per day	109500	Nos	2.75	235425.10
15	De-clogging/desilting of sewer lines by hiring of super sucker and jetting machines as per specifications	8	Times (Shift of 8 hrs)	34655	277240.00
16	Provision of manpower for OBHS	1563264	Work station hours	66.3	103644403.20

17	Provision of chemicals for OBHS in nominated trains of the coaching depot+AC coaches.	3458403	Coach hours	3.92	13556939.76
18	Provision of chemicals for OBHS in nominated trains of the coaching depot +NAC coaches	1062133	Coach hours	1.04	1104618.32
Total					469355650.20
Provision of GST @ 18% for item 1 to 18					84484017.04
Total cost of work for a period of four year including GST					553839667.24
Total cost per year					13,84,59,911.81

The above table reveals that the C&W Depot NDLS is spending RS.13,84,59,911.81 per annum, for four year on the comprehensive cleaning of coaches and depot premises cleaning which has reduced the workload of C&W assistant (cleaning staff) tremendously engaged in coach cleaning. Therefore, to improve the system economically in view of modernization of system development the C&W Assistant (Gr.D) staff engaged in coach cleaning & depot premises cleaning activities is required to reviewed in this work study report.

2.5.0 PROPOSED REQUIREMENT OF STAFF

During the conduct of study, the work study team collected the workload from the depot incharges in terms of coach cleaned per day and examined it carefully. The team has taken into consideration, the yardstick in vogue, deployment of staff, spot observation, change in working pattern outsourcing and analytical estimation while proposing the requirement of staff. All the cleaning activities have already been outsourced which are much economical than the Departmental staff. Some trains are running under OBHS (On Broad Hygienic Services) scheme the work study team is of the opinion that this OBHS scheme be encouraged in railway to minimize the coach cleaning complaint on spot. The proposed requirement of staff is as under:-

2.5.1 PROPOSED REQUIREMENT OF C&W STAFF AT NDLS DEPOT:-

S No	Activity		work load coach/day	Yard Stick man/Per coach	Required Staff	Remarks
1	Primary Maintenance	SF	215.9	1.1	237.49	By Departmental staff
		M/Exp	73.71	0.99	72.97	
		Pass	0	0	0.00	
2	Secondary Maintenance	SF	161.7	0.55	88.94	
		M/Exp	71	0.45	31.95	
		Pass	0	0	0.00	
3	Enroute Train Passing, turn- round attention, terminating/ originating, (inclusive of cleaning and examination at platform but excluding interior dry cleaning of turn- round trains)	SF	56	0.26	14.56	up & dn pairs of trains to be counted as one rake
		M/Exp	334.85	0.23	77.02	
		Pass	20	0.18	3.60	
4	Sick line attention (on coach holding)		602	0.14	84.28	By Departmental staff
5	Cleaning & complete washing of Primary trains		281.61	0.65	0.00	Outsourced
6	Cleaning & complete washing of Secondary trains		232.7	0.65	0.00	Outsourced
7	Only interior dry Cleaning of Terminal trains		616.82	0.45	0.00	Outsourced
8	Watering		709.71	40 coach/man	0.00	Outsourced
9	Pad locking		1131.13	40 coach/man as per practice	28.00	By Departmental staff
10	Material storage		504	26man for coach holding of 150 coach & above	26.00	
11	Linen management (Record Keeping bed rolls)		508	0.22/Ac coach holding	110.88	
12	Inspection carriage		0	1.76	0.00	
13	Train Escorting(Rake)		30	3	90.00	
14	Statistical work			8 man for 150 or more Coach Holding	8.00	

15	M&P			A per prevailing practice	18.00	
16	Main store, DLT store, Rajdhani, Shatabdi store,				20.00	
17	Contract Tender Cell				8.00	
18	Record Keeping				6.00	
19	CMC, CDO office/NDLS				12.00	
20	SSE off at NDLS, SSE off at DLT, Rajdhani office, Shatabdi office				12.00	
21	DRM Office				10.00	
22	Lobby				4.00	
23	Spare coaches @ 10% of coach holding	602	60.2	1.1	66.22	Outsourced
24	Pest control, Waste disposal, pit line cleaning, premises cleaning etc				0.00	
25	For futuristic and unseen work load				20.00	
26	Staff training (requirement of trainers) @ 2% of SS (1688)				33.76	
Total					1084.54	
LR @ 12.5% on 990.56					135.57	
Grand Total					1220.11	say 1220

Sanctioned strength 1688

Proposed staff 1220

Surplus staff 468 (including Group 'C' & 'D' staff)

The total sanctioned strength of C&W staff is 1688, out of which C&W assistant staff is 737 which is 44% of the total sanctioned strength. The work study is confined to the C&W assistant Group 'D' staff engaged in coach cleaning /depot premises cleaning activities, therefore the 44% of 468 i.e. 206 posts of C&W assistant Group 'D' staff are identified as surplus and recommended for surrender.

RECOMMENDATION NO.1

It is proposed that 206 posts of C&W assistant Group 'D' staff engaged in coach cleaning /depot premises cleaning activities, in Gr. ■. 5200-20200-1800 identified as surplus under SSE/C&W, NDLS controlled all the coach cleaning/premises cleaning activities have already been outsourced and recommended for surrender.

3.0.0 FINANCIAL IMPLICATIONS

After the implementation of the work study recommendations following are the financial implications under SSE/C&W, at NDLS over DLI Division.

SN	Category	Grade Rs.	Refer Recom. No.	No. of surplus posts	Monthly value per posts Rs.	Anticipated annual recurring saving Rs.
1	C&W Assistant	5200-20200+1800	1	206	41944/-	10,36,85,568/-
Total				206		10,36,85,568/-

No. of posts identified as surplus: -

Group 'C'= NIL posts

Group 'D'= 206 posts

Total = 206 posts

Anticipated recurring saving = ■ 1036.85 lakh per annum

Capital saving = Nil

Total saving = ■1036.85 lakh per annum

4.0.0 PRODUCTIVITY

4.1.0 The total annual expenditure on the sanctioned strength working under SSE/C&W/NDLS under the administrative control of Sr.DME/C&W/NDLS is tabulated as under:-

S N	Category	Pay Scale + Grade Pay	Monthly value per posts	Sanctioned strength	Total annual expenditure in ■■
1	C&W Assistant	5200-20200-1800	41944/-	737	37,04,52,736/-
Total				737	37,04,52,736/-

The above table reveals that total expenditure on C&W cleaners working under SSE/C&W depots at NDLS ■■370952736 on the above sanctioned strength every year.

4.1.2. The annual expenditure on the proposed staff working under SSE C&W NDLS under the administrative control of Sr.DME/C&W/NDLS is tabulated as under:-

S N	Category	Pay Scale + Grade Pay	Monthly value per posts	Proposed strength	Total annual expenditure in ■■
1	C&W Assistant	5200-20200-1800	41944/-	531	26,72,67,168/-
Total				531	26,72,67,168/-

The above table reflects that after the implementation of the work study report, the expenditure on the proposed staff will come to ■■ 267267168/-. Therefore the expenditure will be reduced from ■■370952736 to 267267168/-

LIST OF ANNEXURES

S.N.	Description	Annex. No.
1	Authority Letter to conduct the work study report No. 16-CP/12/19-20 on review of C&W Assistant working under SSE/C&W, NDLS over Delhi Divn.	I
2	Statement showing category wise, the sanctioned strength and on roll position of C&W staff working under SSE/C&W NDLS over Delhi Division	II

WORK STUDY REPORT DETAILED CHART

Department : - Mechanical

Name of study : - Review of C&W Assistant Group D staff of Mechanical Department engaged in coach cleaning and depot premises cleaning activity working under SSE/C&W NDLS.

Activity Centre :- C&W Depot NDLS

SN	Sub activity	Brief description of workload	Actual staff deployed	Work study report recommendations	Representative workload
1	C&W Depot, NDLS	Cleaning of coaches, washing line, Pit cleaning, paid locking, watering in coaches, passing through trains primary/secondary base trains coach cleaning interior dry cleaning etc.	S/S=737 O/R=559 Vac=+178	C&W Assistant SS= 737 Proposed=531 Surplus=206	Cleaning of primary/secondary, base coaches, cleaning of terminal train terminating/originating & depot premises cleaning.

Category & grade wise staff position of C&W Assistant staff working under SSE/C&W NDLS over DLI Division.

SN	Depot	Category	Pay Scale + Grade Pay	S/S	OR	Vacancy
1	NDLS	C&W Assistant	5200-20200-1800	737	559	178
Total- 'A'				737	559	178

Statement showing category and grade wise staff position of C&W technician staff working under SSE/C&W NDLS

S. No.	Category	S/S	On roll			Vacancy
			Regular	Re-engage	Total	
1	Sr.	99	213	1	214	+115
	Tech-1	722	210	-	210	-173
	Tech-II		97	-	97	
	Tech-III		242	-	242	
2	MCM	6	17	-	17	+11
	Carp.-I	56	04	-	4	-32
	Carp-II		18	-	18	
	Carp-III		2	-	2	
3	MCM Painter	4	7	-	7	+3
	Painter-I	15	6	-	6	-4
	Painter-II		5	-	5	
	Painter-III		-	-	-	
4	MCM Trimmer	2	5	-	5	+3
	Trimmer-I	18	-	-	-	-14
	Trimmer-II		2	-	2	
	Trimmer-III		2	-	2	
5	MCM Welder	4	5	-	5	+1
	Welder-I	16	2	-	2	-9
	Welder-II		5	-	5	
	Welder-III		-	-	-	
6	Blacksmith-I	4	3	-	3	-1
	Blacksmith-II		-	-	-	
	Blacksmith-III		-	-	-	
7	MCM V. Driver	-	1	-	1	+1
	V. Driver-I	3	-	-	3	-
	V. Driver-I		3	-		-
	V. Driver-I		-	-		
8	Lister Driver	1	-	-	-1	-1
	F.L. Driver	1	-	-	-1	-1
	Total 'B'	951	849	1	850	101
	Total A+B	1688			1409	279

**Statement showing staff position of supervisors & ministerial staff working at C&W
Depot, NDLS**

Description	S/S	On Roll	Vacancy
SSE	94	84	10
JE	70	41	29
Ch. OS	5	5	-
OS	30	22	8
Sr. Clerk	4	1	3
Clerk	5	1	4
Total	208	154	54