GOVERNMENT OF INDIA
OFFICE OF THE COAL CONTROLLER,
MINISTRY OF COAL
1, COUNCIL HOUSE STREET, KOLKATA – 700 001

PROCEDURE OF SAMPLING & ANALYSIS OF COAL FOR DECLARATION AND MAINTENANCE OF GRADE/QUALITY.

In exercise of the powers conferred under sub-rule 1 of rule 4 of the Colliery Control Rules, 2004 and sub-rule 1 of rule 18 B of Coal Mines (Conservation and Development ) Amendment Rules, 2011 continued in force under Sub-sections (1) & (2) of Section 18 of 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, the procedure and method of sampling/analysis of coal already circulated earlier vide this office letter No CC/QC/GRD DECLN/Policy/2012-13 dated 01.02.2012, is reproduced below incorporating marginal modifications. These are now to be adopted by the producing coal companies for declaration and maintenance of grade/quality of coal to be mined & dispatched with immediate effect.

SAMPLE PREPARATION :- As per sub-rule 4 of rule 4 of Colliery Control Rules 2004 and sub-rule 3 of rule 18 B of Coal Mines (Conservation and Development ) Amendment Rules, 2011 the Nominated Owner should provide all reasonable facilities and assistance for drawing coal samples by CCO officials. For this, one sample preparation room must be there at every pit head dispatch point of the concerned colliery which should be properly illuminated, properly ventilated (exhaust fan) and installation of mechanical crushers, strainers, pulverisers with vacuum cleaners with a big clean metal plates for coning/quartering etc. Suitable manpower are 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, items 3, 4 & 5 of Annexure – IV should be followed.

PROVISIONAL GRADING/QUALITY OF COAL SEAMS/SIDING
1. Before commencement of dispatch of coal, the grade/quality of coal of the seam/siding should be declared provisionally on the basis of seam sample and stock sample generated from the said seam, if any.

2. For provisional grading/quality, at least two seam samples excluding pick able bands of 10 cm 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 13.5 meters. The said samples are to be drawn and analyzed as per BIS specification. The analysis may be carried out at any Govt. Accredited laboratory/NABL preferably at CIMFR and the prescribed grade certificate enclosed as ANNEXURE – I, should be forwarded to the Coal Controller in terms of items 23 & 24 below:-

3. In case of declaring the provisional grade/quality of a seam/siding, 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.

4. 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.
ANNEXURE-III

ii) Place/places from where samples are drawn (enclose a site plan showing the places of sampling).

iii) Seam – Section up to the full thickness and the working thickness. Nature and thickness of bands in the seam, clearly mentioning therein whether the band is included or excluded.

iv) Particulars of Govt. Accredited laboratory/laboratories where samples are analysed.

v) copies of test results issued by the Govt. Accredited laboratory/NABL preferably CIMFR duly countersigned by the Nominated Owner of the Colliery.

5. 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 results of analysis of seam samples (proximate analysis on equilibrated basis), GCV (in BIS approved bomb calorimeter on dmf basis as per IS : 1350 (Part - II) 1970 or any subsequent revision thereof, Mean Random Reflectance per cent (Ro), Moisture % (60% R.H.) parts/100 parts unit coal, V.M.% on dmf basis, LTGK, CSN, Ash% and Carbon % (dmf) and Hydrogen % (dmf) from ultimate analysis of coal etc., in a Govt. Accredited Laboratory/NABL preferably CIMFR). 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 format (Annexure- I).

6. 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 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 with detailed justification for provisional classification of the seam (the said data of analysis results as mentioned in No. 5.)

FINAL GRADING(QUALITY)/CLASSIFICATION OF COAL SEAM/SIDING

7. After the commencement of despatches on the strength of provisional grade/quality of coal seams/siding, within a period of 6(six) months, the final grade/quality should be declared in replacement of the provisional grade/quality.

8. The final grade/quality of coal is to be declared on the basis of loading samples to be drawn from wagons/trucks on at least 3 different dates spaced at intervals of at least 10 days and taking the majority result of the samples to be analysed in a Govt. Accredited Laboratory/NABL preferably CIMFR and the prescribed grade/quality certificate should be forwarded to the Coal Controller.

9. In case of failure in finalizing the declared provisional grade/quality within the stipulated 6(six) month period due to despatches not being started or any reason whatsoever, the provisional grade/quality will be treated null & void. The grading/quality of such coal already mined/to be mined shall be done by the owner (before despatches commences) following the usual procedure of provisional grade/quality declaration.

10. The application for fixation 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 the provisional grade/quality.

REVISION OF GRADE/QUALITY OF COAL SEAMS/SIDING
ANNEXURE-III

11. If the owner intends to revise the existing (final) grade/quality of a seam or section of a seam, he shall, not less than 45 (forty five) days before such revision, give notice of his intention to the Coal Controller in writing indicating the results of both seam and loading samples drawn in the prescribed format (Annexure- II) on at least 6(six) different dates samples spaced at an interval of at least 10(ten) days in a span of 3(three) months to justify the proposed revision to be analysed in a Govt. Accredited Laboratory/NABL preferably CIMFR from at least three different locations of the concerned seam to be shown in the attached working plan. If the colliery has entered into Third Party/Joint sampling agreement with a consumer, the results of all the joint samples at both ends or at either end as per the terms of agreement during the preceding 3 (three) months shall be the basis of revision of grade/quality. The results of such samples should be enclosed along with the notice of intention for revision of grade/quality.

12. In case of final revision of grade/quality on the basis of wagon samples, truck samples, belt conveyor or rope-way samples, the information is to be furnished to the Coal Controller as per format in Annexure – II.

13. After expiry of 45 (forty five) days or the stipulated period as mentioned in item No.11 above, from the day of receipt of the notice in the office of Coal Controller, the owner may declare the revised grade/quality in the same manner as followed in case of final grade, unless the revision of the grade/quality is objected to by the Coal Controller within the said period stating the reasons for such objection.

REVISION OF CLASSIFICATION OF COAL SEAMS

14. In case of change of classification of coal from coking to non-coking & vice versa, the Nominated owner shall apply to the coal Controller in the beginning of the financial year during Annual Gradation of seams/sections giving detailed justification for change along with relevant detailed analysis results in the prescribed Format (Annexure- II) with comments/observations of CIMFR regarding change of characteristics of seam samples drawn at least three different locations of the concerned seam to be shown in the attached working plan. 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 3(three) different dates spaced at an interval of at least 10(ten) days in a span of 3(three) 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(BIS approved Bomb calorimeter on dmf basis), Mean Random Reflectance per cent (Ro), LTGK type, C.S.N, Ash %,Carbon % (dmf) and Hydrogen% (dmf) etc. should be done at any CIMFR laboratory with CIMFR’s comments/recommendation for change of coking/non-coking characteristics of coal. On the basis of the analysis results, Coal Controller will take the decision and a decision of acceptance will 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 proposal by the Nominated Owner for revision from coking/non-coking characteristics within a financial year or vice versa to Coal Controller will not be accepted at the office of the Coal Controller.

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 previous grade/quality may be declared as a provisional grade/quality which should be made final within 6(six) months from the date of reopening in accordance with the procedure as laid down under item 8 above.
ANNEXURE-III

GRADING/QUALITY DETERMINATION OF SEAM/SIDING

16. The seam shall ordinarily be graded only in respect of the working thickness in case of underground development working.
17. In case of depillaring and opencast mining, the total working thickness of the seam or seams involved should be graded.
18. The grade/quality declaration should generally be in respect of a seam or section of a seam and not in respect of any pit, incline or quarry.

COMPOSITE GRADE/QUALITY OF COAL IN DESPATCH POINTS

19. The owner may declare the composite grade/quality in the basis of weighted average, for a number of seams if the productions from those seams are despatched as mixed loading. In case of composite grade/quality, the grade/quality certificate should indicate the analysis results of coal of each seam in the composite loading giving thickness of individual seams mined and the ratio of quantities of different grades/quality of coal in the mixed loading.
20. Where two or more grades/quality of coal are stacked and loaded from the same depot or siding, a proper fool-proof separation arrangement should be provided so as to eliminate the chance of any intentional or inadvertent admixture of different grades of coal.

DISPLAY OF GRADES/QUALITY OF COAL SEAMS/SIDING

21. (a) 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.
   (b) In siding also some arrangement for such display should exist.
   (c) If two or more grades of coal are loaded from one siding separate boards for each grade of coal shall be erected displaying daily the source of coal i.e. mine, seam and grade of coal.

22. 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 (both seam and wagon).
   (b) Declared grade/quality to be ascertained in BIS approved Bomb calorimeter for non-coking coal from any Govt. Accredited Laboratory preferably CIMFR.
   (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.

   This register should be preserved and maintained up to date in the colliery office and should be made available to the officers deputed by the Coal Controller whenever required.

23. Whenever any declaration of grade/quality, whether provisional or final or revision is made, a grade certificate, serially numbered, in the prescribed format, as attached, should be forwarded to the Coal Controller within 3 (three) days from the date of declaration.

24. All grade/quality certificates should be issued and all declarations of grades should be made under the signature of Nominated Owner & forwarded by the Nominated Owner to the Coal Controller.
ANNEXURE-III

ANNUAL DECLARATION OF GRADES/QUALITY OF COAL SEAMS/SIDING

25. The grades/quality of coal to be mined and despatched during the financial year should be declared every year final grade list should be forwarded to Coal Controller before the commencement of the financial year. Proposal for the purpose from the owner, duly supported by relevant analytical analysis (from any Govt. Accredited laboratory, NABL preferably CIMFR) of seam/channel samples to be projected in the plan shall be submitted to the Coal Controller duly confirmed & forwarded by the owner at least 45 days in advance for scrutiny.

26. Any addition, deletion or revision of grade/quality that may take place subsequently during the year shall be done as per the procedure laid down in clause 11.

SETTLEMENT OF DISPUTES

27. While referring to any dispute by a coal consumer arising out of declaration of the grade for a decision from the Coal Controller under sub-rule 5 of rule 4 of the Colliery Control Rules, 2004 and sub-rule 5 of rule 18 B of Coal Mines (Conservation and Development) Amendment Rules, 2011 as enclosed as Annexure – III, a full analytical data of coal and such other information which is considered relevant by the Coal Controller should be furnished to the Coal Controller.

28. Disputes only in respect of correctness of declaration of grade/quality and size of coal of seam or section of a seam will be admitted by the Coal Controller. No dispute in respect of commercial aspects in respect of a particular consignment will be entertained.

29. 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 Rules, 2004 and sub-rule 5 of rule 18 B of Coal Mines (Conservation and Development) Amendment Rules, 2011 is final and binding on the Coal Company and Consumer.

30. On receipt of the decision from the Coal Controller, the Coal Company shall forthwith revise the grade/quality which shall be made effective from the date as directed by the Coal Controller and a revised declaration in accordance with the decision should be issued immediately.

PROCEDURE FOR SAMPLING AND ANALYSIS FOR DECLARATION/MAINTENANCE OF GRADE/QUALITY OF COAL SEAM/SIDING

(Ref. sub-rule 1 of rule 4 of the Colliery Control Rules, 2004 and sub-rule 1 of rule 18 B of Coal Mines (Conservation and Development) Amendment Rules, 2011).

31. For drawing seam samples the owner of a colliery shall prepare sampling sites in accordance with provisions in item 9.1 of BIS specification NO.IS: 436 Pt.I/ sec I) – 1964 Methods of sampling of COAL AND COKE –Pt. I SAMPLING OF COAL (Revised).

32. For the purpose of drawing wagon samples, the procedure as laid down by the Coal Controller and as enclosed as Annexure – IV shall be followed.

33. 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.

34. For the purpose of analysis of sample, the following BIS standards shall be followed:

(a) METHOD OF TEST FOR COAL AND COKE : PROXIMATE ANALYSIS IS: 1350 (PART-I) (2nd Revision) – 1984.
ANNEXURE-III

(b) METHOD OF TEST OF COAL & COKE : ULTIMATE ANALYSIS IS: 1350 (PART- I) (2nd Revision) – 1984.

(i) IS:1350 (PART II) – 1970 (2nd REVISION WITH AMMENDMENT) : DETERMINATION OF CALORIFIC VALUE BY BOMB CALORIMETER.

(ii) IS:1350 (PART-III)– 1969 : DETERMINATION OF SULPHUR.


(iv) IS: 1350 (PART IV/sec.2) – 1975 : DETERMINATION OF NITROGEN.

(v) IS:1353-1993 METHODS OF TEST FOR CARBONISATION – CAKING INDEX, SWELLING NO. AND GRAY KING ASSAY ( L.T.)

(vi) METHOD 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).

ANNEXURE - I

GRADE/QUALITY CERTIFICATE

(Name of Coal Company)

(Name of Colliery/Siding /CHP etc.,)

Serial No. of Grade/QualityCertificate________________________________________________________
dated________________________________________________________

In pursuance of provisions of sub-rule (2) of rule 4 of Colliery Control Order, 2004 sub-rule 2 of rule 4 of the Colliery Control Rules, 2004 and sub-rule 2 of rule 18 B of Coal Mines (Conservation and Development ) Amendment Rules, 2011, I being the competent authority of the company, hereby declare the Grade/Quality of coal Seam/Siding (No./Name)________________________________________________________

Section__________________in_____________________________ (colliery) as __________________________(Grade/Quality with GCV analyzed at BIS approved Bomb calorimeter in case of non-coking coal) to be effective from __________________________(date) in super session of all previous declaration, if any.
To,
The Coal Controller,
Office of The Coal Controller,
Ministry of Coal, Govt. of India
1, Council House Street,
Kolkata- 700 001.

ANNEXURE - II

DATA REQUIRED FOR GRADE/QUALITY DECLARATION FOR
PROVISIONAL/FINAL/ANNUAL GRADATION/QUALITY OF COAL /LIGNITE
SEAMS OF MINES/ SIDING/CHP ETC.

01. Name of Colliery/Siding/CHP:
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 in Bomb Calorimeter
    (BIS approved)
    K.Cal/kg (BIS approved)

(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 (from CIMFR)

<table>
<thead>
<tr>
<th>Sample Details</th>
<th>Mean Random Reflectance per</th>
<th>LTGK</th>
<th>CSN</th>
<th>GCV (done in BIS approved Bomb calorimeter) in</th>
<th>Volatile Matter % on dmf</th>
<th>Carbon % (dmf)</th>
<th>Hydrogen % (dmf)</th>
<th>Moisture % (60% R.H.) parts/100 parts unit</th>
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</tbody>
</table>

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<table>
<thead>
<tr>
<th>cent(Ro)</th>
<th>Kcal/Kg</th>
<th>basis</th>
<th>coal</th>
</tr>
</thead>
</table>

08. Analysis results of Wagon Sample/Truck Sample/Belt conveyor Sample/Ropeway Sample:

<table>
<thead>
<tr>
<th>Date</th>
<th>Consignee/Destination</th>
<th>Wagon No./Truck No./Belt No.</th>
<th>Ash%</th>
<th>Moist %</th>
<th>VM %</th>
<th>GCV K.Cal/Kg in BIS approved Bomb Calorimeter</th>
<th>Grade/Quality</th>
</tr>
</thead>
<tbody>
<tr>
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</tr>
</tbody>
</table>

9. Analysis Results of Joint Samples:

<table>
<thead>
<tr>
<th>Consignee such results should be endowed as</th>
<th>Sample number and date</th>
<th>Ash%</th>
<th>Moist%</th>
<th>VM% on dmf basis</th>
<th>GCV K.Cal/Kg in BIS approved Bomb Calorimeter</th>
<th>Grade/Quality</th>
</tr>
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</tr>
</tbody>
</table>

10. Composite grade of CHP/Sdg with mention of proportions of seams and grade-wise despatches in tonnes

<table>
<thead>
<tr>
<th>Mine</th>
<th>Seam</th>
<th>Grade/Quality prep of each such loaded their CHP/Sdg.</th>
</tr>
</thead>
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<tr>
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</table>

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

12. In ROM coal, where averages are @ 60% steam, 40% slack, specify the arrangement for limiting the top size of coal to 200-250 mm.

13. Distance between Railway Siding to Pit-Head where surface transportation charges are levied and the name of the Siding from where the coal will be dispatched by rail.

14. Grade Prepared for the year:

<table>
<thead>
<tr>
<th>Mine</th>
<th>Seam</th>
<th>Grade/Quality</th>
</tr>
</thead>
<tbody>
<tr>
<td>STM</td>
<td>SLK</td>
<td>ROM</td>
</tr>
<tr>
<td>(GRADE/QUALITY)</td>
<td>(GRADE/QUALTY)</td>
<td>(GRADE/QUALITY)</td>
</tr>
</tbody>
</table>

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ANNEXURE -III

GOVERNMENT OF INDIA
MINISTRY OF COAL
OFFICE OF THE COAL CONTROLLER
1, COUNCIL HOUSE STREET, KOLKATA –1

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 Order, 2004 sub-rule 1 of rule 4 of the Colliery Control Rules, 2004 and sub-rule 5 of rule 18 B of Coal Mines (Conservation and Development) Amendment Rules, 2011, 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, 1, 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 and should be accompanied by a fee of Rs.2500/- for each grade of each colliery against which complaint is being raised in the form of an A/C Payee Bank Draft on any Nationalised Bank in Kolkata in favour of Coal Controller, Kolkata.

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

PRO FORMA

1. Name and address of the consumer.

2. Name of supplying Colliery and Seam from which Supplied.
ANNEXURE-III

3 Quality/Grade of Coal declared by the Coal Company.

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 by calibrated bomb calorimeter from any Govt. Accredited laboratory preferably CIMFR)

5. Detailed analysis report if available. If not, what is the basis of the complaint?

6. Particulars of Wagons/Trucks and dates of loading.


8. Any other relevant information.

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 WAGON (FOR DECLARATION / MAINTENANCE OF GRADE/QUALITY)

[Ref: Sub-rule 1 of rule 4 of the Colliery Control Rules, 2004 and sub-rule 1 of rule 18 B of Coal Mines (Conservation and Development Amendment Rules, 2011)]

1. For each siding / colliery adequate number of representatives should be authorised by the colliery management for the purpose of supervising the sampling operation. Attested signature of such authorised persons should be kept with the field officer on special duty (O.S.D.) of Coal Controller’s Organisation.

2. In case of sampling from static loaded wagons the following procedure shall be followed:
   Whole Rake (fully or partially loaded) will be considered as one lot for the purpose of sampling. When a rake is loaded with more than one grade/source of coal, wagons loaded with one grade of a particular source shall constitute one lot.

2.2 10%(Ten per cent) of wagons of each lot will be selected from the population of the loaded wagons for actual collection of samples as per random number table (Ref: IS 436 Part 1, Sec I of 1964 of Bureau of Indian Standards).

2.3 One point on the surface of the loaded wagons will be decided for collection of sample before getting on to the top of the wagon. 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.

2.4 The top of the selected spot for collection of sample shall be leveled before digging a pit of about 30 cm diameter will be dug to a depth as practicable taking precaution to prevent
ANNEXURE-III

Side spillage of coal getting mixed with the sample. However, the minimum quantity thus collected from each pit shall not be less than 30 Kg.

2.5 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.

2.6 After collection from one wagon, the gunny bag containing the sample shall be carried to the site of next selected wagon and the same process is continued up to the last wagon 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. PREPARATION OF SAMPLE

3.1 The total material thus collected from identified wagons without exclusion of any thing other than foreign materials viz. metallic pieces, wood, brickbats, concrete chips etc., shall constitute the gross sample for the lot.

3.2 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 made and 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.

3.3 This pulverized sample of approximately 1.5 kg shall be divided in 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 field OSD, CCO at any Govt. Accredited Laboratory/NABL preferably CIMFR.

4. CONING AND QUARTERING

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

4.1 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 only under the influence of gravity.

4.2 Flatten the cone evenly so that it forms a low circular pile.

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

5. 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.

5.1 No part of the sample shall be removed during the process of preparation & reduction.
5.2 Hard clean surface, free from cracks shall be selected for mixing, coning and quartering of the sample.
5.3 The sampling bags for samples collected by Officer on Special Duty or his representative of CCO should be identical and shall be similarly sealed and carefully deposited.
5.4 Before accepting the coal samples from their authorised representative, Officer on Special Duty or his authorised representative of CCO should examine the sample bags and sampling report.

6. 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.

7. HANDLING THE SAMPLES AND ANALYSIS REPORT

The Officer on Special Duty, 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 Officer On Special Duty, 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.

7.1 When the analytical results are obtained from the Govt. Accredited Laboratory/NABL preferably CIMFR, 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.

7.2 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
ANNEXURE-III

15(fifteen) days from the date of intimation of OSD, CCO’s result. The analysis result of the referee sample shall be the final analysis result of the consignment.

7.3 The aggrieved colliery will be allowed to examine within another 15(fifteen) days whether the seal on the referee sample is in tact. 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 despatch the referee samples in his presence. Otherwise, the referee sample will be destroyed after 30(thirty) days from the date of intimating the results.

7.4 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.

7.5 System of rejecting suspicious test result shall be as per Appendix D of IS:436( Part I /Sec I) of BIS.

7.6 For such cases, at least one sample in a quarter shall be collected under supervision of Officer On Special Duty, CCO himself, so that the seasonal variation as also the work of the subordinate officers can be checked.

7.7 In order to ensure proper analysis, Officer on Special Duty, 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:
ANNEXURE-III
7. Wagon/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/Quality with proximate analysis like moisture%, Ash% & volatile matter% on equilibrated basis and GCV analysed at any BIS approved Bomb calorimeter :
11. Size fraction (ROM/STK/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 /BIS procedure in our presence.

Signature of representative of Coal Controller with date
Signature of the representative of Colliery with date