

Ref.: CMD/Mahagenco/CE(FM)/No. 488

Date: **28 FEB 2024**

To,
The Secretary (Coal),
Ministry of Coal,
Shastri Bhavan, A-Wing,
New Delhi – 110001.
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Sub: Issues in coal sampling methodology prescribed in Fuel Supply Agreement signed amongst Mahagenco & CIL subsidiaries-regarding.

Ref: 1) Ltr to Director, CCO, MoC: Dir(Min)/CE(FM)/0323 dtd:16.02.2023.
2) Ltr to Director, CCO, MoC: Dir(Min)/CE(FM)/695/10.04.2023.
3) Ltr to CMD, CIL: CMD/MAHAGENCO/NO.1174 dtd.31 May 2023.
4) Ltr to CMD, CIL: CMD/MAHAGENCO/CE(FM)/No. 1507 dtd. 04 JUL 2023.
5) Ltr to Principal Secretary, GoM No.: CMD/MAHAGENCO/CE(FM)/No.2384 dtd.23.10. 2023.

Respected Sir,

With ref to above, Mahagenco and CIL subsidiaries have signed Fuel Supply Agreement in the year 2009 for ensuring supply of coal of prescribed quality. However, Mahagenco is facing the issue of considerable difference in analysis results between loading and unloading ends due to improper coal sampling methodology prescribed in Fuel Supply Agreement.

Although the sampling methodology issues are taken up by Mahagenco with Ministry of coal, Coal Controller Organization as well as Coal companies viz WCL, SECL & MCL time to time, no concrete steps have been initiated to rectify the issues to revise the sampling methodology.

The issues in coal sampling methodology are summarized below:

A. Sampling of Rail mode Supply:

- 1. Less representation:** As per FSA, Schedule-V, clause-1.2 (c) & (d), out of 59 wagons in a rake, only 6 wagons (i.e. 10%) are selected for sampling. However, as per Indian Standard- 436 of Bureau of Standards (BIS), it should be 25% (i.e. 14 wagons), as it scientifically ensure better and representative sampling of whole lot.
- 2. Top layer sampling:** As per FSA, Schedule-V, clause-1.2 (f) & (g), 50 Kg coal sample is collected manually from the top layer of each selected wagon. However, in this method only top layer of coal is collected leaving middle and bottom portion coal unsampled. In case of poor coal at middle and bottom portion, it is never captured in sample.
- 3. Removal of stone/shales from sample:** As per FSA, Schedule-V, clause-1.2 (h), any

stone/shale of size more than 100 mm are required to be removed/discarded from sample. However, such discriminatory removal of stones/shales from sample makes complete sampling procedure obsolete in terms of true representativeness of coal in particular lot and is unjustified for purchaser.

B. Sampling of Road mode Supply:

1. **Non-random sampling:** As per FSA, Schedule-V, clause-1.3 (b), every eighth truck is subjected to the third party sampling once the number of first truck to be sampled is finalized. However, this method lacks randomness, which is the basis of true sampling. Since the eighth truck to be sampled is fixed, many times trucks are already topped-up with good quality coal and hence the results are always on higher side than the actual quality of the lot.

C. Sampling of Conveyor Belt mode Supply:


1. **Non-random sampling:** As per FSA, Schedule-V, clause-1.4 (a), coal sample is collected in increments of full cross section and thickness of the stream in one operation in a regular interval of time. However, this method lacks randomness. As the timing of sampling is fixed, only selected coal is captured in sample.

In view of above, the Sampling Methodology is required to be revised as below:

1. **Review of coal sampling method:** Current method of rail mode supply sampling to be modified by making 25% wagons selection instead of 10% wagons. Rail mode supply sampling to be modified by making random selection of truck instead of every 8th truck. Conveyor belt mode supply sampling to be modified by making it random instead of sampling at fixed timing.
2. No stones/ shales shall be discarded from the sample.
3. Sampling by Augur machine shall be incorporated in FSA for wagon and road sampling.
4. **Online mechanical samplers for conveyor belt supply-** Provision of Online Mechanical Samplers is to be incorporated in FSA for conveyor belt supply sampling.

In view of above, it requested to revised sampling methodology so that representative and random sampling is ensured.

Thanking you.


Chairman & Managing Director
MAHAGENCO, Mumbai.

Copy.s.w.r.to:

Additional Chief Secretary (Energy), Govt. of Maharashtra, 4th Floor, Mantralaya, Mumbai – 400032, Maharashtra.