



WORK STUDY REPORT
ON
REVIEW OF STAFF
WORKING UNDER SSE/WATER SUPPLY/DSA
OF
ENGINEERING DEPARTMENT
(HEADQUARTER CONTROLLED)

2022-23

WORK STUDY TEAM

SH. SATISH KUMAR WALIA	AWSO	LEADER
SH. RAJEEV YADAV	CWSI	MEMBER
SH. YOGESH BADHWAR	CWSI	MEMBER

GUIDANCE

BY

SH. LALIT KUMAR
AWSO

DATE OF COMMENCEMENT: 04.04/2022
DATE OF COMPLETION : 08.04/2022

No. 16-CP/01/WS/2022-23

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 review staff working under SSE/Water Supply/DSA in Engineering department with a view to eliminate the wasteful expenditure and bring economy in railway expenditure.

STAFF POSITION

The total sanctioned and on roll strength of staff working under SSE/Water Supply/DSA (Headquarter controlled) in Engineering department is mentioned as below.

S.N.	Description	S/S	O/R	Var.
1	SSE/JE	10	02	08
2	Technician	21	02	19
3	Helper	113	09	104
Total		144	13	131

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

Gr. 'C' = 29 posts

Gr. 'D' = 109 posts

Total = 138 posts

FINANCIAL IMPLICATIONS

Anticipated recurring savings = Rs. 527.51 Lakh per annum.

Capital saving = Nil

Total = Rs. 527.51 lakh per annum



I N D E X

S.N.	Contents	Pages	
		From	To
1	Synopsis	5	-
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SYNOPSIS

Indian Railway is the cheapest mode of transport in the country. It is biggest organization of Government with huge manpower of different departments engaged in its punctual and safe working. All the departments are functioning as a team to keep the wheels moving and to achieve the goal by transporting passengers and freight from one place to another. The Civil Engineering Department plays vital role in providing good quality of track fitness and public utility services i.e. the infrastructure like residential and service buildings, water supply system, rest houses and public amenities to rail users. In addition to these services, the water supply organization at zonal level was to provide deep bore wells and water treatment plants for potable water to rail users and raw water for other activities.

In the past when steam engines were the main force for hauling of passenger/goods trains, coal and water were the main source of energy to propel the steam locomotives. The water supply organization was to provide raw water for hydrants at stations to provide uninterrupted water supply to the steam locos.

In view of technological developments in every sphere of Railway working, i.e. phasing out of steam locos and introduction of Diesel/Electric locos, provision and maintenance of water bore wells and water treatment plants at the division itself, the activities of Water Supply Organization has been eliminated to a great extent.

Keeping above in view, SDGM/NR assigned this work study to Central Planning Cell, HQ Office, with a view to optimize utilization of manpower. The team collected the necessary data from the SSE/WS/DSA Office to work out the requirement of staff. The team identified 138 posts as surplus and recommended for surrender. After implementation of all the recommendations made in the report a net recurring annual savings to the tune of Rs. 527.51 lakh per annum will be achieved.

SUMMARY OF RECOMMENDATIONS

S. N.	Recommendations	Refer para No.	Accepting/ implementing authority.																																																														
1	<p>It is proposed that 29 posts of Gr 'C' and 109 posts of Gr 'D' staff (total=138) are identified as surplus and recommended for surrender as under:</p> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr> <th style="width: 5%;">S. No.</th> <th style="width: 40%;">Category</th> <th style="width: 15%;">Gr. Rs.</th> <th style="width: 40%;">No. of posts identified surplus</th> </tr> </thead> <tbody> <tr><td style="text-align: center;">1</td><td>SSE</td><td style="text-align: center;">4600</td><td style="text-align: center;">06</td></tr> <tr><td style="text-align: center;">2</td><td>JE</td><td style="text-align: center;">4200</td><td style="text-align: center;">02</td></tr> <tr><td style="text-align: center;">3</td><td>MCM</td><td style="text-align: center;">4200</td><td style="text-align: center;">05</td></tr> <tr><td rowspan="3" style="text-align: center;">4</td><td>Air Compressor Driver-I</td><td style="text-align: center;">2800</td><td style="text-align: center;">03</td></tr> <tr><td>Air Compressor Driver-II</td><td style="text-align: center;">2400</td><td style="text-align: center;">01</td></tr> <tr><td>Air Compressor Driver-III</td><td style="text-align: center;">1900</td><td style="text-align: center;">01</td></tr> <tr><td style="text-align: center;">5</td><td>V. Driver-I</td><td style="text-align: center;">2800</td><td style="text-align: center;">02</td></tr> <tr><td style="text-align: center;">6</td><td>Welder-I</td><td style="text-align: center;">2800</td><td style="text-align: center;">01</td></tr> <tr><td style="text-align: center;">7</td><td>Fitter-I</td><td style="text-align: center;">2800</td><td style="text-align: center;">02</td></tr> <tr><td style="text-align: center;">8</td><td>Rig Operator-I</td><td style="text-align: center;">2800</td><td style="text-align: center;">03</td></tr> <tr><td style="text-align: center;">9</td><td>Rig Operator-II</td><td style="text-align: center;">2400</td><td style="text-align: center;">01</td></tr> <tr><td style="text-align: center;">10</td><td>Rig Operator-III</td><td style="text-align: center;">1900</td><td style="text-align: center;">01</td></tr> <tr><td style="text-align: center;">11</td><td>Black Smith-III</td><td style="text-align: center;">1900</td><td style="text-align: center;">01</td></tr> <tr><td style="text-align: center;">12</td><td>Helper-I</td><td style="text-align: center;">1800</td><td style="text-align: center;">109</td></tr> <tr> <td colspan="3" style="text-align: center;">Total</td> <td style="text-align: center;">138</td> </tr> </tbody> </table>	S. No.	Category	Gr. Rs.	No. of posts identified surplus	1	SSE	4600	06	2	JE	4200	02	3	MCM	4200	05	4	Air Compressor Driver-I	2800	03	Air Compressor Driver-II	2400	01	Air Compressor Driver-III	1900	01	5	V. Driver-I	2800	02	6	Welder-I	2800	01	7	Fitter-I	2800	02	8	Rig Operator-I	2800	03	9	Rig Operator-II	2400	01	10	Rig Operator-III	1900	01	11	Black Smith-III	1900	01	12	Helper-I	1800	109	Total			138	2.6	<p>CE/G/Baroda House, New Delhi. Dy. CE/Works Baroda House, New Delhi. Dy. CPO/Engg./Baroda House, New Delhi.</p>
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ACKNOWLEDGEMENT

The Work Study is highly grateful to Sh. Praveen Kumar, Dy. CE/Works/HQ, Sh. Dinesh Bisht, Dy.CPO/Engg. and other functionaries for giving their valuable guidance and extending full cooperation to the team for providing requisite data/information during the conduct of study.

1.0 INTRODUCTION

1.1. The Indian Railway provides transportation services at a desired level of safety to its users. Being a public utility service it also provides various passengers amenities like drinking water, waiting rooms, neat and clean platform environment within railway premises.

1.2. It is the Civil Engineering Department, which maintains track fitness and maintenance of infrastructure. But as this study is mostly related to Works side of Engineering Department, it is necessary to say that entire infrastructural maintenance work of service/residential buildings, bridges, foot over bridges, water supply system, approach road etc. is supervised by Sr. Section Engineer (Works) in his jurisdiction.

1.3 The water supply organization was to provide raw water for hydrants at stations to provide uninterrupted water supply to the steam locos. In view of technological developments in every sphere of Railway working, i.e. phasing out of steam locos and introduction of Diesel/Electric locos, provision and maintenance of water bore wells and treatment plants at the division itself, the activities of Water Supply Organization has been eliminated to a great extent.

Keeping in view above, SDGM/NR assigned the work study to C.P.Cell, HQ Office with a view to review the staff working in Water Supply Organization of northern railway.

1.4 TERMS OF REFERENCE:

The study has been conducted under the following terms of references:-

1. To review staff strength vis-à-vis existing workload.
2. To identify redundant/unproductive/obsolete activities with a view to eliminate wasteful expenditure.
3. To suggest ways and means to improve the efficiency and productivity of the system.

1.5 METHODOLOGY ADOPTED

The work study is based on the following methods and work measurement techniques:-

1. Data Collection and its critical analysis.
- 1.0 Physical observations, spot checks of various activities done by maintenance staff, analytical estimation and application of yardstick in vogue, if any.
2. Held discussions at various levels.

2.0 BRIEF DESCRIPTION, STAFF POSITION, CRITICAL ANALYSIS, REQUIREMENT OF STAFF AND RECOMMENDATIONS.

2.1 BRIEF DESCRIPTION

In the past the water supply organization at zonal level was to provide deep bore wells and water treatment plants of potable water to rail users and raw water for other activities. When steam engines were the main force for hauling of passenger/goods trains, coal and water were the main source of energy to propel the steam locomotives. The water supply organization was to provide raw water for hydrants at stations to provide uninterrupted water supply to the steam locos.

2.2 ORGANIZATIONAL SET UP:

The Water Supply Organization/DSA is a head quarter controlled unit under the control CE/G and Dy. CE/Works/Northern Railway Baroda House, New Delhi.

2.3 STAFF POSITION

During the conduct of study, the team collected the staff position of Water Supply Organization from Dy. CE/ Works/Baroda House, New Delhi and placed as Annexure No. II and the summarized position of the same is tabulated below:-

S. No.	Category	Gr. Rs.	S/S	O/R	Vac.
1	SSE	9300-34800-4600	07	01	06
2	JE	9300-34800-4200	03	01	02
3	MCM	9300-34800-4200	05	-	05
4	Air Compressor Driver-I	5200-20200-2800	03	-	03
	Air Compressor Driver-II	5200-20200-2400	01	-	01
	Air Compressor Driver-III	5200-20200-1900	01	-	01
5	V. Driver-I	5200-20200-2800	02	-	02
6	Welder-I	5200-20200-2800	01	-	01
7	Fitter-I	5200-20200-2800	02	-	02
8	R. Operator-I	5200-20200-2800	03	-	03
	R. Operator-II	5200-20200-2400	01	-	01
	R. Operator-III	5200-20200-1900	01	01	-
9	Black Smith-III	5200-20200-1900	01	01	-
10	Helper-I	5200-20200-1800	113	09	104
Total			144	13	131

The above table reveals that the sanctioned strength of Group 'C' & 'D' staff is 144 while 13 are on roll with 131 vacant posts. The above Group 'C' & 'D' staff falls in the non safety category.

2.4 DEPLOYMENT OF STAFF:

S. No.	Category	Gr. Rs.	O/R	Remarks
1	SSE	9300-34800-4600	01	Working in Engg. Branch, Baroda House.
2	JE	9300-34800-4200	01	Working in charge of DSA unit.
3	R. Operator-III	5200-20200-1900	01	Working in DSA unit.
4	Black Smith-III	5200-20200-1900	01	Working in DSA unit.
5	Helper-I	5200-20200-1800	09	05 staff are working in Engg. Branch, Baroda House and 04 are working in DSA unit.
Total			13	

2.5 WORK LOAD:

During the course of study, the team visited the office of SSE/Water Supply/DSA. The team observed that the outdated Tools, machines and truck are lying in the unit and the details are as under.

S. No.	Type of machines	Status	Remarks
1	D R Rig Machine LMP-2000	Under the process of condemnation.	
2	R R Rig Machine DEL-2760	Under the process of condemnation.	
3	Air Compressor 600psi set no. 3596	Under the process of condemnation.	
4	Air Compressor 250 psi set no. 2771	Under the process of condemnation.	
5	D R Rig Machine HR-37C2502	Not in use as activities have been abolished.	
6	Air Compressor 100 psi CPS 300 set no. 601785		
7	Air Compressor 100 psi CPS 300 set no. 403507		
8	Air Compressor 100 psi CPS 300 set no. 601789		
9	Welding Plant Single phase		
10	Electric Welding Plant Set		
11	Electric Welding Plant Single phase		
12	Welding Transformer		
13	Motor Truck UP32 BG 1592	Not in use	The truck has completed its codal life in July 2019.

Except the above machineries, a lot of tools which were required during bore wells are lying in the Water Supply Unit, DSA.

2.5 CRITICAL ANALYSIS

This work study is confined to provide the actual requirement of staff for Water Supply Organization in the changed scenario. In the past when steam engines were the main force for hauling of passenger/goods trains, coal and water were the main source of energy to propel the steam locomotives. The main functions of Water Supply Organization were to provide uninterrupted raw water supply for hydrants at stations for steam locos, bore wells work and their maintenance, maintenance of treatment plants etc.

In view of technological developments in every sphere of Railway working, i.e. phasing out of steam locos and introduction of Diesel/Electric locos, outsourcing of bore wells work and their maintenance, maintenance of water treatment plants at the Division concerned itself, the activities of Water Supply Organization has been eliminated to a great extent.

Consequently, outsourcing of activities of bore wells and their maintenance and maintenance of water treatment plants at Divisional level, the work of Water Supply Organization has reduced drastically.

2.6 REQUIREMENT OF STAFF AND RECOMMENDATIONS

In view of technological developments in every sphere of Railway working, i.e. phasing out of steam locos and introduction of Diesel/Electric locos, outsourcing of bore wells work and their maintenance, maintenance of treatment plants by the division concerned itself, the activities of Water Supply Organization has been eliminated to a great extent.

SUMMARY OF EXISING, PROPOSED AND IDENTIFIED SURPLUS Gr 'C' & 'D' STAFF

S. No.	Category	Gr. Rs.	S/S	Proposed strength	Identified surplus	Remarks
1	SSE	4600	07	01	06	To work in Engg. Branch, Baroda House.
2	JE	4200	03	01	02	To work as in charge till the condemnation process completes.
3	MCM	4200	05	-	05	
4	Air Compressor Driver-I	2800	03	-	03	
	Air Compressor Driver-II	2400	01	-	01	
	Air Compressor Driver-III	1900	01	-	01	
5	V. Driver-I	2800	02	-	02	
6	Welder-I	2800	01	-	01	
7	Fitter-I	2800	02	-	02	
8	Rig Operator-I	2800	03	-	03	
	Rig Operator-II	2400	01	-	01	
	Rig Operator-III	1900	01	-	01	
9	Black Smith-III	1900	01	-	01	
10	Helper-I	1800	113	04	109	To look after the assets round the clock.(including LR/RG)
Total			144	06	138	

RECOMMENDATION NO.1

It is proposed that 29 posts of Gr 'C' and 109 posts of Group 'D' staff working under SSE/Water Supply/DSA of Engg. Department under administrative control of CE/G/NRHQ (Headquarter controlled unit) are identified as surplus and recommended for surrender as under:-

S. No.	Category	Gr. Rs.	No. of posts identified surplus
1	SSE	9300-34800-4600	06
2	JE	9300-34800-4200	02
3	MCM	9300-34800-4200	05
4	Air Compressor Driver-I	5200-20200-2800	03
	Air Compressor Driver-II	5200-20200-2400	01
	Air Compressor Driver-III	5200-20200-1900	01
5	V. Driver-I	5200-20200-2800	02
6	Welder-I	5200-20200-2800	01
7	Fitter-I	5200-20200-2800	02
8	Rig Operator-I	5200-20200-2800	03
	Rig Operator-II	5200-20200-2400	01
	Rig Operator-III	5200-20200-1900	01
9	Black Smith-III	5200-20200-1900	01
10	Helper-I	5200-20200-1800	109
Total			138

2.7 During the course of study the team observed that by phasing out of steam locos and introduction of Diesel/Electric locos, outsourcing of bore wells work and their maintenance, maintenance of water treatment plants by the division concerned itself, the activities of Water Supply Organization has been eliminated to a great extent and the on roll staff deployed in the unit is just looking after the assets. Thus 138 no. of posts (Gr 'C'=29, Gr 'D'=109) are identified as surplus and recommended for surrender.

As and when the decision is taken by the concerned department about the disposal of the assets lying in the SSE/WS/DSA unit, the 06 staff proposed by the Work Study Team for looking after the assets may be surrendered accordingly.

3.00 FINANCIAL IMPLICATIONS

3.1.0 The annual expenditure as per 7th CPC on Gr 'C' & 'D' staff working under SSE/WS/DSA Engg. department is as under:-

S. No.	Category	Grade Rs.	Monthly value per post	S/S	Monthly expenditure	Annual expenditure
1	SSE	9300-34800-4600	67793/-	07	474551.00	5694612.00
2	JE/MCM	9300-34800-4200	53448/-	08	427584.00	5131008.00
3	AC Driver-I/V. Driver-I/Welder-I/Fitter-I/Rig Operator-I	5200-20200-2800	44082/-	11	484902.00	5818824.00
4	AC Driver-II/ V.Driver-II/ Welder-II/ Fitter-II/ Rig Operator-II	5200-20200-2400	38514/-	02	77028.00	924336.00
5	AC Driver-III/ V.Driver-III/ Welder-III/ Fitter-III/Rig Operator-III	5200-20200-1900	30065/-	03	90195.00	1082340.00
6	Helper-I	5200-20200-1800	27183/-	113	3071679.00	36860148.00
Total				144		55511268.00

The above table reveals that the annual expenditure being incurred on 144 sanctioned strength of Gr 'C' & 'D' staff working under SSE/WS/DSA of Engg. Department is 55511268.00

3.2.0 Proposed strength: The annual expenditure on the proposed strength of Gr 'C' & 'D' staff working under SSE/WS/DSA of Engg. Department is as under:-

S. No.	Category	Grade Rs.	Monthly value per post	Proposed Strength	Monthly expenditure	Annual expenditure
1	SSE	9300-34800-4600	67793/-	01	67793/-	813516.00
2	JE	9300-34800-4200	53448/-	01	53448/-	641376.00
3	Helper-I	5200-20200-1800	27183/-	04	108732.00	1304784.00
Total				06		2759676.00

The above table reveals that total annual expenditure on 06 proposed posts of Gr 'C' & 'D' staff working under SSE/WS/DSA will be reduced to ₹ 2759676.00 instead of ₹ 55511268.00 resulting net saving of ₹ 52751592.00 per annum

3.3.0 RECURRING SAVING

S. No.	Category	Grade Rs.	Monthly value per post	No. of posts identified surplus	Annual expenditure
1	SSE	9300-34800-4600	67793/-	06	4881096.00
2	JE/MCM	9300-34800-4200	53448/-	07	4489632.00
3	AC Driver-I V.Driver-I Welder-I Fitter-I Rig Operator-I	5200-20200-2800	44082/-	11	5818824.00
4	AC Driver-II V.Driver-II Welder-II Fitter-II Rig Operator-II	5200-20200-2400	38514/-	02	924336.00
5	AC Driver-III V. Driver-III Welder-III Fitter-III Rig Operator-III	5200-20200-1900	30065/-	03	1082340.00
6	Helper-I	5200-20200-1800	27183/-	109	35555364.00
Total				138	52751592.00

No. of posts identified as surplus: -

Group 'C' = 029 posts

Group 'D' = 109 posts

Total = 138 posts

Anticipated recurring saving = ₹ 527.51 lacs per annum

Capital saving = Nil

Total saving = ₹ 527.51 lacs per annum

WORK STUDY REPORT DETAILED CHART

Department : - Civil Engineering.

Name of study : - Review of Group 'C' & 'D' staff working under SSE/WS/DSA of Engineering department HQ controlled.

Activity centre : - SSE/WS/DSA Office.

S N	Sub activity	Brief description of workload	Actual staff deployed	Work Study recommendations	Representative workload
1	The water supply organization was to provide raw water for hydrants at stations to provide uninterrupted water supply to the steam locos, stations/offices and Railway colonies.	To provide raw water for hydrants at stations to provide uninterrupted water supply to the steam locos, stations/offices and Railway colonies and up keeping of the machineries/equipments.	SS= 144 OR= 13 Vac=131	The team identified 29 posts of Group 'C' and 109 posts Gr 'D' staff (Total=138) as surplus and recommended for surrender.	Due to phasing out of steam locos, elimination of activities like maintenance of bore wells and water treatment plants by the division concerned itself.

LIST OF ANNEXURES

S.N.	Description	Annex. No.
1	Statement showing staff position of Group 'C' & 'D' working under SSE/WS/DSA of Engineering department Headquarter controlled.	I
2	Letter of C.P. Cell to initiate the work study No. 16-CP/1/WS/22-23 dt.04.04.2022.	II

Annexure No.I

STATEMENT SHOWING STAFF POSITION OF GROUP 'C' & 'D' STAFF WORKING UNDER SSE/WS/DSA (HQ CONTROLLED) OF ENGINEERING DEPARTMENT.

S. No.	Category	Gr. Rs.	S/S	O/R	Vac.
1	SSE	9300-34800-4600	07	01	06
2	JE	9300-34800-4200	03	01	02
3	MCM	9300-34800-4200	05	-	05
4	Air Compressor Driver-I	5200-20200-2800	03	-	03
	Air Compressor Driver-II	5200-20200-2400	01	-	01
	Air Compressor Driver-III	5200-20200-1900	01	-	01
5	V. Driver-I	5200-20200-2800	02	-	02
6	Welder-I	5200-20200-2800	01	-	01
7	Fitter-I	5200-20200-2800	02	-	02
8	R. Operator-I	5200-20200-2800	03	-	03
	R. Operator-II	5200-20200-2400	01	-	01
	R. Operator-III	5200-20200-1900	01	01	-
9	Black Smith-III	5200-20200-1900	01	01	-
10	Helper-I	5200-20200-1800	113	09	104
Total			144	13	131

