

GOVERNMENT OF INDIA
OFFICE OF THE COAL CONTROLLER,
MINISTRY OF COAL

**LAI D DOWN PROCEDURE AND METHOD OF SAMPLING & ANALYSIS OF
COAL FOR THE PURPOSE OF DECLARATION AND MAINTENANCE OF
GRADES OF COAL MINED IN A COLLIERY (April 2022 onwards)**

In exercise of the powers conferred under sub-rule 1 of rule 4 of the Colliery Control (Amendment) Rules, 2021 continued in force under Sub-sections (1) & (2) of Section 18 of the Mines & Minerals (Development and Regulation) Act 1957 (67 of 1957) and vide MoC's Gazette (Extraordinary) Notification S.O.2920 (E) dated 30.12.2011 and S.O. No 174 dated 24th January 2019, the procedure and method of sampling/analysis of coal is reproduced below after incorporating certain modifications. The revised procedure is to be adopted by the coal companies for declaration and maintenance of grade/quality of coal to be mined & dispatched after April **2022 onwards**.

SAMPLE PREPARATION: - As per sub-rule 3 of rule 4 of the Colliery (Amendment) Rules, 2021 the Nominated Owner shall provide all reasonable facilities and assistance for drawing coal samples by CCO officials & Government Organizations/Academic Institutions if any, authorized by CCO for this purpose. For this, one sample preparation room must be made available at every pit head dispatch point of the concerned colliery which should be properly illuminated, properly ventilated (exhaust fan), duly equipped with mechanical crushers, strainers, pulverizers (with vacuum cleaners) and a big clean metal plate for coning/quarterming. Suitable manpower is also to be provided by concerned coal company at the sampling room. Mechanical sampling/auto samplers are preferable to manual sampling. For preparation of sample Annexure – IV shall be followed.

ANNUAL GRADING / CLASSIFICATION OF COAL SEAM / PROVISIONAL GRADING OF COAL SEAMS / REVISION OF CLASSIFICATION OF COAL SEAMS:

1. All the grade proposals must reach the office of the Coal Controller through online portal of CCO (**portal.coalcontroller.gov.in**) and email (**coalcont-wb@nic.in**) positively before 10th of January every year. All relevant documents stated in point number 9 along with Annexure-II for Coal and Annexure-IIA for Lignite shall be uploaded.
2. Random sampling and analysis for finalization of the proposed grades of all the seams of the mines shall be done by CCO. For this purpose, pithead dispatch and or seam samples shall be collected and analyzed at any Govt. accredited laboratory / Govt. Academic Institution / NABL Lab. The job shall commence from the 2nd week of January every year.
3. The seam shall ordinarily be graded only in respect of the working thickness in case of underground development working. For annual grade declaration for the seams of underground mines where more than one coal seam are being worked but coal come out in a mixed way through the main belt, there shall be a provision of collecting samples from the respective belts of different seams for their individual grade declaration. However, for

declaration of combined grade of the seams, weighted average shall be considered. Proportion of mixing of different grade of coal should be mentioned and to be maintained.

4. In case of depillaring and opencast mining, the total working thickness of the seam or seams involved should be considered for grading purpose.

5. The annual grade/quality of coal shall be finalized by CCO on the basis of samples to be drawn randomly from seam (s)/trucks for pithead dispatch/conveyor belts on at least 3 different dates spaced at a minimum interval of 7 days and by taking the average GCV of the samples. The expenditure of such sampling & analysis shall be borne by the Coal Company and payment shall be made in advance to the Government Organization / Academic Institution concerned. All the reasonable facilities/ logistics for sampling shall be provided by the Coal Company as requisitioned by the Head of the Regional CCO offices as per statute under the Colliery Control (Amendment) Rules, 2021.

6. On the basis of average of the analysis results of all these three samples, the approval for the Annual Grade Declaration shall be communicated by the Coal Controller's Organization every year. Subsequently, the grades/quality so approved by the Coal Controller shall be notified by the Nominated Owner in the prescribed Grade Certificate in the extant prescribed format (Annexure-I) and copy of such Grade Certificate(s) issued under the signature of the Nominated Owner shall be forwarded to Coal Controller and Regional Office of CCO.

7. For provisional grading/quality, at least two seam samples excluding pickable bands of 10 cm thickness and above are to be drawn from at least two different sites which shall be as far apart as practicable but in any case not less than 30 meters. If the method of mining is such that the pieces of bands after blasting or cutting cannot be separated / picked, then the same should be included in the sample, keeping in view the cost incurred on beneficiation. In such cases, the Nominated Owner/Agent must submit a certificate as per Annexure-VI. The said samples to be drawn by the Nominated Owner, Agent or Manager of the mine are to be analyzed as per the relevant BIS specifications. The analysis may be carried out at any Govt. Institution / NABL Accredited laboratory preferably CIMFR, IITs, IEST, IICT-Hyderabad, IMMT-Bhubaneswar etc.

8. In case of declaring the provisional grade/quality of a seam, which had enjoyed a grade/quality in the past but subsequently withdrawn, the previous grade or its equivalent may be declared as provisional grade/quality.

9. While declaring a provisional grade/quality, the Nominated Owner should furnish the following information to the Coal Controller: -

- i) Number of samples tested and the dates of drawal of samples.
- ii) Place/places from where samples are drawn (enclose a mine plan of scale 1:4000 showing the Area proposed to be worked during the financial year and the places of sampling).
- iii) Seam Section(s) up to the full thickness and the working thickness. Nature and thickness of bands in the seam must be clearly mentioned therein showing whether the band is included or excluded.

- iv) Particulars of Govt./NABL Accredited laboratory/laboratories where samples are analyzed.
- v) Copies of test results duly countersigned by the Colliery Manager and Head of Quality Management of the Company.

10. If the provisional grade is not approved by the Coal Controller within 180 days (six months), the same may be treated as null and void unless otherwise notified.

11. In case of a virgin seam in a working coalfield, determination of class i.e. whether the coal is coking or non-coking may be assessed provisionally on the basis of analysis results of seam samples (proximate analysis on equilibrated basis), GCV (by approved bomb calorimeter on dmf basis as per IS : 1350 (Part - II) 1970 dated April 1971 or any subsequent revision thereof), Mean Random Reflectance per cent (Ro), Moisture % (60% R.H.) parts/100 parts of unit coal, V.M.% on dmf basis, LTGK, CSN, Ash% and Carbon % (dmf) and Hydrogen % (dmf) for ultimate analysis of coal. The Nominated owner shall apply to the Coal Controller for provisional classification of the seam giving particulars of the class and grade/quality of the seam in the extant prescribed format (Annexure-II).

12. In case of a virgin seam in a new area having no mine in the vicinity, the expected class of coal as per analytical data of bore hole or other such samples provisionally mentioned or mentioned in the Project Report (PR) may be taken as the expected/indicative class for the purpose of declaring the grade/quality. In this case also the owner shall apply to the Coal Controller through online portal of CCO (portal.coalcontroller.gov.in) and email (coalcont-wb@nic.in) with detailed justification for provisional classification of the seam in the extant prescribed format (Annexure-II).

13. The application for confirmation of the final class whether the coal is coking or non-coking in case of a virgin seam should be submitted to the Coal Controller as early as possible but in any case not later than 60 (sixty) days from the date of declaration of provisional grade/quality.

14. In case of intention of change of classification of coal from coking to non-coking & vice versa, the Nominated owner shall apply to the Coal Controller positively by 31st December. At the time of submission of Annual Grade proposals of seams/sections of the mine(s) giving detailed justification for change along with current relevant detailed analysis results in the extant prescribed Format (Annexure- II) For this, at least six (6) seam / dispatch samples are to be drawn during the last six months of the previous financial year by the Nominated Owner, Agent or Manager of the mine, as per laid down procedure from at least 3 (three) different locations of the concerned seam to be shown in the attached working plan (1:4000). The proposed change of class of coal would be verified by officials of CCO through systematic sampling of seam as well as loading samples drawn on at least 6 (six) different dates spaced at an interval of at least 7 (seven) days in a span of 2 (two) months to justify the proposed revision, as per laid down procedure and the detailed analysis like Moisture % (60% R.H.) parts/100 parts unit coal, V.M. (per cent on dmf basis), GCV (in Bomb calorimeter on dmf basis), Mean Random Reflectance per cent (Ro), LTGK type, C.S.N, Ash %, Carbon % (dmf) and Hydrogen% (dmf) etc. On the basis of the analysis results, Coal Controller shall take the decision and the decision of acceptance shall be intimated to the Nominated Owner of the concerned coal company, if found in order as per Table 2 of Indian Standard

classification and codification of Indian coals and Lignites (IS 770 : 1977, second revision and further revision thereof). Interim re-classification proposal by the Nominated Owner for revision from coking/non-coking characteristics or vice-versa within a financial year may not be accepted at the office of the Coal Controller unless otherwise permitted.

REOPENING OF WORKING

15. In case, where a seam is re-opened within 6 (six) months of temporary discontinuance, the previous grade prevailing at the time of discontinuance may be restored but when the period of discontinuance exceeds 6(six) months, the nominated owner shall apply afresh for grade verification by CCO.

COMPOSITE GRADE/QUALITY OF COAL

16. The Nominated Owner may declare the composite grade/quality on the basis of weighted average, for a number of seams if the productions from those seams is despatched as mixed loading. In case of composite grade/quality, the grade/quality certificate should indicate the ratio of quantities of different grades/quality of coal in the mixed loading with a certificate for maintenance of such mixed proportion to maintain the proposed grades of coal feeder streams.

DISPLAY OF GRADES/QUALITY OF COAL SEAMS

17. The Nominated Owner shall permanently display the declared grade/quality list on a notice-board at the office of the Manager showing the grades of all the seams and sections of seams mined in the colliery. Further, complete grade/quality list of all the seams and sections of seams of all collieries belonging to the coal company should be maintained, so as to be accessible by all concerned, at the offices of the Nominated owner, Chairman/Managing Director, Area General Manager and all Area Sales Officers.
18. The Nominated Owner shall maintain a register showing the following particulars of all seams being worked in the mine:
- (a) Analytical results of each sample
 - (b) Declared grade/quality approved by Coal Controller
 - (c) Date of declaration.
 - (d) Serial number of grade /Quality certificates.
 - (e) Section of the seam graded showing details of bands.
 - (f) Particulars of each band such as their thickness, nature i.e. hard or friable, whether pickable or not and whether included or excluded in the seam sample.

SETTLEMENT OF DISPUTES

19. While referring to any dispute arising out of the correctness of the declaration of grade of coal to the Coal Controller by a coal consumer for a decision, under sub-rule 5 of rule 4 of the Colliery Control (Amendment) Rules, 2021, the same should be preferred in the extent prescribed format (Annexure – III), and a full analytical data of coal and

such other information which is considered relevant by the Coal Controller should be furnished.

20. Disputes arising only in respect of the correctness of declaration of grade/quality of coal of seam or section of a seam shall be admitted by the Coal Controller. No dispute in respect of **commercial aspects** in respect of a particular consignment shall be entertained.

21. The decision of the Coal Controller in the matter of disputes about grades/quality under sub-rule 5 of rule 4 of the Colliery Control (Amendment) Rules, 2021 is final and binding on the Coal Company and Consumer.

22. On receipt of the complaint from the consumer, the CCO officials may take surprise samples in the presence of authorized representatives of Coal consumers and the coal company from the loading point(s), get them analyzed, cost of such analysis of the samples shall be borne by the complainant. Based on the results or otherwise, Coal Controller shall take a decision.

**PROCEDURE FOR SAMPLING AND ANALYSIS FOR DECLARATION /
MAINTENANCE OF GRADE / QUALITY OF COAL SEAM TO BE FOLLOWED BY THE
COAL COMPANIES, CCO REPRESENTATIVES AND AUTHORIZED GOVERNMENT
ORGANIZATIONS / ACADEMIC INSTITUTIONS**

(Ref. sub-rule 1 of rule 4 of the Colliery Control (Amendment) Rules, 2021).

23. For drawing seam samples the owner of a colliery shall prepare sampling sites and collect seam samples in accordance with provisions in item 9.1 of BIS specification NO.IS: 436 Part.I/ sec I) – 1964 Methods For sampling of COAL AND COKE –Part. I SAMPLING OF COAL Section I Manual Sampling (Revised)
24. Where samples of coal are required to be drawn from belt conveyer or other means of transport, provisions in the relevant BIS specification may be followed with modifications prescribed by Coal Controller as detailed in Annexure – IV.
25. For the purpose of analysis of sample(s), the following BIS standards shall be followed:
 - (a) METHODS OF TEST FOR COAL AND COKE: PART I PROXIMATE ANALYSIS IS: 1350 (PART-I) (2nd Revision) – 1984.
 - (b) METHOD OF TEST OF COAL & COKE : ULTIMATE ANALYSIS IS: 1350 (PART- IV) 1974
 - (i) IS:1350 (PART II) – 1970 (2ND REVISION WITH AMMENDMENT) : DETERMINATION OF CALORIFIC VALUE.
 - (ii) IS:1350 (PART-III)–1969 : DETERMINATION OF SULPHUR.
 - (iii) IS:1350 (PART IV/sec.I) –1974 :ULTIMATE ANALYSIS: DETERMINATION OF CARBON & HYDROGEN.
 - (iv) IS: 1350 (PART IV/sec.2) – 1975: ULTIMATE ANALYSIS: DETERMINATION OF NITROGEN.
 - (v) IS :1353-1993: METHODS OF TEST FOR CARBONISATION – CAKING INDEX, SWELLING NO., AND GRAY KING ASSAY (L.T.)
 - (vi) METHODS OF PETROGRAPHIC ANALYSIS OF COAL: IS 9127 (Part – I, II & III) 1992
 - (c) INDIAN STANDARD CLASSIFICATION AND CODIFICATION OF INDIAN COAL AND LIGNITES (IS 770: 1977, SECOND REVISION AND FURTHER REVISION THEREOF).

On the Company's Letter Head

ANNEXURE - I

GRADE/QUALITY CERTIFICATE

(Name of Coal/Lignite Company)

(Name of seam of Colliery)

Serial No. of
Grade/Quality Certificate _____ dated _____

In pursuance of provisions of sub-rule (2) of rule 4 of Colliery Control (Amendment) Rules, 2021, I being the competent authority of the company, hereby declare the Grade/Quality of coal Seam (No./Name) _____

Section _____ in _____ (colliery) as

_____ (Grade/Quality with GCV analyzed in a Bomb calorimeter in case of non-coking coal) to be effective from _____ (date) in

supersession of all previous declarations, if any.

(Signature of the Nominated Owner)
Name & Designation with seal

The Coal Controller
Office of the Coal Controller
Ministry of Coal, Govt. of India
1, Council House Street
Kolkata-700 001

ANNEXURE - IIDATA REQUIRED FOR GRADE/QUALITY PROPOSALS FOR ANNUAL / INTERIMLY REVISED GRADATION / QUALITY OF COAL SEAMS OF MINES.

01. Name of Colliery:
02. Name of Seam:
03. Thickness of Seam:
04. Height of Working Section:
05. Vertical Section of Seam Showing all bands indicating Nature and Thickness (working Section should be indicated by Arrow). This Section should be given for each mine in a Standard Paper of 29 cm. x 23 cm Size:
06. Analysis of seam samples (Equilibrated basis)
- Ash% Moist% VM% GCV
- by Bomb Calorimeter in K.Cal/kg on air dry basis, i.e., samples equilibrated at 40 degrees C and 60% Relative Humidity.
- (a) Including all bands
Site No. 1
Site No. 2
- (b) Excluding pickable bands (of 10cm & above)
Site No. 1
Site No. 2
07. Additional Analysis results for coking properties.

Sample Details	Mean Random Reflectance per cent(Ro)	LTGK	CSN	GCV(done by Bomb calorimeter) in Kcal/Kg on dmf basis	Volatile Matter % on dmf basis	Carbon % (dmf)	Hydrogen % (dmf)	Moisture % (60% R.H.) parts/100 parts unit coal

08. Analysis results of /Truck Sample/Belt conveyor Sample/Third party/Joint sample (on equilibrated conditions basis):

Date	Consignee/ Destination	Truck No. /Belt No.	Ash%	Moist %	VM %	GCV K.Cal/Kg	Grade/Quality

09. Analysis Results of Joint Samples:

Consignee	Sample number and date	Ash%	Moist%	VM% on dmf basis	GCV K.Cal/Kg	Grade/Quality

10. Whether Steam, Slack are suitably graded (the arrangement for segregation should be mentioned along with likely % of steam and slack in each Grade/Quality included & be declared).

11. Grade proposed for the year:

STM	SLK	ROM/Cr.ROM
(GRADE/QUALITY)	(GRADE/QUALTY)	(GRADE/QUALITY)

(Signature of the Nominated Owner with office seal)

ANNEXURE - II ADATA REQUIRED FOR GRADE/QUALITY PROPOSALS FOR ANNUAL / INTERIMLY
REVISED GRADATION / QUALITY OF LIGNITE SEAMS OF MINES.

01. Name of Lignite mine:
02. Name of Seam:
03. Thickness of Seam:
04. Height of Working Section:
05. Vertical Section of Seam showing all bands indicating Nature and Thickness (working Section should be indicated by Arrow). This Section should be given for each mine in a Standard Paper of 29 cm. x 23 cm Size:
06. Analysis of seam samples
- | | Ash% | Moist% | VM% | GCV |
|--|------|--------|-----|-----|
| (a) Including all bands | | | | |
| Site No. 1 | | | | |
| Site No. 2 | | | | |
| (b) Excluding pickable bands (of 10cm & above) | | | | |
| Site No. 1 | | | | |
| Site No. 2 | | | | |
07. Analysis results of Truck Sample/Belt conveyor Sample/ Third party/Joint sample:

Date	Consignee/ Destination	Truck No./ Belt No.	Ash%	Moist %	VM %	GCV K.Cal/Kg	Grade/Quality

09. Grade proposed for the year:

(Signature of the Nominated Owner with office seal)

ANNEXURE -III

GOVERNMENT OF INDIA
MINISTRY OF COAL
OFFICE OF THE COAL CONTROLLER

PROCEDURE FOR LODGING STATUTORY COMPLAINTS IN RESPECT OF GRADES / QUALITY OF COAL

In terms of sub-rule 5 of rule 4 of the Colliery Control (Amendment) Rules, 2021, disputes arising out of declaration of grade of coal by the Coal Companies may be referred to the Coal Controller, Government of India, Ministry of Coal, Council House Street, Kolkata – 700 001 for final decision.

Any consumer who wishes to prefer a complaint to the Coal Controller regarding the grade of coal received by him may do so in the proforma appended below. A separate complaint should be made in respect of each grade of coal of each colliery which should be accompanied by a fee of Rs.2500/- in the form of an A/C Payee Bank Draft on any Nationalized Bank in Kolkata drawn in favour of Coal Controller, Kolkata, for each grade of each colliery against which complaint is being raised.

Disputes only in respect of declaration of grade shall be admitted and any dispute in respect of any financial transaction shall not be entertained.

P R O F O R M A

1. Name and address of the consumer.
2. Name of supplying Colliery and Seam from which Supplied.
3. Approved Grade of Coal
4. Quality/Grade of Coal actually received by the consumer ascertained by actual analysis on loading point/dispatch point only (Proximate analysis, ash%, moisture%, volatile matter% on equilibrated basis and GCV in Kcal/Kg analyzed in bomb calorimeter on equilibrated basis ie., samples equilibrated at 40 degrees C and 60% Relative Humidity for non-coking coals).
5. Detailed analysis report if available. If not, what is the basis of the complaint?
6. Particulars of Trucks and dates of loading.
7. Particulars of accompanying Bank Draft.
8. Any other relevant information. Like a copy of FSA or CSA executed by the consumer with the Coal Company should be enclosed to the application.

Date: (Signature of the authorized Signatory/ Nominated owner
for Consumer lodging the complaint with Official Seal)

Place:

ANNEXURE - IV

PROCEDURE FOR COLLECTION OF SAMPLES FROM LOADED TRUCKS/
CONVEYOR BELTS (FOR DETERMINATION OF GRADE/QUALITY) TO BE
FOLLOWED BY THE COAL COMPANIES & GOVERNMENT ORGANIZATIONS /
ACADEMIC INSTITUTIONS

[Ref: Sub-rule 1 of rule 4 of the Colliery Control (Amendment) Rules, 2021]

1. For each colliery adequate number of representatives should be authorized by the colliery management for the purpose of supervising the sampling operation. Attested signature of such authorized persons should be kept with the Regional head of Coal Controller's Organization (O.S.D.).
2. **In case of sampling from loaded trucks, following procedure shall be followed:**
 - 2.1 Trucks shall be chosen at random which shall be the first truck for sampling & after that 2nd and 3rd truck may also be randomly selected.
 - 2.2 One point on the surface of the loaded truck will be decided for collection of sample before getting on to the top of the truck. From the prefixed point the entire quantity of coal will be collected from a pit of about 30 cm diameter and dug up to a depth as far as practicable.
 - 2.3 The top of the selected spot for collection of sample shall be leveled before digging a pit of about 30 cm diameter to a depth as far as practicable taking precaution to prevent coal getting mixed with the sample due to side spillage. However, the minimum quantity thus collected from each pit shall not be less than 30 Kg.
 - 2.4 In case of any big piece of coal/stone encountered during the process of digging in the above manner, all the material at the top of the big piece shall be taken in sample.
 - 2.5 After collection from one truck, the gunny bag containing the sample shall be carried to the site of next selected truck and the same process is continued up to the last truck selected for collection of sample. Alternatively, the gunny bags containing sample may be kept at a central place under reliable guard or placed in the locked sampling room wherever available. The gunny bag will be loosely tied.
3. **In case of sampling from conveyor belts, following procedure shall be followed:**
 - 3.1 For the purpose of sampling, a lot, while it is being discharged over a conveyor, shall be divided into a number of sub-lots of approximately equal weight. 2 gross samples shall be collected from a quantity upto 500 tonnes, 3 gross samples for a quantity ranging from 501 tonnes to 1000 tonnes, 4 gross samples for a quantity ranging from 1001 tonnes to 2000 tonnes, 5 gross samples for a quantity ranging from 2001 to 3000 tonnes and 6 gross samples for a quantity of over 3000 tonnes.
 - 3.2 Weight of one gross sample shall be 350 kg in case of ROM/Cr. ROM coal, 175 kg in case of Steam coal and 75 kg in case of Slack coal.
 - 3.3 Weight of one increment shall be 5 kg for all coal sizes.
 - 3.4 In case of ROM/Cr. ROM coal, for 1 gross sample, the number of increments shall be 70 (@ 5 kg per increment, equivalent to 350 kg), in case of Steam coal, for 1 gross sample, the number of increments shall be 35 (@ 5 kg per increment, equivalent to

175 kg) and in case of Slack coal, for 1 gross sample, the number of increments shall be 15 (@ 5 kg per increment, equivalent to 75 kg).

- 3.5 The increments shall preferably be taken from the full cross-section and thickness of the stream in one operation. While drawing the increments, the scoop should sweep the bottom of the conveyor.
- 3.6 Samples may be collected either from the moving belt or after stopping the belt periodically.
- 3.7 Before collecting the increments, the speed of the conveyor and the quantity of material passing a certain point in a given time shall be ascertained so that an appropriate spacing of the increments may be arranged over the whole of the lot.

4. PREPARATION OF SAMPLE

- 4.1 The total material thus collected without exclusion of anything other than foreign materials viz. metallic pieces, wood, bricks, concrete chips etc., shall constitute the gross sample for the lot.
- 4.2 The gross sample shall be crushed to 50 mm preferably by mechanical means, mixed thoroughly, coned and quartered. Two opposite quarters shall be retained and rest rejected. The retained material shall be further mixed together and same procedure of coning and quartering and rejection shall be followed till one quarter of the gross sample is retained. The material so obtained shall be crushed to 12.5 mm preferably by mechanical means and finally crushed to 3 mm size, preferably by mechanical means following coning and quartering till approx. 2(two) kg of sample is obtained. 2(two) kg sample is to be reduced to 72 mesh in a pulveriser and shall be kept for analysis.
- 4.3 This pulverized sample of approximately 1.5 kg shall be divided into 3 equal parts in segments of 120 degree each and by taking each segment, three equal parts of 500 gm (approx.) of the sample be collected in suitable polythene bags. One part shall be handed over to the colliery. The second part shall be sealed with a slip inside the bag as well as tagged outside with information viz. (i) date of sampling,(ii) name of colliery,(iii) place of sampling, (iv) size of coal and shall be kept as a referee sample under the custody of Coal Controller's Organisation. The third part shall be sealed and tagged outside of the bag with the above information. This part of the sample shall be sent for analysis by Regional Head of CCO with a code number.

5.0 CONING AND QUARTERING

For reduction of sample – the following procedure shall be followed.

- 5.1 Heap the material into the shape of a cone by pouring one scoopful of the material one after another on the apex of the cone by allowing the material to fall down only under the influence of gravity.
- 5.2 Flatten the cone evenly so that it forms a low circular pile.

- 5.3 Cut the pile into 4 quarters along two diameters which intersect at right angles. Retain one pair of opposite quarters and reject the other pair. Repeat till the size of the retained sample is reduced to the required weight.

6. GENERAL PRECAUTIONS

The place selected for preparation of sample shall be enclosed, properly roofed, well lighted and free from draught. Where this is not possible, precaution shall be taken against loss of (a) fine wind-borne sample (b) contamination with moisture (c) contamination with foreign matter.

- 6.1 No part of the sample shall be removed during the process of preparation & reduction.
- 6.2 Hard clean surface, free from cracks shall be selected for mixing, coning and quartering of the sample.
- 6.3 The sampling bags for samples collected by Regional Head of CCO or his representative should be identical and shall be similarly sealed and carefully deposited.
- 6.4 Before accepting the coal samples from their authorised representative, Regional Head of CCO or his authorised representative of CCO should examine the sample bags and sampling report.
7. Sampling report as prescribed in the Annexure - V shall be prepared in triplicate with the signature of the representatives of colliery as well as that of Coal Controller.

8. HANDLING THE SAMPLES AND ANALYSIS REPORT

The Regional Head of CCO should send his part of sample to laboratory after codification by removing the slip inside/outside in a group of at least 6 samples. The code number will be given by Regional Head of CCO and confidentially recorded in a bound paged register. All the samples sent in one lot will be in exactly similar bags and after sealing again. The code number would be given both on the tag and inside the bag.

- 8.1 When the analytical results are obtained, same should be decoded and recorded in the register. The results shall be communicated to Coal Company along with all relevant information, viz. colliery, seam, size fraction, declared grade/quality, place and date of sampling, the name of the consumer etc.
- 8.2 The referee sample shall be analysed only when the loading colliery challenges the result supported by his own analysis result of the sample kept with him within a period of 15 (fifteen) days from the date of intimation of Regional Head of CCO's result. The analysis result of the referee sample shall be the final analysis result of the consignment.
- 8.3 The aggrieved colliery will be allowed to examine within another 15(fifteen) days whether the seal on the referee sample is intact. The referee sample part should be sent to a laboratory in a lot of at least 6 (six) samples with code number (which would not of course be made known to colliery representatives) under sealed condition. Effort shall be made to dispatch the referee samples in his presence. Otherwise, the referee sample will be destroyed after 30(thirty) days from the date of intimating the results.

- 8.4 In case of unusual variation of analysis result of the referee part from the earlier result of the same sample, the reason for such variation may be analysed.
- 8.5 System of rejecting suspicious test result shall be as per Appendix D of IS:436(Part I /Sec I) 1964 of BIS.
- 8.6 For such cases , at least one sample in a quarter shall be collected under supervision of Regional Head of CCO himself , so that the seasonal variation as also the work of the subordinate officers can be checked
- 8.7 In order to ensure proper analysis, Regional Head of CCO should have the analysis conducted periodically in more than one Govt. Accredited laboratory simultaneously and compare the results.

ANNEXURE - V

GOVERNMENT OF INDIA
 MINISTRY OF COAL
OFFICE OF THE COAL CONTROLLER

SAMPLING REPORT

1. Sample No.:
2. Date of Sampling:
3. Name of Colliery:
4. Name of Owner/Company:
5. Pit/Incline/Quarry:
6. Place of Sampling:
7. Trucks No:
8. Consignee & Destination:
9. Name of Seam:
 - (a) Including all bands
 - Site No. 1
 - Site No. 2
 - (b) Excluding pickable bands (of 10cm & above)
 - Site No. 1
 - Site No. 2
10. Declared Grade
11. Size fraction (ROM/STM/SLK):
12. Method of loading:
13. Method of drawl of samples :(revised procedure laid down by Coal Controller/BIS for drawal of seam/dispatch samples)
14. Name and Designation of the Company representative:

This is to certify that the samples were taken as per revised procedure of sampling laid down by Coal Controller in our presence.

**Signature of the representative of
 Nominated Owner of the Colliery
 with date & seal**

**Signature of representative of
 CCO wherever applicable
 with date & seal**

ANNEXURE-VI(On company's letter head)CERTIFICATE

1. Name of the Mine/Colliery
2. Name of the Area
3. Name of the Nominated Owner & Company
4. Name of the Agent/Manager
5. Name of the seam
6. Name of the working section
7. Thickness of the working section
8. Thickness of the band

Certified that the above band/bands of the coal seam cannot be separated due to method of mining in vogue. This is also to certify that there will be no percentage (%) deduction from the production of coal on account of the shale/bands.

Signature of the Area General Manager
With date and seal

Signature of the Agent
With date and seal