

F.No.13026/1/2016-Vig.
Government of India
Ministry of Coal

Shastri Bhawan, New Delhi
Dated the 1st May, 2020


OFFICE MEMORNDUM

Subject: Identifying systemic deficiencies in coal shortage on the way after its loading from points of Northern Coalfields Limited and its receipt in power plants-regarding.

The undersigned is directed to refer to CVC's OM no. Conf./6441/15 dated 13.06.2018 on the subject mentioned above wherein CVC advised Ministry of Coal to form a Joint Committee of CVOs of Ministry of Coal, Railways, CIL and NTPC to find out the systemic deficiencies and suggest corrective measures in this regard.

2. The Joint Committee formed in this regards has submitted its report and the same is forwarded as annexure to CVC for further necessary action please.

Encls: as above


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To,

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Copy to:

1. Ministry of Railways (Principal Executive Director {Vig.}), CVO, Railway Board, Rail Bhawan, New Delhi-110001
2. NTPC Limited, (Ms. Trishaljit Shetty, Chief Vigilance Officer, NTPC Bhawan, SCOPE Complex, Institutional Area, Loadhii Road, New Delhi-110003.
3. Coal India Ltd. (Shri SK Sadangi, Chief Vigilance Officer), Coal Bhawan, Premise No. AF-III, Action Area-1A, New Town Rajarhat, Kolkata-700156.



Report

Sub: Identifying systemic deficiencies in coal shortage on the way after its loading from loading points and its receipt at destined power plants-reg.

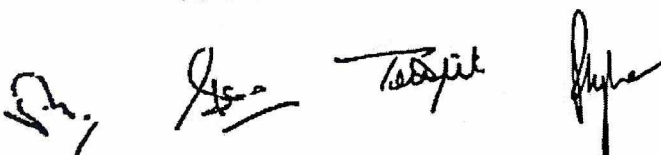
1. The Issue :

A complaint was forwarded by CVC under "Public Interest Disclosure Protection of Informer Resolution" (PIDPIR) regarding the theft of coal by manipulating of Weigh Bridge in collieries of Coal Company. In this regard, CVC directed vide OM No. Conf./6441/15 dated 13.06.2018 that a Joint Committee of CVOs of M/o Coal, Indian Railways, CIL and NTPC be formed to find out the systemic deficiencies and suggest corrective measures in this regards. Accordingly, a Committee of CVOs of Ministry of Coal, Indian Railways, Coal India Limited and NTPC was formed by MoC vide OM no. F.No. 13026/1/2016-Vig. Dated 19.11.2018 & Notice of MoC no. 13026/1/2016-Vig dated 10.01.2019 and the terms of Reference (TOR) of the Committee are as under, as mentioned in above OM of MoC & Notice of MoC (**Annexure-1, 2**):

- a. To find out the systemic deficiencies resulting in coal shortage on the way after its loading from loading points of coal companies and its receipt in destined power plants;
 - b. To find out the systemic deficiencies, if any, in weightment of rakes at weighbridges used for weighing Railway rakes based on which RR (Railway Receipts) are generated by the Railways and payments made by the power generators to the coal companies;
 - c. To suggest corrective measures in respect of the systemic deficiencies found by the Committee in respect of (a) and (b) above ; and
 - d. Any other issue as may be deemed necessary by the Committee or as may be referred by the Government.
2. First meeting was held on 17.01.2019 at Rail Bhawan, New Delhi, wherein Committee of the CVOs decided to form a Joint team consisting of officials from Indian Railways, NTPC and Coal India Limited to examine the process of coal transportation from mine to the power plant, where the maximum transit loss of coal occurred, as reported by NTPC (**Minutes of Meeting, placed at Annexure-3**). NTPC had raised that on an average they had received 1.2% shortage of coal compared to what they were being billed by CIL under the FSA.
3. Accordingly, Ministry of Coal vide OM No. 13026/1/2016-Vig dated 14th Feb 2019(**Annexure-4**) constituted a joint team of the Officials of CIL, NTPC and Railway officers to examine the process of coal transportation from mine to the power plant at 08 critical locations (Loading Points of CIL and Unloading Points of NTPC). The Joint Team inspected the 8 sidings, as directed, where the loss of coal had been reported to be maximum by NTPC. In order to verify the aspect of reported coal shortage at NTPC siding, the Joint Team comprising of the officers visited the critical locations of Coal Loading / Unloading sidings of NTPC, and compare the weight of coal received there with what were being reflected in the RRs.
- The Joint team visited 05 originating sidings and 03 destination sidings which were as follows :

Originating Sidings :

- (1) Sonapur Bajri & Dalurband (ECL) (2) Belpahar (MCI) (3) Ananta (MCI)



(4)Rajrappa (CCL) (5) New Majri (WCL)

Destination Sidings:

(1) NTPC Farakka (2) NTPC Simhadri (3) NTPC Mouda

The destination sidings mentioned above, chosen for field inspection, were some of the highest weight loss experiencing sidings, as reported by NTPC.

4. The Methodology Adopted:

As directed, the Joint team followed the following methodology for inspection of the Loading/Unloading points of Coal :

- (i) Whether the Weigh Bridges comply to the standard and specification, stipulated by RDSO ?
- (ii) Whether maintenance of the Weigh Bridges is adequate or not and its present state ?
- (iii) Examine the loading, unloading & weighment process at Originating & Destination Sidings
- (iv) Weigh some randomly selected rakes at the destination siding(s) of NTPC and compare the observed gross weight(s) to that recorded in the RR made at Originating siding(s).

5. DATA Collection:

(a) The Joint team witnessed weighment of three rakes at Weighbridge at Simadri NTPC . Details are as below:

All Wt in Tonnes

S.N.	RR No.	Source	LE Gross	LE Tare	LE Net	ULE Gross	Gross Wt Diff .	Gross Wt Diff (%)
1	17100046 1 dated 24.03.201 9	MCL, Bharatp ur	4553.1 0	1409.72 *	3143.3 8	4808.0 0	(+) 255	(+)5.6
2	17200035 9 dated 24.03.201 9	ECL	5160.8 0			5189.9 0	(+) 29.10	(+)0.6
3	17200014 4 dated 21.03.201 9	NCL, Rebooke d from Singrauli	5260.5 0	1194.80	4065.7 0	5281.9 0	(+) 21.40	(+)0.4

(b) Joint Team also visited wagon tippler area to view unloading arrangements at Mouda, NTPC.

The team witnessed weighment of one loaded (RR No. 172000300) and one empty rake (RR No. 172000239). The speed was at 4-8 Kmph during weighment. Details as below:

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S.N.	RR No.	Source	Loading end Weighment as per RR			Un-Loading end Weighment			All Wt in Tonnes Wt Difference (MT / %)		
			Gross	Tare	Net	Gross	Tare	Net	Gross	Tare	Net
			1	172 000 300	Dudh ichua , NCL	5178. 68	1196. 68	3982. 00	*5220. 80	1224. 20	3996.6 0
2	172 000 239	Wani, WCL	5230. 50	1293. 53	3936. 97	5261.1 0	*126 6.00	3995.1 0	30.6 (0.58%)	-27.53 (- 2.13%)	58.13 (1.48%)

* Witnessed by Committee

(c) Variation in recorded rake weight on 11 rakes received at Mouda on 02.06.2019 to 03.06.2019, as per NTPC's own records

Total nos. of Rakes	Loading end Total Gross Weight (in MT)	Loading end Total Net Weight (in MT)	Un-Loading end Total Gross Weight (in MT)	Un-Loading end Total Net Weight (in MT)	Weight Difference Gross Wt. (in MT)	Weight Difference Gross Wt. (in %)	Weight Difference Net Wt. (in MT)	Weight Difference Net Wt. (in MT)
11	57237.51	43814.17	57348.90	43761.6	(+)111.39	(+)0.19	(-) 52.57	(-)0.12

6. DATA Analysis :

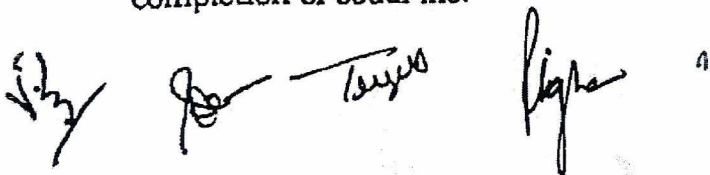
The Joint team carried out the inspection of the destination sidings of NTPC, where, the said team found the excess coal instead of coal shortage in 2 out of 3 destination sidings. In 2 out of 3 destination sidings where, the team conducted weighment of rakes and were found to be more than the gross weight, reflected in the RRs. The day of re-weighment test as well as rakes, chosen for weighment were random in nature.

Gross Weight at Unloading Point of NTPC, Simhadri was found higher than Gross Weight, reflected in Railway RR, during inspection by Joint Team (from +0.4% to +5.6%) Gross Weight at Unloading Point of NTPC, Mouda was found higher than Gross Weight, reflected Railway RR, during inspection by Joint Team (from +0.58% to +0.81%). At NTPC Farakka one rake was measured which was having 3.1 % lesser Gross weight.

7. The Joint Inspecting Team had also examined the weight of 11 rakes which were already recorded by NTPC, Mouda siding. In these 11 rakes, sum total of gross weight, reflected in the NTPC records was again found to be more than gross weight, reflected in RRs. As observed from NTPC's own record, 111.39 MT (+ 0.19%) was found higher than the total Gross Weight reflected in Railway RRs of 11 Rakes. 52.57 MT (-0.12 %) was found lesser than the total Net Weight reflected in Railway RRs of 11 Rakes.

7. Observations of the Joint Team, based on all the visits of 08 critical locations are as under:

- a. Guidelines of RDSO in respect of Weigh Bridge & its track maintenance must be followed by both NTPC and Coal Company. Calibration of weighbridge may be done to the extent possible in presence of all the stakeholders (NTPC, Coal Company and AMC holder) at both loading and unloading end. Information for calibration may be sent in advance. NTPC / Coal Company shall give prior information to each other for witnessing of weighbridge calibration after getting information regarding test wagon. NTPC stations and coal companies raised concern about timely availability of test wagons. Better co-ordination with Railways may be ensured.
- b. It is observed that at NTPC Mouda, maximum weight of test wagon used is 80.53 MT. As per Railway circular dated 1 Mar 2013, Test Wagons of weight upto 90 MT to be used. Railway may ensure accordingly for increasing reliability.
- c. Deputation of the private security guards in the loaded Railway rakes to escort the coal wagons from loading point in areas having high transit loss, so as to avoid any possible loss of coal in transit may be considered as an option.
- d. The feasibility of getting transit insurance for loss of coal on any account may be explored by the insurance company and NTPC may examine this aspect also considering the freight charges including insurance charges.
- e. In cases where weighment difference is consistently high, re-calibration of weighbridge may be done at loading / unloading point, if required.
- f. RR should have provision of indicating name & number of the weighbridge on which consignment have been weighed. Railway circular, RC1/2019 dated 07.02.2019 specifies requirement of integration of FOIS with weighbridges. In case of NTPC Simhadri, some cases of mismatch between wt in RR / Billed quantity were observed. Integration of weighing System with FOIS may be expedited to avoid these issues.
- g. To the extent possible Silo loading with pre-weighed bin may be installed / used. This will decrease loading time thereby increasing rake availability. Further, weighment will be accurate, thereby avoiding under loading / overloading.
- h. It was observed that at MCL, Lakhanpur area, BOCM 6 & 7, weighbridge of private washery was being used for weighment by Railways. One newly installed Rice Lake make in-motion weighbridge was available at MCL siding however approval from Railways was awaited which has now been granted, as informed by MCL.
- i. It was observed that at MCL-Jagannath Area equipment of M/s Rice Lake weighbridges for installation as per latest RDSO specifications are available. Railways have permitted for replacement of 1 on trial basis at Rly. Siding No - 1/2 of Jagannath Area. Railways and Coal Company should take pro-active steps to get all the old IMWBs replaced at the earliest.
- j. It was observed that at CCL Rajrappa, very old static WB is in use. Further, at WCL, New Majri, old WB is in use. Old Weighbridges may be replaced with RDSO compliant weighbridges. In case of WCL, New Majri WB was installed in 2008 and its life of 8 years is over in 2016. Action for replacement is taken in 2018-19. Prompt action for WB replacement may be taken at both loading and unloading end before completion of codal life.



k. Pre calibration readings may be taken during calibration as far as possible. Further, pre calibration data (if done) and Post Calibration data (necessarily) shall be available at loading / unloading weighbridge.

l. CCTV Camera with recording facility for rake top may be provided at both loading and unloading ends to monitor loading and unloading process. Recordings may be made available on request.

m. CCTV coverage may be explored where the rakes are detained excessively.

n. Railways master circular RMC/Provision of WB/2014/0 dated 12.06.2014 para 2.6 specifies requirement of joint inspection. The inspection should be done preferably with the test wagons. Further, Railways may explore use of test wagons for random inspection of weighbridges during the movement of test wagon for calibration at other locations.

o. In case overload is detected at WCL sidings, same is adjusted by WCL by reversing the rake, however re-weighment is not done and overloaded wagons are billed based on PCC as certified by Coal Company representative. RR is prepared based on certified corrected value. NTPC was of the view that in case wagon overload is detected at loading sidings, same shall be reweighed after adjustment at loading siding for determining the correct weighment. Railways informed that as per circular no. RMC/Weighment/2014/0, para 4.4.3(iii) dated 11.07.2014, "The wagons that have undergone load adjustment should be randomly reweighed". Accordingly, re-weighment may be resorted in case of repeated load adjustment at particular loading point.

p. It was observed that in some cases WB system does not have correct entry of PCC and hence PCC / overload / under-load is corrected manually. If WB is integrated with FOIS, this type of manual corrections may be avoided.

q. During committee visit to Farakka, committee observed that some coal is left unloaded in the wagon. Empty rake is not escorted and some miscreants take away left out coal.

NTPC stated that at most of the plants unloading is through wagon tippler and / or track hopper. Only in some specific cases manual unloading of some rakes is done. There will always be some residual coal but that quantity is negligible and it is not practical to escort empty rake.

r. It is observed that on the final day of the financial year, RRs are prepared on sender's weight / PCC basis and such rakes are not subsequently subjected to weighment (Letter dated 12.03.2019). However, this circular was being issued by Talcher area Railway division (Letter dated 31.01.2019 and 27.02.2019) on regular basis on month end. The rakes should be weighed at loading point, as far as possible or en-route.

s. NTPC, Mouda informed that in some cases rakes are received without weighment at loading end or enroute (RR based on sender's weight). As per FSA provisions, Mouda forwards its weighment particulars to Coal company in such cases. However, after some time weighment slip of enroute weighment is received by Mouda. Enroute weighment may be communicated immediately on weighment to avoid rework and confusion in accounts.

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- t. At NTPC Simhadri, WB is having glue joint and isolation on both side of WB rail to ensure isolation from nearby faults. However it needs to be further examined.

The Joint Team submitted their Reports for all the 08 Critical Loading Points of CIL and Unloading Points of NTPC and Final Summary Report, considering inspections of all the 08 Critical Locations of CIL & NTPC (Annexure-5).

9. The 2nd meeting of Committee of the CVOs was held on 08.07.2019 at Rail Bhawan, New Delhi in the office of Shri R.K.Jha, Principals Executive Director (Vig.) & CVO, Ministry of Railways, wherein CVOs of Ministry of Coal, Indian Railways, Coal India Limited and NTPC were present along with other Officials of MoC, Railways, CIL and NTPC (Minutes of Meeting, at Annexure-6). The next meeting was held through video conferencing on 24.04.2020. (Minutes of Meeting at Annexure-7)

10. NTPC was requested to share the details of receipted coal at plants where coal stock is more than RR weight like NTPC, Korba during discussion in the 2nd meeting of CVOs. Accordingly, NTPC provided the details of physical verification of Korba NTPC for year 2018-19, wherein 0.14% loss with comparison to receipt was mentioned.

11. NTPC had informed that on an average they had received 1.2% shortage of coal compared to what they were being billed by CIL under the FSA. NTPC shared the details of the reported loss of 1.2 % shortage of Coal.

12. NTPC provide the data-set for only one Financial Year i.e. 2018-19. To ascertain a trend of weighment at Weigh Bridges of NTPC, one year's data-set would be statistically insufficient, therefore, NTPC was requested to provide data-set for the previous two years i.e. for 2016-17 and 2017-18. In response to this, NTPC informed vide letter dated 25.09.2019 that data for previous years is not available in the form, as in the form it is available from April, 18 onwards.

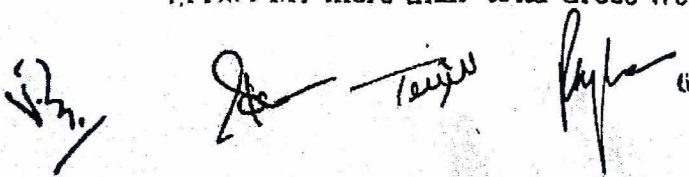
13. NTPC requested to share data of physical verification of coal at loading end for Dalurhand / Selected Shamla. In this regard, it may be noted that the survey of the dispatching coal at the Loading Point during loading the Coal in the Railway Wagon is not carried out, as this coal stock, during loading in Railway wagon at loading point is dynamic in nature.

14. **Observations of the Committee of CVOs:**

a. **Inspection of the joint Team & Collection of the Data :**

(i) In 2 out of 3 destination sidings, where, the team conducted weighment of rakes and were found to be more than the gross weight, reflected in the RRs. The day of re-weighment test as well as rakes, chosen for weighment were random in nature. In the 03 rakes (reweighed) at Simhadri NTPC Siding and 02 rakes (reweighed) at Mouda NTPC, the excess weight of Coal received by NTPC happened to be between (+) 0.4 % to (+) 5.6% and (+) 0.58 % to (+) 0.81% respectively above the Gross Weight, reflected in RRs. At NTPC Farakka one rake was measured which was having 3.1% lesser Gross weight.

(ii) The Joint Inspecting Team had also examined the weight of 11 rakes which were already recorded by NTPC, Mouda siding. In these 11 rakes, sum total of gross weight, reflected in the NTPC records was again found to be more than gross weight, reflected in RRs. As observed from NTPC's own record, the total Gross Weight of these 11 rakes at NTPC sidings have been shown to be 1.11.39 MT more than total Gross Weight, reflected in RRs.



b. **Railway Circulars :**

- (i) In Railways, the Master Circular No RATES MASTER CIRCULAR / WEIGHMENT / 2014/0 ; Rates Circular No. 49 of 2006 do not take cognizance of variation of weight after the rake leaves the originating siding, either en-route or at destination, if the re-weighed rake's weight does not exceed 2% of the gross weight. In other words as far as Railway policy is concerned, an implicit tolerance of $\pm 2\%$ is already recognized. Such a range of tolerance (admitted by Railways) is more than historical shortage of 1.2% (if true).
- (ii) Railways master circular RMC/Provision of WB/2014/0 dated 12.06.2014 para 2.6 specifies requirement of Joint inspection. The inspection should be done preferably with the test wagons. Further, Railways may explore use of test wagons for random inspection of weighbridges during the movement of test wagon for calibration at other locations. The practice of Joint Inspection by Railways is not uniform. →

c. **FSA Terms :**

- (i) FSA stipulates that the weight in RR recorded in originating siding will be the governing weight for the purpose of payment to CIL. Such clause in FSA unambiguously declares that no other weighment can be taken for the purpose of payment to be made by the FSA-consignee. *Coal companies*
- (ii) Another important clause in FSA, concerns a "Title of Goods" i.e. its transfer from one party to other during the course of contract execution. The said clause states that once coal is loaded into NTPC-rake, the "Title of Goods" passes on to NTPC.
- (iii) FSA does take into cognizance, the interest of consignee, as far as measurement of quantum of goods by allowing the consignee to send his representative for witnessing loading at the originating point. It was found that NTPC had not deputed anybody to witness the loading activity at the originating sidings, which were inspected by the team.

d. **Difference in Methodology of Weighment at NTPC :**

- (i) There is the difference in methodology of weighment of "Coal" followed by Railway & NTPC. This difference can cause variation in the weight difference by Railway & NTPC. For instance, in Railways, weight of coal is determined by deducting the designed tare weights of all wagons (without actually weighing them) from the gross weight of the rake. Thus, in case of Railways, only one time the rake is weighed i.e. when it is fully loaded. In case of NTPC, two weight measurements of the rake, once loaded rake after being received in the siding and second time the empty rake after the coal is unloaded. This difference in method of determining net weight can be a contributing factor for possible variation.
- (ii) Railway assumes sum total of "designed" weight of wagons to be the weight of empty rake. The designed tare weight of wagons may not remain the same and had been reported to increase during the course of their lifetime. However, NTPC provided the data of Tare Weight variation at unloading sides of NTPC with comparison to Tare Weight reflected in RRs, wherein it was observed that Tare weight at unloading sides of NTPC was 0.9 % more than the Tare Weight, reflected in the RRs. As far as, issue, reported by NTPC on wagon tare weight is concerned, whether the tare weight of wagon increases after induction of rake (possibly because patch work etc) or decreases due to natural material depreciation needs to be verified. All the members of the committee were of the opinion that this should be examined by Railways.

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(iii) NTPC faced average transit loss on Railway transportation to the tune of 1.2 % and they face less problems in MGR Supplies with Silo loading. Overall shortage for MGR supplies is within of 0.2 %, which is within Normative Loss of 0.8 %, as informed by NTPC. But there is a very optimistic variation compared to two factors (a) Railway's own implied transit tolerance is $\pm 2\%$ (b) Normal tolerance of electronic weigh bridge, as specified by manufacturer i.e. $\pm 0.5\%$. In fact, as far as this large sample of 11 rakes with NTPC measurement records is concerned the reported difference in Net Weight of Coal found was lesser than the weighbridges machine tolerance.

e. **RDSO Norms :**

In addition to the discussion on the coal shortage and its possible reasons, the committee also deliberated on other issues related to the compliance of electronic weigh bridges to the standards specified by RDSO norms, their present state of maintenance aspects etc. The committee who inspected various sidings, had observed many deviations, some of which are as follows:

1. Some of the WBs were not RDSO compliant.
2. WB maintenance by OEM at some places and by Non-OEM at some other places. (RDSO guidelines WD-29-MISC-14 clause no. 8.5 specifies about WB maintenance by OEM).
3. Practices of sealing of WB panel / CPU / Junction box are not uniformly exercised.
4. WB defect register does not have standard format.
5. Pre - Post Calibration practices not uniform.
6. Re-Weighment after Weight adjustment for overloading at loading end siding does not have uniform practice.
7. Railways master circular RMC/Provision of WB/2014/0 dated 12.06.2014 para 2.6 specifies requirement of Joint inspection. The inspection should be done preferably with the test wagons. Further, Railways may explore use of test wagons for random inspection of weighbridges during the movement of test wagon for calibration at other locations. The practice of Joint Inspection by Railways is not uniform. *L & local companies*

f. **Miscellaneous issue :**

NTPC provided the data for only one Financial Year i.e. 2018-19, wherein the weighment deference (-) 1.2 % was shown. They (NTPC) have provided the data of physical verification for Korba NTPC, wherein the closing stock was mentioned 0.14% lesser than the Stock as per Books. In view of above, NTPC was requested to provide the similar data-set for the previous two years i.e. for 2016-17 and 2017-18 so that better analysis can be made. During the earlier meeting on 08.07.2019 at Rail Bhawan, it was given to understanding that NTPC had observed excess quantity of unloading coal at NTPC, Korba. However, NTPC showed "deficit" instead of excess Coal. NTPC was further requested to provide the data for any other case / instance, where such excess coal with comparison to Book Stock had been noticed. In response to above, NTPC informed vide letter no. 01:VIG:CC dated 25.09.2019 that data for previous years is not available in the form, as available from April' 18 onwards.

g. **Possible Reasons for the difference in Weight at Loading and Unloading Points:**

- (i) Manufacturer's Standard Weighbridge Tolerance in EIMWB
- (ii) Weigh Bridge Inaccuracy arising out of calibration / maintenance / Machine defects etc. at origin and destination sidings.

- (iii) Normal transit loss, Moisture evaporation, theft etc.
- (iv) Difference in Weighment Methodology between NTPC & Railway.

15. Recommendations of the Committee of the CVOs:

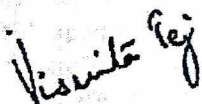
- (i) Compliance of RDSO guidelines in respect of Weigh Bridge & its track maintenance shall be followed by Railways, NTPC and Coal Company to the extent possible. All three stakeholders (consumer, seller and transporter) shall make efforts to have RDSO guidelines compliant in-motion weighbridges in a phased manner. However, NTPC shall provide a list of 25 sidings where this shall be implemented on priority so as to rule out the possibility of weighment errors during loading. The Calibration of weighbridge may be done to the extent possible in presence of all the stakeholders (NTPC, Coal Company and AMC holder) at both loading and unloading end. Information for calibration may be sent in advance. NTPC / Coal Company shall give prior information to each other for witnessing of weighbridge calibration after getting information regarding test wagon. NTPC stations and coal companies raised concern about timely availability of test wagons. Better co-ordination with Railways may be ensured. The AMC of the in-motion weighbridges by the OEM should be a preferred mode but the users may decide to engage agencies other than OEMs for the AMC depending on the merits of the case.
- (ii) As per Railway circular dated 1 Mar 2013, Test Wagons of weight upto 90 MT to be used. Railway may ensure accordingly for increasing reliability.
- (iii) In cases where weighment difference is consistently high, re-calibration of weighbridge may be done at loading & unloading point, if required.
- (iv) RR should have provision of indicating name & number of the weighbridge on which consignment have been weighed. Railway circular, RC1/2019 dated 07.02.2019 specifies requirement of integration of FOIS with weighbridges. Integration of weighing System with FOIS may be expedited.
- (v) To the extent possible Silo loading with pre-weighed bin may be installed / used. This will decrease loading time thereby increasing rake availability. Further, weighment will be accurate, thereby avoiding under loading / overloading.
- (vi) Pre calibration readings may be taken during calibration as far as possible. Further, pre calibration data (if done) and Post Calibration data (necessarily) shall be available at loading / unloading weighbridge.
- (vii) CCTV Camera with recording facility for rake top may be provided at both loading and unloading ends to monitor loading and unloading process. Recordings may be made available on request.
- (viii) CCTV coverage may be explored ^{by Railways.} where the rakes are detained excessively ^{as per NTPC.} However, Railways observed that this is practically not feasible.
- (ix) Railways master circular RMC/Provision of WB/2014/0 dated 12.06.2014 para 2.6 specifies requirement of joint inspection. The inspection should be done preferably with the test wagons. Further, Railways may explore use of test wagons for random inspection of weighbridges during the movement of test wagon for calibration at other locations.

- (x) NTPC shall share the data of the actual weight, design weight ~~and stencilled weight~~ of the empty wagons with CVO, CIL and a study may be done to find the statistical significance of the tare weight in the discrepancy in coal transported.
- (xi) In case overload is detected at Coal sidings, same should be adjusted at Originating Siding by reversing the rake, however, as far as possible, re-weighment of the Rakes after adjustment should be done. Railways informed that as per circular no. RMC/Weighment/2014/0, para 4.4.3(iii) dated 11.07.2014, "The wagons that have undergone load adjustment should be randomly reweighed". Accordingly, re-weighment may be resorted in case of repeated load adjustment at particular loading point.
- (xii) The rakes should be weighed at loading point, as far as possible or en-route.
- (xiii) Enroute weighment may be communicated immediately on weighment to avoid rework and confusion in accounts.
- (xiv) NTPC may, wherever feasible, depute Security Persons to supervise the coal wagons to avoid any theft / loss of coal in transit, as being done by some Private Companies
- (xv) NTPC may transport the coal with covered plastic sheets on the rakes where probability of transit losses is high.
- (xvi) NTPC may depute their representatives to witness the Gross Weight of the wagons at the weighbridge of Loading Sides of CIL and Calibration of Weighbridges of CIL, as per terms of FSA.



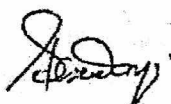
Shri R.K. Jha

Principals Executive
Director (Vig.) &
CVO, Ministry of
Railways



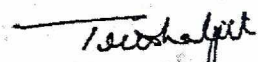
Ms. Vismita Tej

CVO, Ministry of Coal



Sri S.K. Sadangi

CVO, CIL



Ms Trishaljit Sethi

CVO, NTPC