गुणवत्ता नियंत्रण

5 DECADES OF UNEARTHING ENERGY

वेस्टर्न कोलफील्ड्स लिमिटेड

Western Coalfields Limited

(मिनीरत्न कंपनी) (A Miniratna Company)

(कोल इंडिया लि. की अनुषंगी कंपनी) **(A Subsidiary of Coal India Limited)**

गुणवत्ता नियंत्रण **(Quality Control)**

कोयला गुणवत्ता प्रबंधन पुस्तिका

COAL QUALITY MANAGEMENT HANDBOOK

शपथ

हमारा लक्ष्य गुणवत्ता

मैं एतद्वदारा सत्यनिष्ठा से यह शपथ लेता हूँ कि मैं न केवल गुणवत्ता उन्नति मापदण्डों के समस्त निर्देशों का अनुपालन करने हेतु बाध्य रहूँगा अपितु मैं अपने साथियों को गुणवत्ता जागरुकता हेतु प्रोत्साहित एवं प्रेरित करते हुए उनका कुशल मार्गदर्शन भी करूंगा । जिससे ग्राहकों की पूर्ण संतुष्टि के लिये उत्तम गुणवत्ता के कोयले का उत्पादन एवं प्रेषण सुनिश्चित हो सके। इससे अधिकाधिक राजस्व निर्माण होगा तथा सम्पूर्ण गुणवत्ता प्रबंधन के नये युग में प्रवेश भी मिलेगा।

मैं, एतद्वदारा कंपनी के गुणवत्ता निति एवं मानकों का अनुपालन कर, अपनी कम्पनी के प्रति निष्ठा एवं समर्पण के भाव को सुदृढ़ करने का वचन देता हूँ । जिससे हम उदारीकरण अर्थव्यवस्था की नई चुनौतियों का सामना कर सकें तथा नई सहस्त्राब्दी में हमारा उद्योग सर्वश्रेष्ठ स्थान प्राप्त कर सके।

वेस्टर्न कोलफील्ड्स लिमिटेड

Western Coalfields Limited

जय प्रकाश द्विवेदी
अध्यक्ष-सह-प्रबंध निदेशक
Jai Prakash Dwivedi
Chairman-cum-Managing Director

वेस्टर्न कोलफील्ड्स लिमिटेड
(भारत सरकार का मिनी-रत्न श्रेणी १ उपक्रम)
WESTERN COALFIELDS LIMITED
(A Miniratna-Cat. 1 Government of India Undertaking)
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Coal Estate, Civil Lines, Nagpur-440001
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Website:http/westerncoal.in

5 DECADES OF UNEARTHING ENERGY

MESSAGE

It is a matter of great pride that Western Coalfields Limited is bringing out the Coal Quality Management Handbook, a publication that reflects our enduring commitment to quality, transparency, and customer satisfaction.

In recent years, WCL has undertaken several initiatives to strengthen grade conformity and reinforce operational discipline in coal quality management. However, we firmly believe that excellence is not a destination; it is a continuous journey of improvement and learning.

This handbook is a reflection of that belief. It is designed not just as a compilation of technical procedures, but as a practical document that embodies WCL's values of accountability, ownership, and integrity.

Each chapter in the handbook addresses a critical point in our coal value chain covering sampling protocols, grade declaration norms, dispute handling, and modern quality assurance tools.

In today's competitive energy market, quality remains our strongest differentiator. It defines our credibility and shapes our reputation in the eyes of our consumers and stakeholders.

This publication is an invitation to every WCL employee to embrace a culture where quality is not confined to a supervisory function, but becomes a shared responsibility. I sincerely hope that this handbook is studied, discussed, and implemented earnestly at every level-from the mine face to the weighbridge.

Let us always remember: a tonne of coal mined with integrity carries far greater value than several tonnes mined with compromise. I extend my sincere appreciation to the Quality Control team, the authors, and all contributors for their dedication, diligence, and clarity of thought.

Let this handbook become a symbol of WCL's promise to mine not just more coal, but better coal.

Warm wishes,

(Jai Prakash Dwivedi)

बिक्रम घोष
निदेशक (वित्त)
Bikram Ghosh
Director (Finance)

वेस्टर्न कोलफील्ड्स लिमिटेड
(भारत सरकार का मिनी-रत्न श्रेणी १ उपक्रम)
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5 DECADES OF UNEARTHING ENERGY

MESSAGE

The publication of the Coal Quality Management Handbook by Western Coalfields Limited marks a significant step towards strengthening the organization's financial sustainability and operational credibility.

From a financial perspective, coal quality is not merely a technical parameter; it has a direct and measurable impact on revenue realization, cost efficiency, and long-term profitability. Accurate grade declaration, reduction in disputes, and consistency in quality directly contribute to improved cash flows and stronger customer confidence.

Every deviation in quality carries financial implications-whether in the form of penalties, claims, re-handling costs, or erosion of goodwill. This handbook effectively addresses these concerns by prescribing standardized procedures that enhance transparency, accountability, and predictability across the coal value chain.

By institutionalizing best practices in sampling, analysis, and reporting, WCL is reinforcing a framework where financial discipline is firmly supported by technical discipline. Further, the integration of automation and digitization in quality management, as envisaged in this handbook, will significantly reduce manual interventions, minimize operational risks, and support cost optimization and informed financial planning in an increasingly competitive energy landscape.

I appreciate the Quality Control and Technical teams for their meticulous efforts in compiling this comprehensive and practical document. I am confident that this handbook will serve as an effective tool for aligning quality performance with financial prudence.

Let us collectively ensure that every tonne of coal dispatched not only meets the prescribed quality standards but also delivers maximum value to the organization and its stakeholders.

With best wishes,

Director (Finance)
Western Coalfields Limited

आनंदजी प्रसाद
निदेशक (तकनीकी)
Anandji Prasad
Director Technical

5 DECADES OF UNEARTHING ENERGY

वेस्टर्न कोलफील्ड्स लिमिटेड
Western Coalfields Limited
(भारत सरकार का उपक्रम)
(Govt. of India Undertaking)
Coal Estate, Civil Lines,
Nagpur (MH)-440001

MESSAGE

The release of the Coal Quality Management Handbook by WCL is an important step toward strengthening our systems for assured coal quality.

This handbook has been prepared to support our ground-level teams by providing clear guidance, practical procedures, and uniform understanding of quality practices. It brings together the experiences of our better-performing areas and highlights the key responsibilities of Technical Inspectors and Loading Inspectors in ensuring that quality coal is dispatched to consumers.

The handbook also explains the purpose behind each procedure, so that quality control is followed with understanding and responsibility, rather than as a routine formality. By improving accuracy in grade declaration and strengthening sample integrity, we can reduce disputes, enhance transparency, and build stronger trust with our customers.

WCL is steadily moving towards becoming a benchmark organization in coal quality management, and this handbook will play an important role in that journey. I congratulate the team involved in bringing out this publication and sincerely appreciate the dedicated efforts of our field officers who uphold these practices every day.

Warm wishes,

ANANDJI PRASAD
Director (Technical)
Western Coalfields Limited

डॉ. हेमंत शरद पांडे
निदेशक (मानव संसाधन)
Dr. Hemant Sharad Pande
Director (Human Resources)

5 DECADES OF UNEARTHING ENERGY

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कोल इस्टेट, सिविल लाइन्स, नागपुर महाराष्ट्र)- ४४०००१
Coal Estate, Civil Lines, Nagpur, (M.S.)-440001

MESSAGE

I am pleased to note the publication of the Coal Quality Management Handbook, a document that reflects WCL's commitment to strengthening systems through people-centric approaches. Quality management is ultimately driven by human effort, discipline, and accountability at every level of the organization.

While technology and procedures provide the framework, it is the workforce that brings quality standards to life on the ground. This handbook plays a crucial role in creating awareness, clarity, and uniform understanding of quality practices among employees across all areas and departments.

It serves not only as a technical guide but also as an important training and capacity building resource. By clearly defining roles, responsibilities, and standard operating procedures, the handbook promotes ownership and accountability among our employees.

It will be particularly valuable in on boarding new officers and in refresher training programs for field and laboratory personnel. A well-informed workforce is more confident, motivated, and capable of delivering consistent results.

This publication also reinforces a culture where quality is not seen as the responsibility of a single department, but as a shared organizational value. I commend the Quality Control team and all contributors for their dedicated efforts in bringing out this comprehensive handbook. Let us encourage our employees to internalize its principles and practice them in their day-to-day work. Together, through skill, discipline and commitment, we can ensure that quality becomes an integral part of WCL's organizational culture.

(Dr. Hemant Sharad Pande)

वेस्टर्न कोलफील्ड्स लिमिटेड
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WESTERN COALFIELDS LIMITED
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Coal Estate, Civil Lines, Nagpur (Maharashtra)-440001

"Under Jurisdiction of Nagpur Court Only"

5 DECADES OF UNEARTHING ENERGY

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MESSAGE

The publication of the *Coal Quality Management Handbook* by Quality Control Dept, WCL HQ is an important step toward ensuring uniformity, transparency, and discipline in coal quality management across the organization.

Effective quality control is crucial to ensuring customer confidence, operational efficiency, and organizational credibility. This handbook serves as a comprehensive reference by integrating standard operating procedures, best practices, and statutory requirements related to coal sample collection activities, coal analysis activities, and annual coal grade declaration.

The adoption of standardized and system-driven processes will help minimize variations, reduce disputes, and improve consistency in coal grading. I encourage all concerned personnel to follow the guidelines outlined in this handbook and implement them diligently in their day-to-day work.

Let this handbook serve as a practical guide and a reminder of our collective responsibility to uphold quality as a core organizational value at Western Coalfields Limited.

Warm regards,

28/01/26

Director Technical (P&P)
Western Coalfields Limited

अजय मधुकर म्हेत्रे, आईटीएस
मुख्य सतर्कता अधिकारी
AJAY MADHUKAR MHETRE
CVO, WCL

5 DECADES OF UNEARTHING ENERGY

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CIN-U10100MH1975GOI018626

MESSAGE

The publication of the Coal Quality Management Handbook by Western Coalfields Limited is a commendable initiative that reinforces transparency, accountability, and ethical governance.

Coal quality management is not only a technical activity but also a critical area where integrity and procedural compliance are paramount. Every stage-from sampling to grade declaration and dispatch-must strictly adhere to prescribed norms to safeguard organizational credibility and public trust.

This handbook provides clarity by standardizing procedures, defining responsibilities, and strengthening documentation practices. Its emphasis on automation, traceability, and system-driven processes aligns well with the principles of preventive vigilance.

I urge all officers and employees to follow the guidelines outlined in this handbook in letter and spirit.

Let this publication serve as a guide for ethical conduct, procedural discipline, and responsible decision-making across WCL.

(Ajay Madhukar Mhetre)

CVO, WCL

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MESSAGE

With immense satisfaction and a sense of professional pride, I present the Coal Quality Management Handbook, a comprehensive outcome of detailed coal sampling and analysis procedures, salient features of the Third Party Sampling Agreement, and various circulars related to Quality Control.

At WCL, the Quality Control Division has always believed that systematic documentation is the first step toward meaningful transformation. This handbook has been designed to bring uniformity in coal sampling and analysis, enhance grade accuracy, and minimize ambiguity in quality-related decisions.

The document incorporates the latest coal sampling guidelines and applicable standards, providing a robust framework for modern coal quality management amid forthcoming competitive era in coal sector.

By implementing the provisions of this handbook, we aim to enhance consumer satisfaction, foster stronger cross-departmental coordination, and maintain high standards of coal quality even during peak operational periods.

This is not merely a document; it is a manual of accountability. I urge all officers to refer to it regularly and integrate its principles into their daily work culture.

Together, let us uphold WCL's commitment to dispatch only the declared quality of coal.

Sincerely,

(Deepak V. Walke)
General Manager (Quality Control)
Western Coalfields Limited

A GUIDE TO COAL QUALITY CONTROL AT A GLANCE AND COAL SAMPLING & ANALYSIS

CONTENTS:

वेस्टर्न कोलफील्ड्स लिमिटेड

Western Coalfields Limited

CHAPTER-1

MISSION, VISION & MANAGEMENT POLICY

Mission

To produce and market the planned quantity of coal and coal products efficiently and economically in an eco-friendly manner with due regard to safety, conservation and quality.

Vision

To emerge as a global player in the primary energy sector committed to provide energy security to the country by attaining environmentally & socially sustainable growth through best practices from mine to market.

Management Policy:

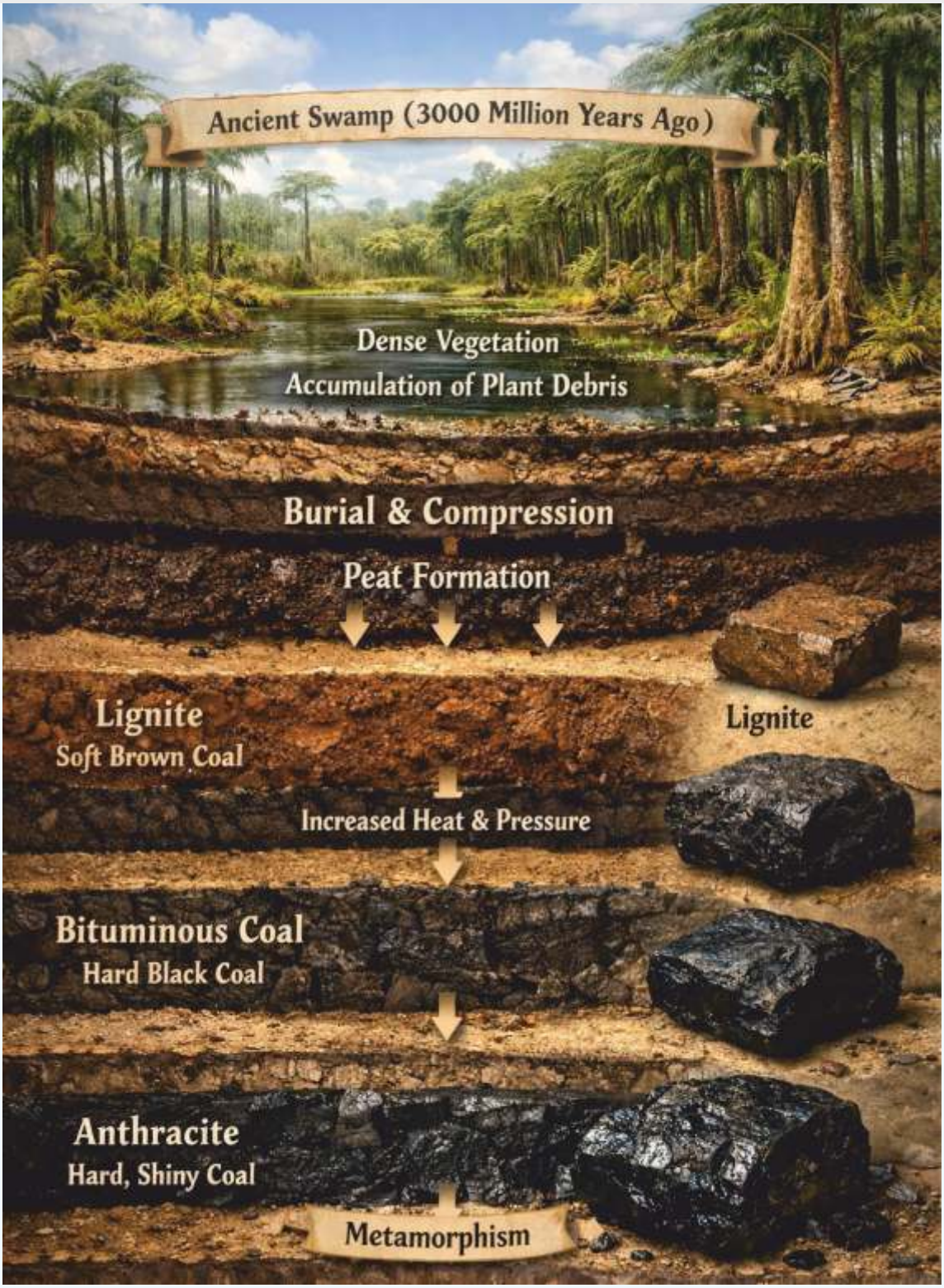
WCL is an organization engaged in providing energy security to the country by producing and marketing planned quantity of coal and coal products efficiently, economically in an environmental friendly manner with due regard to safety, conservation of resources, quality and socially inclusive growth and committed to:

- Produce and deliver the assured quality and quantity of coal and coal products.
- Quality assurance in our repair and maintenance work.
- Provide need based training to employees and nearby communities and land oustees for their career growth and uplifment.
- Optimum utilization of available resources.
- Protection of environment, biodiversity and ecosystem through mitigation of environmental impacts of our business and sustainable resources use.
- Protection of health and prevention of injury from our work activities by providing safe and healthy working conditions, controlling occupational health & safety risks and involving workers/their representatives in decision making process.
- Comply with all applicable legislations, statutory and other requirements.
- Ensure that management objectives are framed for relevant functions, levels and processes considering quality, environmental and occupational health and safety issues.
- Continual improvement of our management system to fulfil needs and expectations of all our stake holders and to achieve sustainable development by adopting CSR as a strategic tool.

These commitments are in line with the vision & policy of our holding company Coal India Limited to emerge as a global player in the primary energy sector.

CHAPTER-2

COAL FORMATION PROCESS, SAMPLING & ANALYSIS IN BRIEF



कोयला सैम्पलिंग एवं विश्लेषण

COAL FORMATION PROCESS

1. Millions of years ago, vegetable matter grown on earth got burried at varying depths and got converted into coal over a period of time, due to different tectonic changes.
2. Consequently, two theories, viz., 'In-situ Theory' and 'Drift Theory' were postulated to explain the formation of coal.
3. While formation of coal when plants got burried at their place of origin gave rise to 'In-situ Theory', formation of coal when plants got burried at a far away place from their origin due to floods, etc., gave rise to 'Drift Theory'.
4. Coal Deposits of 'In-situ' origin are of low ash and high GCV, and those of 'Drift' origin are of high ash and low GCV.
5. Presence of high degree of temperature and pressure inside earth over a very long period of time lead to a process called 'Coalification'.
6. Thus plants first became 'Peat', then 'Lignite' which ultimately became 'Coal'.
7. Major contaminants present in coal seams are Shale and Clay.
8. Most of the Indian Coal Deposits are of Drift Origin.

कोयला बनने की प्रक्रिया

1. लाखों साल पहले, पृथ्वी पर पाए जाने वाले पेड़–पौधे भूगर्भीय उथलपुथल के कारण अलग अलग गहराई में दफन हो गए थे, जो कालांतर में कोयले में परिवर्तित हुए ।
2. इस प्रक्रिया को दो सिद्धांतों में माना गया है, जिन को ''इन–सीटू सिद्धांत'' और ''बहाव सिद्धांत'' के नाम से जाना जाता है।
3. ''इन–सीटू'' सिद्धांत के अनुसार कोयले का गठन पौधों की उत्पत्ति की जगह पर हुआ और ''बहाव'' सिद्धांत के अनुसार कोयले का गठन बाढ़ और आदि के कारण अपनी उत्पत्ति की जगह से बहुत दूर जाने के बाद हुआ ।
4. ''इन–सीटू'' उत्पत्ति के कोयला भंडार, कम राख एवं उच्च ऊर्जादायक हैं, और 'बहाव' उत्पत्ति के कोयला भंडार, उच्च राख एवं कम ऊर्जादायक हैं।
5. पृथ्वी के अंदर उच्च तापमान और दबाव की बहुत लंबी अवधि 'कोयलाकरण' प्रक्रिया को जन्म देती है।
6. इस प्रकार पौधे पहले ''पीट'', फिर ''लिग्नाइट'' और अंत में ''कोयला'' बन गए ।
7. कोयला सीम में मौजूद प्रमुख प्रदूषक शेल, और मृत्तिका हैं।
8. बहुतांश भारतीय कोयला भंडार 'बहाव उत्पत्ति' मूल के हैं।

COAL SAMPLING & ANALYSIS

SIZE ANALYSIS OF COAL (UNWASHED) FOR MARKETING
CIL Ref : S&M : GM (F) : Pricing 2017 / 767, Dated 31st August 2017

Steam Coal (Size: 25 to250 mm) स्टीम कोल (साइज: 25 से 250 एमएम)

Slack Coal (Size: 0 to 25 mm) स्लैक कोल (साइज: 0 से 25 एमएम)

ROM (Run Of Mine) COALUnscreened Coal of All Sizes
आर ओ एम (खदान से निकाला हुआ सभी आकार का मिश्रित कोयला)

HISTORY OF COAL SAMPLING ACTIVITY IN CIL

(Chronological Sequence of Sampling Time-Scale)

Sr.No.	Period	Sampling Locations	Sampling system in Vogue
1	Mid 1975* to Early 1982* (About 7 years)	Loading & Unloading Points	Joint Sampling; however, the sampling point was changing every alternate FN / Month
2	Early 1982* to End of 1997* (About 16 Years)	Unloading Points	Joint Sampling
3	Early 1998* to Aug 1999 (About 1 1/2 Years)	Loading Points	Third Party Sampling; independently by CCO
4	Sept. 1999 to Oct. 2009 (About 10 Years)	Loading & Unloading Points	Third Party Sampling; simultaneously by an independent common Third Party appointed by Coal & Power companies. Average of the two results was applied for commercial purposes.
5	Nov. 2009 to Sept. 2013 (About 4 years)	Loading Points	Joint Sampling
6	Oct. 2013 to Apr. 2015 (About 1 1/2 years)	Loading Points	Third Party Sampling; by the CIL - appointed TPA in the presence of Representatives of Power Cos
7	May 2015 to Sept. 2016 (About 1 1/2 Years)	Loading Points	Third Party Sampling; by two independent TPAs appointed by CIL as well as Power Cos (Period of dispute)
8	Sept. 2016 to 10.11.2023	Loading Points	Third Party Sampling by common TPA, CSIR-CIMFR as per decision of the Ministry (Power Sector only)
9	Oct. 2017 to 05.03.2024	Loading Points	Third Party Sampling by common TPA, QCI as per decision of the Ministry (Non Power/IPP)
10	January 2024 onwards	Loading Points	Third Party Sampling by common TPA, QSS & IGI as per decision of the PFC
11	March 2024 onwards	Loading Points	Third Party Sampling by common TPA, QCI as per decision of the Ministry /CIL

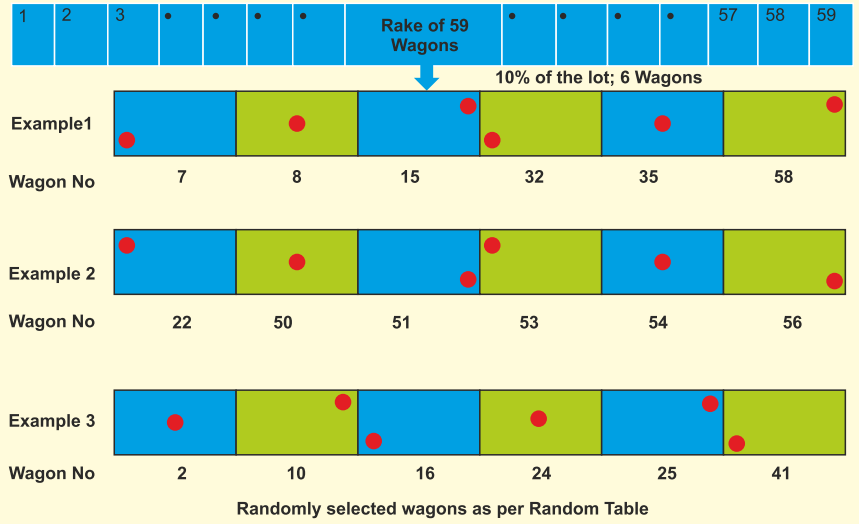
कोयला सैम्पलिंग एवं विश्लेषण

Random Number Table To Select Wagons For Sampling
सैम्पलिंग वैगन चुनने के लिए रैंडम टेबल

- Select any number randomly.
- Follow any One direction.
- Select the next number in the same direction, if the selected number is greater than the total no. of wagons; continue the process till you select the required numbers.
- रैंडम टेबल से किसी भी संख्या का चयन करें।
- किसी एक दिशा का पालन करें।
  यदि चयनित संख्या कुल बैगनों का संख्या से अधिक है, तो उसी दिशा में अगला नंबर चुनें। जब तक आप आवश्यक संख्या का चयन नहीं करते हैं तब तक प्रक्रिया जारी रखें।

81	74	67	95	70	56	51	54	50	53
61	37	42	62	93	96	34	18	22	89
52	07	16	29	39	04	71	14	76	78
43	08	77	25	72	49	86	03	83	45
65	32	27	40	63	57	97	84	82	87
21	58	11	23	80	10	30	01	100	44
31	90	55	88	13	36	24	91	19	64
73	98	20	05	68	46	69	85	94	59
33	15	35	26	79	92	38	12	41	17
75	66	99	09	06	47	48	60	28	02

Recommended Sample collection Locations in Loaded Wagons
भरे हुए बैगनों से सैंपल लेने के उपयुक्त स्थान



Randomly selected wagons as per Random Table

Sub-lots/Gross Samples/Qty From One Lot
एक लॉट से सब-लॉट्स / ग्रॉस / सैंपल्स / मात्रा

Wt of the Lot (Tons)	No.of Sub - Lot / gross samples	Qty to be collected (kg) for ROM Rail
Up to 500	2	100
501 to 1000	3	150
1001 to 2000	4	200
2001 to 3000	5	250
over 3000	6	300

Sampling from loaded wagons
भरे हुए बैगन से सैंपल लेना

BIS FORMULATIONS FOR THE PURPOSE OF SAMPLING AND ANALYSIS

सैम्पलिंग और विश्लेषण के उद्देश्य के लिए बीआईएस फॉर्मूलेशन्स

Sr. No.	CODE	TITLE	PURPOSE
1	IS:436 (Part 1/Sec 1) - 1964 (Reaffirmed 2013)	Methods for sampling of coal and coke	Manual sampling
2	IS: 436 (Part 1/Sec 2) - 1976 (Reaffirmed 2010)	Methods for sampling of coal and coke	Mechanical sampling
3	IS: 1350 (Part 1) - 1984 (Reaffirmed 2002)	Methods of Test for Coal and Coke	Proximate Analysis of coal (Ash, Moisture, VM and FC)
4	IS: 1350 (Part II) - 1970 (Reaffirmed 2005)	Methods of Test for Coal and Coke	Determination of calorific value

SAMPLE COLLECTION PROCEDURE FROM LOADED WAGONS

- Selection of 10% wagons as per random table
- Selection of one sampling spot from first wagon at one end randomly, and continuation of the same sequence for subsequent wagons as shown in the Fig. 8 of page 11
- Leveling of sampling spot for an area of 50 cm x 50 cm
- Removal of 25 cm of coal from the top surface of the selected spot
- Collection of 50 kg sample from each selected spot/wagon
- Removal/discarding of any stone/shale of (+) 250 mm/(+) 100 mm in size from sample found if any as the case may be, as per FSA
- Mixing of all the samples collected grade-wise, to form one final gross sample for each lot

भारित वैगन से सैंपल संग्रह की प्रक्रिया

- रैंडम टेबल के अनुसार 10% वैगन का चयन !
- पहले वैगन से एक सैंपलिंग स्पॉट का रैंडम चयन के बाद, बाद के वैगनों के लिए पृष्ठ क्र. 11 के चित्र क्र. 8 में दिखाए गए समान अनुक्रम की निरंतरता !
- 50 वर्ग सेमी के क्षेत्रफल के लिए सैंपलिंग स्पॉट का समतल करना !
- चयनित स्पॉट की शीर्ष सतह से 25 सेमी तक कोयला हटाना !
- प्रत्येक चयनित स्पॉट/वैगन से 50 किलो सैंपल का संग्रह करना !
- सैंपल से आकार में (+) 250 एमएम अथवा (+) 100 एमएम के किसी भी पत्थर/शेल में से किसी एक साईज वाले को एफ.एस.ए. के नियमानुसार हटाना, यदि कोई मिला हो !
- एक समग्र सैंपल बनाने के लिए सभी एकत्रित-ग्रेड का सैंपल्स का मिश्रण करना !

COAL SAMPLING & ANALYSIS

SAMPLE COLLECTION PROCEDURE FROM CONVEYOR BELTS

1. The quantity that passes over the conveyor in a day constitutes one lot, which needs to be divided into a no. of sub-lots for the purpose of sampling. No. of sub-lots to be divided & qty of gross sample to be collected from each sub lot .
2. E.g., if the qty to be passed in a day over the conveyor is 600 tons (which is 1 Lot), then there will be 3 sub-lots of 200 tons each.
3. We need to collect 1 gross sample from 1 sub-lot, @50 kg per sub-lot. Thus total 150 kg gross sample shall be collected from 3 sub-lots over the whole day, in the above example; any stone/shale of (+)250mm/(+)100 mm size must be removed from sample, as the case may be as per FSA.
4. If the conveyor is operated for 15 hours in a day, spacing the collection of 150 kg over 15 hours of conveyor operation, we need to collect 10 kg every 1 hour (qty & intervals can be mutually decided by seller & purchaser depending on the running time of the conveyor and the qty that passes in a day).
5. The belt needs to be stopped at the scheduled time to facilitate collection of the samples manually.
6. While collecting the sample, the scoop should traverse the entire cross-section of the conveyor belt, drawing approx 5kg per increment.

कनवेयर बेल्ट से सैंपल लिए जाने का प्रक्रिया

1. प्रतिदिन कनवेयर बेल्ट से निकलने वाली मात्रा को एक लॉट कहा जाता है, जिसे सैंपलिंग के उद्देश्य से कुछ सब लॉट में बाँटा जाता है।
2. उदाहरण के लिए: यदि प्रतिदिन कनवेयर बेल्ट से पास होने वाली मात्रा 600 टन है तो उसे 200 टन के तीन सब लॉट में बाँटा जाएगा।
3. हमें एक सब लॉट में से 50 किलोग्रॉम की मात्रा लेनी होगी, इस तरह तीन सब लॉट में से ली जाने वाली ग्रॉस सैंपल की मात्रा 150 किलोग्रॉम होगी। इस ग्रॉस सैंपल में से (+) 250 एमएम अथवा (+) 100 एमएम के किसी भी पत्थर/शेल में से किसी एक साईज वाले को एफ. एस.ए. के नियमानुसार हटाना, यदि कोई मिला हो ।
4. यदि कनवेयर बेल्ट प्रतिदिन 15 घंटे चलता है तो ऐसी स्थिति में प्रत्येक घंटे में 10 किलोग्राम का एक सैंपल लेना होगा। (हर सब लॉट में सैंपल लिए जाने की मात्रा का निर्धारण एवं समय का अंतराल उपभोक्ता एवं विक्रेता के आपसी सहमति के ऊपर निर्भर रहेगा)।
5. मैनुअली सैंपल लिए जाने के दौरान कनवेयर बेल्ट को समय समय पर रोका जाएगा ।
6. सैंपल लेते समय कनवेयर बेल्ट की चौड़ाई के एक छोर से दूसरे छोर तक बेलचा चलाते हुए लगभग 5 किलोग्राम का सैंपल लिया जाएगा।

Sampling from conveyor belt
कनवेयर बेल्ट से सैंपल लेना

कोयला सैम्पलिंग एवं विश्लेषण

Recommended Random Truck Selection & Sample collection Locations in Loaded Trucks

लोड किए गए ट्रकों में रैंडम ट्रक चयन और
सैंपल कलेक्शन के लिए उपयुक्त स्थान

Samples shall be collected from every 8th truck after the truck from which the first sample is collected. The Sampling Spot at the top of the loaded truck.

जिस भी ट्रक से पहला सैंपल लिया गया हो, उसके आगे के प्रत्येक आठवें ट्रक से सैंपल लेना होगा। सैम्पलिंग की जगह भरे हुए ट्रकों के उपर होगी।

1st truck is Randomly/ Mutually Selected for Sampling

Level the top of sampling spot (50cm X 50cm) Remove at least 25 cm of coal from surface

About 30kg Sample shall be collected from each truck selected for sampling

1. Method of collection of samples from loaded trucks is the same as that from loaded wagons

2. Grade-wise & source-wise collection in a day constitutes one gross sample

1. सैंपल लेने की प्रकिया भरे हुए बैगन एवं भरे हुए ट्रक दोनों में एक प्रकार की ही है।

2. दिन भर में एकत्रित किए गए ग्रेड अनुसार सैम्पल्स को एक ग्रॉस सैंपल माना जाएगा।

AUGER SAMPLE FROM TRUCK

PROCEDURE FOR COLLECTION OF SAMPLES FROM DIFFERENT SOURCES - A SUMMARY

1) Rail/ MGR mode :-

- Rake wise and grade wise Coal supplied from one loading end shall be considered as one lot, in case of supplies by rail.
- One rake shall be divided into sub-lots as per the number of wagons in each rake as given in the following table :-

No. of wagons in the rake	Number of sub lots
Up to 30 wagons	4
>30 wagons up to 50 wagons	5
>50 wagons and above	6

- As per FSA, one wagon each shall be selected from each of the sub-lots as per the following random number table of lS: 436 (Part I/ Section l) 1964 or its latest version for collection of increments :-

81	74	67	95	70	56	51	54	50	53
61	37	42	62	93	96	34	18	22	89
52	07	16	29	39	04	71	14	76	78
43	08	77	25	72	49	86	03	83	45
65	32	27	40	63	57	97	84	82	87
21	58	11	23	80	10	30	01	100	44
31	90	55	88	13	36	24	91	19	64
73	98	20	05	68	46	69	85	94	59
33	15	35	26	79	92	38	12	41	17
75	66	99	09	06	47	48	60	28	02

- Before collecting the samples, the sampling spot will be levelled.
- At least 25 cm of coal surface shall be removed/ scrapped from the top.
- The place will be levelled for an area of 50 cm X 50 cm.
- About 50 kg of sample shall be collected from each selected wagon in the lot by drawing 10 increments of approx. 5 kg each with the help of shovel/ scoop.
- Any stone/ shale of size more than that indicated in Schedule-lI (-250 mm) shall be removed/ discarded, however all stones/ shale of size in terms of schedule-II (-250 mm) shall form part of the sample collected.
- Samples collected from all the selected wagons in a lot shall be mixed separately to form gross Samples.

2) Road Mode :-

- Sample shall be collected source wise and grade wise on daily basis.
- Quantity of coal despatched on daily basis round the clock constitutes one lot.
- The first truck for TPA sampling on a day shall be selected randomly from the first eight trucks placed for loading by the purchaser.
- Thereafter every eighth truck shall be selected.
- Before collecting the samples, the sampling spot will be levelled.
- At least 25 cm of coal surface shall be removed/ scrapped from the top.
- The place will be levelled for an area of 50 cm X 50 cm.
- About 30 kg of sample shall be collected from each truck by drawing 6 increments of approx. 5 kg each with the help of shovel/ scoop.
- Any stone/ shale of size more than that indicated in Schedule-lI (-250 mm) shall be removed/ discarded, however all stones/ shale of size in terms of schedule-II (-250 mm) shall form part of the sample collected.
- All the samples collected from every eighth truck shall be mixed together to form a gross samples.

3) Conveyor Belt/ Rope ways/ Pipelines Mode :-

- Sample shall be taken lot wise grade wise
- Quantity of coal despatched on daily basis round the clock (from 00:00 hours to 24:00 hours of the following day) constitutes one lot.
- A lot shall be divided into number of sub-lots of approximately equal weight as given in the following :-

Weight of the Lot (in te)	No. of Sub-lots/ Gross Samples
Up to 500	2
501 to 1000	3
1001 to 2000	4
2001 to 3000	5
Over 3000	6

- Minimum 150 kgs of samples to be collected for daily Gross Samples as per FSA.
- Sample shall be collected in increments of full cross section and thickness of the stream in one operation at a regular interval of time mutually decided by both Seller & Purchaser.
- Before collecting the increments, the speed of the conveyer belt/ ropeways/ pipelines and quantum of material passing a certain point in a given time shall be ascertained so that an appropriate spacing of time between increments may be arranged over the whole of the lot.
- In case of conveyor belt, if it is practicable to stop the belt periodically, increment may be collected from the whole of the cross section of the stream by sweeping the whole of the Coal lying between the sides of a suitable frame placed across the belt.
- The frame should be inserted in the Coal until it is in contact with the belt across its full width.

- If it is not possible, then sample is to be collected from falling stream of the belt at a suitable transfer point where coal is being released from one point to other.
- Any stone/ shale of size more than that indicated in Schedule-lI (-250 mm) shall be removed/ discarded, however all stones/ shale of size in terms of schedule-II (-250 mm) shall form part of the sample collected.
- The material collected from all the increments in a sub-lot shall be mixed together and shall constitute a gross sample.

4) Stockpile :-

- Total quantity of coal available in the stockpile constitutes one lot.
- A lot shall be divided into sub-lots as per the quantity of coal in the stock pile in a suitable manner as specified in the following table :-

Weight of the lot (Te)	No. of Sub-lots
Upto 500	2
501 to 1000	3
1001 to 2000	4
2001 to 3000	5
Over 3000	6

- The surface of each sub-lot shall be levelled and one point for approximately every 250 Te. of material in the sub-lots shall be chosen at random for taking gross sample as per the following procedure:
- ln case height of the stock pile is not more than 1.5 metre, the material shall be collected at-every selected point by taking the whole section of Coal from top to bottom over the area of a circle of 30 cm diameter.
- ln case the height of the stock pile is more than 1.5 metre, the sample shall be collected at every selected point by taking the material over an area of a circle of 30 cm diameter and up to a depth of 1.5 metre.
- Any stone/ shale of size more than that indicated in Schedule-lI (-250 mm) shall be removed/ discarded, however all stones/ shale of size in terms of schedule-II (-250 mm) shall form part of the sample collected.

■■■

Sample Preparation Flow Diagram (Reduction of Gross Sample)

As Per Existing TPA Norms

समग्र सैम्पलिंग प्रक्रिया (ग्रॉस सैंपल से लैब सैंपल बनाना)

Gross Coal Sample of -100mm size

↓

Passing through Primary Crusher Output Size -50 mm

↓

Reduced to -50 mm size and thoroughly mixed

↓

Sample passing through secondary crusher of output size -12.5 mm

↓

Part 1/4th of sample of size -12.5 mm for total Moisture Determination

Coning and Quartering

↓

Gross 3/4th sample passing through Tertiary Crusher of output size -3.35 mm

↓

Coning and Quartering

↓

Sample reduced repeatedly by Coning & Quartering Method

↓

Passing through Pulveriser (-212 micron)

↓

Reduced to -212 micron size (2kg) final job Sample for GCV, Ash, Moisture % determination

↓

Part -I (500 grams) for TPSA

Part-II (500 grams) for WCL

Part-III (500 grams) for Consumer

Part-IV (500 grams) for Referee Sample

COAL SAMPLING & ANALYSIS

Comparison between Wagon Sampling Procedure as per BIS & CCO And Standard Adopted in FSA

Sr. No.	Parameter	As Per BIS	As Per CCO	Standard Adopted in FSA
1	Constitution of one lot	One Rake	One Rake, if whole rake is loaded with on grade of coal; otherwise, wagons of one grade shall form one lot	As per CCO
2	Random selection of wagons	25% of the lot; 16-18 wagons in one rake	10% of the lot; six wagons in one rake	As per CCO
3	No. of sub-lots /wagons	6 sub-lots of 3 wagons each; total 18 wagons	No sub-lot concept	6 sub-lots of 1 wagon each; total 6 wagons (To be decided as per FSA)
4	Qty of gross sample	(120kg from 1 wagon)	30kg from 1 wagon	50 kg from 1 wagon
5	Total weight of gross sample for the whole rake	2.160 tons (120 kg x 18 wagon)	180 kg (30 kg x 6 wagons)	300 kg (50 kg x 6 wagons)
6	Collection of gross sample	From a 30 cm dia hole upto full depth if height of wagon is < 1.5 mtrs; otherwise, upto 1.5 mtrs	From a 30 cm dia hole, upto a depth as far as practicable	From an area of 50 cm X 50 cm, after leveling the selected spot and removing at least 25 cm coal from surface
7	Wt. of final laboratory sample	1.5 kg.	2.0 kg.	2.0 kg.

COAL SAMPLING & ANALYSIS

SAMPLE ANALYSIS PROCEDURE
(Proximate Analysis & GCV Determination)

The Final (-) 212 Micron size lab sample received in the lab is air-dried in an open tray at the laboratory for 24 hrs to bring the lab sample in equilibrium with atmospheric conditions. Subsequently, following parameters are determined:

1] Ash (Air-Dried): Apparatus: Muffle Furnace

2] GCV (Air-Dried) Apparatus: Automatic Bomb Calorimeter

3] Moisture (Air-Dried): Apparatus: Moisture Oven

4] Moisture: (At Equilibrated Test Conditions.. 40°C & 60% RH)

Two Methods are in Vogue for determination of (4):

Rapid Method -Takes about 18 hours; Apparatus: Humidity Conditioner & Temp Oven

Reference Method-Takes about 72 hours; Apparatus: Desiccator & Moisture Oven

After Determination of Air-Dried GCV, Eq GCV is determined from the following formula:

Equilibrated GCV =

$$\text{Air Dried GCV} \times \frac{(100\text{-Eq M})}{(100\text{-Air Dried M})}$$

सैंपल विश्लेषण प्रक्रिया
(प्रॉक्सीमेट विश्लेषण और GCV का निर्धारण)

प्रयोगशाला में प्राप्त अंतिम (–) 212 माइक्रॉन आकार प्रयोगशाला सैंपल वायुमंडलीय परिस्थितियों के साथ संतुलन में लाने के लिए 24 घंटे के लिए प्रयोगशाला में एक खुली ट्रे में रखा जाता है। इसके बाद, निम्नलिखित पैरामीटर निर्धारित किए जाते हैं :

1] एश (एयरड्राइड): उपकरण: मफल फर्नेस

2] जीसीवी (एयरड्राइड): उपकरण : स्वचालित बम कैलोरीमीटर

3] आर्द्रता (एयरड्राइड): उपकरण : नमी ओवन

4] आर्द्रता (इक्विलिब्रेटेड परीक्षण स्थितियों पर 40 डिग्री सेल्सियस और 60% आर एच)

(4) **के निर्धारण के लिए अस्तित्व में दो तरीके हैं :**

रैपिड विधि लगभग 18 घंटे लेता है । उपकरण: आर्द्रता कंडीशनर और तापमान ओवन

रेफरेन्स विधि लगभग 72 घंटे लेता है । उपकरण Desiccator और आर्द्रता ओवन

एयरड्राइड जीसीवी के निर्धारण के बाद, इक्विलिब्रेटेड जीसीवी निम्नलिखित सूत्र से निर्धारित होता है :

इक्वि जीसीवी =

$$\text{एयरड्राइड जीसीवी} \times \frac{(100- \text{इक्वि आर्द्रता})}{(100-\text{एयर ड्राइड आर्द्रता})}$$

कोयला सैम्पलिंग एवं विश्लेषण

GCV CHART / जीसीवी चार्ट

GRADE	GCV RANGE (Kcal/Kg)
G1	Exceeding 7000
G2	Exceeding 6700 and not exceeding 7000
G3	Exceeding 6400 and not exceeding 6700
G4	Exceeding 6100 and not exceeding 6400
G5	Exceeding 5800 and not exceeding 6100
G6	Exceeding 5500 and not exceeding 5800
G7	Exceeding 5200 and not exceeding 5500
G8	Exceeding 4900 and not exceeding 5200
G9	Exceeding 4600 and not exceeding 4900
G10	Exceeding 4300 and not exceeding 4600
G11	Exceeding 4000 and not exceeding 4300
G12	Exceeding 3700 and not exceeding 4000
G13	Exceeding 3400 and not exceeding 3700
G14	Exceeding 3100 and not exceeding 3400
G15	Exceeding 2800 and not exceeding 3100
G16	Exceeding 2500 and not exceeding 2800
G17	Exceeding 2200 and not exceeding 2500

ESSENTIAL CONDITION OF SAMPLING & CONVERSION FORMULAE

Essential Condition of sampling

The whole bulk of coal to be sampled should be exposed, so that all parts are equally accessible to the sampling implement and have the same chance of being included in the sample.

1. Erstwhile UHV* formulae:
UHV=8900-138 (A+M); when value of (A+M) is 64.5%, UHV becomes negative

2. For conversion of Air Dried GCV into Eq GCV:

$$\text{Eq. GCV} = \text{Air dried GCV} \times \frac{(100-\text{Eq.M})}{(100-\text{Air dried M})}$$

3. For conversion of UHV into GCV (When UHV and M% are available)

$$\text{GCV} = \frac{(\text{UHV}+3645)-(75.4 \times \text{M})}{1.466}$$

4. For conversion of UHV into GCV (when UHV only is available):

$$\text{GCV}=2111+(0.6812\text{UHV})$$

***Wef 1.1.2012, the UHV-based system of grading & pricing of Non-Coking coal in the country is changed into the GCV-based system of grading & pricing.**

CO-RELATION BETWEEN UHV AND GCV OF HIGH MOISTURE NON-COKING COALS SHOWING APPROXIMATE ASH AND MOI VALUES

	UHV		APPROXIMATE GCV, (A+M) & A ranges			
GRADE	RANGE (kCAL/KG)	AS PER NORM AT 5% MOISTURE	GR	RANGE (kCAL/kG)	(A+M) Range	Ash Range (Approximate)
A	6200	6454	G1	+ 7000	Upto 19.6	Upto 14.6
			G2	6701 TO 7000		+14.6-15.5
			G3	6401 TO 6700		+15.6-17.9
B	5601 TO 6200	6050 10 6454	G3	6401 TO 6700	+19.6-23.9	+15.6-17.9
			G4	6101 TO 6400		+17.9-18.7
			G5	5801 TO 6100		+18.7-20.7
C	4941 TO 5600	5598 TO 6049	G5	5801 TO 6100	+23.9-28.7	+18.7.20.7
			G6	5501 TO 5800		+20.7-22.7
D	4201 TO 4940	5090 TO 5597	G6	5501 TO 5800	+28.7-34.1	+20.7-22.7
			G7	5201 TO 5500		+22.7-25.1
			G8	4901 TO 5200		+25.1-27.1
E	3361 TO 4200	4525 TO 5089	G8	4901 10 5200	+34.1-40.1	+25.1-27.1
			G9	4601 TO 4900		+27.1-29.1
			G 10	4301 TO 4600		+29.1-34.0
F	2401 TO 3360	3866 TO 4524	G10	4301 TO 4600	+40.1-47.1	+29.1-34.0
			G11	4001 TO 4300		+34.0-36.1
			G 12	3701 TO 4000		+36.1-42.1
G	1301 TO 2400	3114 TO 3865	G 12	3701 TO 4000	+47.1-55.1	+36.1-42.1
			G 13	3401 10 3700		+42.1-47.1
			G 14	3101 TO 3400		+47.1-50.1
NO NOMENCLATURE			G 15	2801 TO 3100		+50.1-53.1
			G 16	2501 TO 2800		+53.1-56.1
			G 17	2201 TO 2500		+56.1-58.1

NB :

1] A FEW GRADES ON GCV BASIS ARE OVERLAPPING IN BETWEEN GRADES ON UHV BASIS DUE TO THE GCV RANGE AS DEFINED BY GOI.
2] (ASH+M) RANGE IS THE CORRESPONDING RANGE IN REPECT OF THE UHV
3] ASH RANGE IS THE CORRESPONDING RANG FOR EACH GCV BAND CONSIDERING THE UNIFORM MOISTURE OF 5%.

CHAPTER-3

SALIENT PROVISIONS OF FSA RELATED TO QUALITY

IS standards for sample Collection, Preparation & Analysis.

- **SAMPLE COLLECTION & PREPARATION :** IS 436 PART I SEC I, IS 1964 or its latest version (MANUAL SAMPLING)

- **ANALYSIS:** IS 1350 PART I SEC I, BIS STANDARDS (IS: 1350 PART 1-1984) or its latest version (PROXIMATE ANALYSIS) AS APPLICABLE (for determination of Moisture under different conditions, Total Moisture Content, Determination of VM, Ash, Fixed Carbon, Evaluation of Mineral Matter)

- **ANALYSIS:** IS 1350 PART I SEC II, (IS: 1350 PART-II-2017) or its latest version , (GCV ANALYSIS) AS APPLICABLE. (Test for coal and coke to the determination of Calorific Value)

Relevant FSA Clauses (FSA Dtd. 21.11.2009 with MAHAGENCO)

RULE & DEFINATIONS:

- 1.1(c): "Applicable Laws" means all laws, brought into force and effect by the Government of India (GoI) or the State Government including rules, regulations and notifications made there under, and judgments, decrees, injunctions, writs and orders of any court of record, applicable to either Seller/CIL or the Purchaser, their obligations or this Agreement from time to time.

4. QUALITY

4.1: The quality of Coal delivered / to be delivered shall conform to the specifications given in Schedule II/III of FSA.

4.3: The Seller shall deliver sized Coal with size conforming to specifications laid in Schedule II / III of FSA. The Seller shall make reasonable efforts to remove stones from Coal.

4.4: The Seller shall use magnetic separators and metal detectors, at its Coal handling/loading system at the Delivery Point, where the same are already installed.

4.5: Declaration of Common Grade/Re-declaration of Grade by the Seller:

(i) The Seller shall declare one common Grade for Coal seam or seams from which Coal is being despatched through the same Delivery Point, wherever applicable.

(ii) If the Grade analysed pursuant Clause 4.7 shows variation from the Declared Grade, consistently over a period of three (3) months, the Purchaser shall request the Seller for re-declaration of Grade, which shall be duly considered by the Seller.

4.6: Oversized Coal/stones

4.6.1: Oversized Coal:

The Purchaser shall inform the Seller all incidents of receipt/presence of oversized Coal, in terms of specifications laid down in Schedule II, in any specific consignment(s), immediately on its detection at the Delivery Point and/or Unloading Point and the Seller shall take all reasonable steps to prevent such ingress at his end.

4.6.2: Stones

The Purchaser shall inform the Seller all incidents of receipt / presence of stones in any specific consignment(s) by rail, immediately on its detection at the Delivery Point and/or Unloading Point. The Seller shall, immediately take all reasonable steps to prevent such ingress at his end. The stones segregated by the Purchaser at the Power Station end shall be assessed jointly by the representative of the Seller and the Purchaser at the Power Station end for adjustments pursuant to Clause 9.1.

4.6.3: Modalities for assessment of stones (including amendments)

a) The Purchaser shall endeavour to segregate and stack separately all oversized stones of size more than 250 mm received along with Coal from the Seller's supplies by rail / MGR at the Power Station end, during the month, at a mutually agreed place identified for the purpose within the Power Station premises, for the purpose of joint assessment pursuant to Clause 4.6.2 as per the procedure laid down in Schedule V of this Agreement for compensation pursuant to Clause 9.1.

b) The Seller shall depute its representative at the Power Station end between fourth (4th) day to tenth (10th) day of the following month, for joint assessment of the quantity of stones of size more than 250 mm received by rail in the preceding month and the Parties shall prepare a jointly signed statement of quantity of stones. The Purchaser shall extend full co-operation and facilitate deputation of such representative of the Seller failing which the Seller shall not agree to the claim raised by the Purchaser in this regard.

c) In case the Seller's representative fails to be present at the Power Station end, within the period stipulated at Clause 4.6.3 (b) for the assessment of the quantity of oversized stones in compliance to 4.6.3 (a), the quantity of oversized stones assessed by the Purchaser shall be intimated to the Seller, by the fifteenth (15th) day of such following month and the same shall be taken as final and binding on the Seller for the purpose of adjustments under Clause. 9.1. Thereafter, the Purchaser shall dispose off / remove such stones by the end of such month under intimation to the Seller and the Purchaser shall not be under any obligation to preserve

such material beyond the day(s) stipulated herein above. However, the Purchaser shall maintain all records/ documents for example work order, running account bills, payment document etc for such disposal and present the same along with audited records for scrutiny of the Seller, if required.

d) Quantity of stones attributable to the Seller shall be worked out by pro rata apportionment on the basis of proportionate receipt of Coal by rail /MGR from Seller out of the total Coal received by the rail /MGR at the concerned Power Station during a month. For such apportionment, the Purchaser shall provide certified monthly figures of quantity of Coal received by rail as per Coal bill at the concerned Power Station from the Seller as well as from all sources other than the Seller.

e) Compensation for oversized stones shall be payable by the Seller to the Purchaser month-wise, Power-station wise, in terms of weighted average Base Price of the analysed Grade of Coal for the equivalent quantity of stones verified/ removed, as above provided that the quantity of stones admissible for compensation shall be restricted to 0.75% of the total quantity of indigenous Coal supplied progressively in a Year by the Seller to the concerned Power Station by rail after accounting for the weight reduction towards destination end, weighment in terms of Clause 5.2 and moisture compensation in terms of Clause 9.2.

4.7: Assessment of Coal Quality

Modalities for collection, handling, storage and preparation of joint samples are given in Schedule IV, but at present modalities given in Third Party Sampling Agreement are in vogue, which are given in Chapter 5.

7: Transfer of Title Goods.

Once delivery of Coal have been effected at the Delivery Point by the Seller, the property /title and risk of Coal so delivered shall stand transferred to the Purchaser in terms of this Agreement. Thereafter the Seller shall in no way be responsible or liable for the security or safeguard of the Coal so transferred. Seller shall have no liability, including towards increased freight or transportation costs, as regards missing/diversion of wagons /rakes or road transport en-route, for whatever causes, by Railways, or road transporter or any other agency.

8.2 : Other Charges

8.2.1 : Transportation charges:

Where Coal is transported by the Seller beyond the distance of three (3) kms from Pithead to the Delivery Point, the Purchaser shall pay transportation charges, as notified by CIL / Seller from time to time.

8.2.2 : Sizing/Crushing charges:
Where Coal is crushed by mechanical means for limiting the top-size to 250mm, or any other lower size, the Purchaser shall pay sizing/crushing charges, as applicable and notified by CIL / Seller from time to time.

8.2.3 : Rapid Loading Charges:
Where Coal is loaded through rapid loading system, the Purchaser shall pay rapid loading charges notified by CIL / Seller from time to time.

8.3 : Statutory Charges :
The statutory charges shall comprise royalties, cesses, duties, taxes, levies etc., if any, payable under relevant statute but not included in the Base Price and/or other charges pursuant to Clause 8.2, shall be payable by the Purchaser. These levies/charges shall become effective from the date as notified by the Government/statutory authority.

8.4 : In all cases, the entire freight charges, irrespective of the mode of transportation of the Coal supplied, shall be borne by the Purchaser.

9.1: Compensation of Oversized Stones:

The Seller shall adjust through regular credit notes to the Purchaser amounting to hundred percent (100%) of the weighted average Base Price, as per the analysed Grade of Coal applicable for the month in which such supplies were made by the Seller and other charges pursuant to Clause 8.2 but excluding statutory charges pursuant to Clause 8.3, if any, and railway freight for the quantity of oversized stones received by the Purchaser along with the Coal supplies during the month as per the jointly assessed signed statement or as intimated by the Purchaser to the Seller pursuant to Clause 4.6.3(b) or 4.6.3(c) respectively.

9.2: Excess Surface Moisture

(i) In the event that monthly weighted average Surface Moisture in Coal exceeds seven percent (7%) during the months from October to May and nine percent (9%) during the months from June to September, the Coal quantities delivered to the Purchaser during such month shall be adjusted for the resultant excess Surface Moisture, which shall be calculated in percentage by which the Surface Moisture exceeds the foregoing limits.

(ii) The Seller shall give regular credit note on account of excess Surface Moisture, as per Clause 9.2(i) above, calculated at the rate of Base Price of analysed Grade of Coal and other charges persuant to clause 8.2, but excluding statutory charges pursuant to clause 8.3, if any, and railway frieght for the quantity of excess Surface Moisture.

(iii) Sampling/analysis and determination of Surface Moisture for compensation shall be done as per the procedure given in Schedule IV.

THE GAZETTE OF INDIA EXTRAORDINARY PART II-Sec. 3(i)

CHAPTER-4

COLLIERY CONTROL RULES 2004

MINISTRY OF COAL AND MINES
(Department of Coal)
NOTIFICATION
New Delhi, the 25th August, 2004

G.S.R. 540(E).- In exercise of the powers conferred by Sub-sections (1) and (2) of Section 18 of the Mines and Minerals (Development and Regulation) Act, 1957 (67 of 1957), the Central Government hereby makes the following Rules, namely:-

1. Short title and commencement:
(i) These rules may be called the Colliery Control Rules, 2004.
(ii) These rules shall come into force from date of their publication in the Official Gazette.

2. Definitions: In these rules, unless the context otherwise requires, -
(i) Act" means the Mines and Minerals (Development and Regulation) Act, 1957 (67 of 1957);

(ii) 'coal' includes anthracite, bituminous coal, lignite, peat and any other form of carbonaceous matter sold or marketed as coal and also coke;

(iii) 'Coal Controller' means the person appointed as such by the Central Government under the provisions of the Coal Controller's Organisation (Group 'A' Posts) Recruitment Rules, 1986;

(iv) 'colliery' means any mine or open working where winning or extraction of coal is the principal object of the mining, quarrying or any other operation carried on therein and includes a plant for the production of coke or for the washing of coal;

(v) 'disposal includes agreeing or offering to dispose of, and the disposal of ownership or any proprietary interest, the right of possession and possession whether or not accompanied by any disposal of ownership or any proprietary interest or of the right to possession.

(vi) 'agent', 'manager' and 'owner' when used in relation to a colliery shall have the meanings respectively assigned to them in the Mines Act, 1952,

(vii) 'size' when used in relation to coal shall have the same specification as given, from time to time, by the Bureau of Indian Standards in their specification number IS : 437-1979

3. Categorisation of Coal :- The Central Government may, by notification in the Official Gazette, prescribe the classes, grades and sizes into which coal may be categorised and the specifications for each such class, grade or size of coal.

4. Procedure for categorisation of coal : -

(1) On the basis of the categorisation notified by the Central Government under rufe 3, the Coal Controller shall lay down the procedure and method of sampling and analysis of coal for the purpose of declaration and maintenance of grades of coal mined in a colliery.

(2) The owner, agent or manager of a colliery shall declare the classes, grades or sizes of the coal of any seam or section of a seam in a colliery in accordance with the procedure specified in sub-rule (1).

(3) The owner, agent or manager of the colliery shall allow the inspection of the colliery undertaken by the Coal Controller or any officer authorised by him in this regard so as to ensure the correctness of the class, grade or size declared. During inspection, if the Coal Controller or the officer authorised by him decides to draw sample, the owner, agent or manager of the colliery shall provide all reasonable facilities and assistance for drawing such sample.:

(4) If after inspection or from the sample drawn, the Coal Controller is satisfied that the grade as declared by the owner, agent or the manager of the colliery does not conform to the grade notified under rule clause (3) the owner, agent or manager of the colliery shall be bound to revise the grade as per the directions issued by the Coal Controller.

(5) If any dispute arises between a consumer and a owner of a colliery regarding the declaration of grades of coal, the same may be referred to the Coal Controller whose decision shall be binding on the owner of the colliery. A memorandum of reference to the Coal Controller regarding such dispute shall be accompanied by a fee of rupees two thousand and five hundred and in such manner, as may be specified by the Coal Controller, from time to time.

5. Every Submission of returns and information to Coal Controller : - owner of a colliery and every person engaged in the business of production, supply and distribution of, or trade and commerce in coal, on being directed to do so by the Coal Controller shall submit such returns and other information, within such time, as may be specified in the direction.

6. The Central Directions to regulate the disposal of coal stocks :- Government may, from time to time, issue such directions as it may deem fit to any owner of a colliery regulating the disposal of stocks of coal or of the expected output of coal in the colliery during any period.

7. Power of the Coal Controller for quality surveillance : - The Coal Controller or any other officer authorised by him in writing shall be competent to

(a) cause the owner, agent or manager of a colliery or any person engaged in or incharge of the loading of coal in wagons, trolleys or trucks in a colliery, to adjust the loading according to the procedure laid down by the Coal Controller regarding grades and size of coal and to remove impurities like shales and stones from the wagons, trolleys or trucks loaded with coal;

(b) detain the wagons, trolleys or trucks at the colliery or weighbridge for adjustment of loading after inspection; and

(c) return the wagons, trolley or trucks to the colliery from weighbridge for unloading and reloading with the specified quantity and quality of coal.

8. Power to prohibit or limit the mining or production of coal :- The Central Government may issue such directions as it may deem fit to any colliery owner prohibiting or limiting the mining or production of any grade of coal and the colliery owner shall comply with such directions.

9. Requirement of prior permission to open a coal mine, seam or section of a seam : - (1) No owner of a colliery shall open a coal mine, seam or a section of a seam without the prior permission in writing of the Central Government.

(2) No owner of a colliery shall also commence mining operations in a colliery or seam or a section of a seam, in which the mining operation has been discontinued for a period exceeding one hundred and eighty days, without the prior permission in writing of the Central Government.

10. Notice of suspension or closure :- If the mining operations in a coal mine or seam or a section of a seam is suspended or closed temporarily or permanently, as the case may be, for any reason whatsoever, then a notice of such suspension or closure shall be given by the owner, agent or manager of the colliery within a period of thirty days from the date of such suspension or closure to the Coal Controller.

11. Power to restrict sub-division of a coal mine : - No owner of a colliery or a group of collieries which has been permitted under rule 9 to work as a single mining unit or which has been working as a single unit at the time of commencement of these rules shall be allowed to sub-divide his mining unit or to work as a separate unit without the prior permission of the Central Government.

12. Power to inspect collieries :- The Coal Controller or any other Officer authorised by him in writing may with a view to securing compliance of these rules.-

(i) require any owner or agent or manager of a colliery to give any information in his possession relating to the production of coal in the coal mine or seam or section of a seam showing full boundaries of the leasehold area and plan of abandoned area, flooded area and area which has been or is on fire:
(ii) ask for production of any document, register and working plan,
(iii) inspect any mine plan in the possession of owner or agent or manager of a colliery, and
(iv) enter and inspect any colliery.

13. Whoever contravenes any of the provisions of these rules shall be punished with imprisonment for a term which may extend to one year or with fine which may extend to five thousand rupees, or with both, and in case of a continuing contravention, with an additional fine which may extend to five hundred rupees for every day during which such contravention continues after the first such contravention.
14. No, suit, prosecution or other legal proceedings shall lie against any person for anything which is done or intended to be done in good faith under these rules.

15. Delegation of powers to Coal Controller : - The powers of the Central Government specified under rules 6,7 and 11 may be delegated by notification in the Official Gazette to the Coal Controlier.

16. Power to exempt : - Not with standing anything contained in these rules, the Central Government may, if it deems proper for avoiding any hardship or for any other just and sufficient reasons, by notification in the Official Gazette, exempt any colliery owner or any class or category of person from the provisions of any of these rules.

[No. 28012/5/2001-CA]
A.P.V.N. SARMA, Jt. Secy.

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COLLIERY CONTROL (AMENDMENT) RULES 2021

MINISTRY OF COAL

NOTIFICATION

New Delhi, the 9th August. 2021

G.S.R. 546(E).- In exercise of the powers conferred by sub-sections (1) and (2) of section 18 of the Mines. and Minerals (Development and Regulation) Act, 1957 (67 of 1957), the Central Government hereby makes the following rules to amend the Colliery Control Rules, 2004, namely:

1. Short title and commencement. - (1) These rules may be called the Colliery Control (Amendment) Rules, 2021.

(2) They shall come into force on the date of their publication in the Official Gazette.

2. In the Colliery Control Rules, 2004 (hereinafter referred to as the principal rules), for rule 2, the following rule shall be substituted, namely:

2. Definitions. -

(1) In these rules, unless the context otherwise requires,

(a) 'Act' means the Mines and Minerals (Development and Regulation) Act, 1957 (67 of 1957);

(b) 'agent', 'manager' and 'owner' when used in relation to a colliery shall have the meanings respectively assigned to them in Mines Act, 1952;

(c) 'coal' includes anthracite, bituminous coal, lignite, peat and any other form of carbonaceous matter sold or marketed as opal and also coke;

(d) 'Coal Controller' means the person appointed as such by the Central Government under the provisions of the Coal Controller's Organisation (Group 'A' Posts) Recruitment Rules, 1986;

(e) 'colliery' means any mine or open working where winning or extraction of coal is the principal object of the mining. quarrying or any other operation carried on therein and includes a plant for production of coke or for the washing of coal;

(f) 'disposal' includes agreeing or offering to dispose of, and the disposal of ownership or any proprietary interest, the right of possession and possession whether or not accompanied by any disposal of ownership or any other proprietary interest;

(g) 'safety in coal mines' includes the safety of any railway situated on the surface above coal mine;

(h) 'size' when used in relation to coal shall have the same specifications as given, from time to time, by the Bureau of Indian Standards in their specifications number IS: 437-1979:

(I) 'stowing' means operation of filling with sand or any other material, or with both, spaces left underground in a coal mine by extraction of coal;

(j) 'washing' means such process or combination of processes as may be approved in this behalf by the Central Government by which the whole or any part of the shale and minerals matter found in the coal is removed therefrom.

(2) The words, expressions used in these rules but not defined herein shall have the same meaning as referred to them in the Act or rules made thereunder."

3. In the principal rules, for Rule 5, following shall be substituted, namely:-
"5. Submission of returns and information to Coal Controller—

(1) Every owner, agent or manager of a colliery and every person engaged in the business of production. supply and distribution of, or trade and commerce in coal, on being directed to do so by the Coal Controller shall submit such returns and other information including information regarding production. of dispatch of coal, washery products from his mines, washery and process products, working methods and conditions in his mine or mines, within such time, as may be specified in the direction.

(2) Every owner, agent or manager shall furnish to the Coal Controller such other information regarding opening, re-opening, closure of mine, seam or section of seam and any other information as may be required by the Coal Controller in respect of prescribed media for transfer.".

4. In the principal rules, after rule 10, the following rule shall be inserted, namely.-

"10A. Power to Monitor Mine Closure and operate the escrow account formed for funding Mine Closure Activity- The Coal Controller or any other officer authorised by him in writing may with a view to securing compliance of this rule,
(a) require any owner or agent or manager of a colliery to give any information in his possession regarding to implementation of approved mine closure plan,
(b) inspect the closure activities being conducted at the mine and direct for any additional jobs to be carried out to fulfil the conditions of Mine Closure Plan:
(c) Coal Controller shall issue Mine Closure Compliance Certificates based on which the reclaimed leasehold area or any structure thereon which is not to be utilised by the mine owner shall be surrendered to the State Government following a laid down procedure which are in vogue at that point of time."

5. In the principal rules, after rule 12, the following rules shall be inserted, namely:-

"12A. Power of Central Government in respect of conservation of coal and development of coal mines. (1) The Central Government may, for the purpose of conservation of coal and for the development of coal mines, exercise such powers and take, or cause to be taken, such measures as it may deem necessary or proper.
(2) Without prejudice to the generality of the foregoing power, the Central Government may, by order in writing addressed to the owner, agent or manager of a coal mine, require him to take such measures as it may think necessary for the purpose of conservation of coal or for development of coal mines, including-
(a) in any coal mine, stowing for safety; or
(b) the prevention of any factor which may adversely affect the conservation of coal or development of coal mine; or
(c) washing of coal with a view to beneficiating and reducing the ash-contents of coal.
(3) The Central Government may, if it is satisfied after consideration of all the facts and

circumstances that the recovery of the cost of measures, if any, undertaken by it under sub-rule (1) or sub-rule (2) in relation to a coal mine is justified, recover such cost from the owner, agent or manager of the coal mine, either wholly or partly, in the same manner as an arrear of land revenue.

12B. Duty of owner, agent or manager to take steps for the conservation and development of coal mine. (1) The owner, agent or manager of a coal mine shall take, in relation to each coal mine owned by him, such steps as may be necessary to ensure the conservation of coal and development of the coal mine.

(2) Without prejudice to the generality of the provisions of sub-rule(1), the owner, agent or manager of a coal mine shall-

(a) execute such stowing and other operations as may be necessary to be taken in furtherance of the objects of the Act in so far as such objects relate to the conservation of coal or development of the coal mine or the utilisation of coal obtained from the coal mine;

(b) acquire such stowing and other materials as may be necessary for ensuring the conservation of

coal, and safety in, the coal mine:

(c) undertake research in relation to conservation of coal, development of coal mines and utilisation of coal

(d) plan and undertake developrnent of the coal mines in a scientific manner.

12C. Coal Conservation and Development Advisory Committee.- (1) For the purpose of determining the procedure for the disbursement of sums of the credit of the Coal Mines Conservation and Development Account, the Central Government may constitute an Advisory Committee, to be called the "Coal Conservation and Development Advisory Committee" to advise the Government.

(2) The Advisory Committee shall consist of the following members, namely:-

(i) Additional Secretary (Coal), Ministry of Coal, ex-officio who shall be the Chairman:

(ii) Financial Adviser and Joint Secretary, Ministry of Coal, ex-officio member:

(iii) Advisor (Projects), Ministry of Coal member;

(iv) Director General of Mine Safety. Ministry of Labour, ex officio member;

(v) Sr. Advisor (Energy), NitiAayog-member,

(vi) Chairman-cum-Managing Director, BCCL-member:

(vii) Chairman-cum-Managing Director, ECL-member:

(viil) Chairman-cum-Managing Director, Central Mine Planning and DesignInstitute-member;

(ix) Director (Technical), Coal India Ltd. member,

(x) Director (Technical), SCCL-member;

(xi) Director, Central Institute of Mining & Fuel Research, Dhanbad, ex officio member.

(xii) Coal Controller, Ministry of Coal member secretary:

(xiii) Two representatives of private or captive coal producing organisations to benominated by the Central Government.

(3) Without prejudice to the generality of the provisions contained in sub-rule (1), the Coal

Conservation and Development Advisory Committee shall-

(a) advise the Central Government regarding the formulation and implementation of a national policy in relation to the conservation, development and scientific utilization of the coal reserves of the country keeping in view the recommendation that may be made in this regard by the Central Mine Planning and Design Institute or any other authority specified on its behalf;

(b) recommend measures which should be taken for-

(i) ensuring the conservation of the coal resources,

(ii) undertaking the development of the coal mines in a scientific manner,

(iii) undertaking research in relation to conservation of coal, development of coal mines and utilisation of coal,

(iv) undertaking formulation and implementation of national policy on Mine Closure Plan of Coal (including Lignite) mines; and

(v) better utilisation of coal;

(c) recommend the classes, grade or sizes into which coal or coke may be categorised;

(d) advise the Central Government on the disbursement of funds under financial assistance scheme to the owners, agents or managers of coal mines or to any other person for specified purposes;

(e) advise the Central Government on the manner in which and the condition, subject to which financial assistance shall be granted:

(f) advise the Central Government regarding the procedure that should be adopted for carrying out examination, inquiries and inspection in order to ascertain whether the financial assistance is being or has been utilised for the purpose for which it was sanctioned, as also to ascertain whether the provision made thereunder are being complied with:

(g) recommend to the Central Government the action that should be taken against those who make any default in complying with the provisions, and also in implementing the schemes and measures for conservation and development of coal mines.

(4) The Coal Conservation and Development Advisory Committee shall meet as and when required by the Central Government to do so and shall have the power to regulate its own procedure.

(5) The non-constitution of the Coal Conservation and Development Advisory Committee or the existence of any vacancy therein shall not render invalid the disbursement or application of any amounts out of the sums standing to the credit of the Coal Mines Conservation and Development Account.

12D. Purposes for which funds may be disbursed.- The Central Government may, having regard to the recommendations of the Coal Conservation and Development Advisory Committee, make disbursements to the owners, agents or manager of coal mines or to any other person, for the purposes, one or more of the following, namely:-

(1) Conservation and safety-

(a) Stowing operations.

(b) Protective Works, including

(i) blanketing with incombustible materials:

(ii) filling up of subsidence:

(iii) cutting of branch trenches;

(c) Surface protection measures including vacation of buildings and structures over areas of subsidence and rehabilitation of affected persons:
(d) Installation of stowing plants, blending plants and plants for the beneficiation of coal;
(e) Schemes for recovery and transportation of sand.
(2) Scientific Development of Coal Mines-
(a) Development of new coal mining methods, development andutilisation of explosives:
(b) Techno-economic studies of various underground and surface transport systems in mines:
(c) Investigation into problems of rock burst in deep mines,
(d) Investigation into roof bolting under different mining conditions;
(e) Introduction of man riding system:
(f) IT and other electronic aids for application in mining.
(3) Research and Development-
(a) Transportation of stowing material:
(b) Investigations into suitability of waste materials for stowing in mines:
(c) Investigation into problems of mines fires and efficacy of different methods of dealing with them;
(d) Assessment of ventilation and other environmental condition in mines;
(e) Problems relating to Methane emission and drainage from highly gassy coal seams:
(f) Research on surface pollution and environmental control in mining areas:
(g) Any other activity for furtherance of conservation as directed by the Central Government:
(4) Meeting the expenses in connection with the work of Advisory Committee
(5) Development of roads and creation of rail infrastructure.

12E. Application For Assistance. : Every owner, agent or manager of a coal mine or group of coal mines or any other person, desirous of obtaining financial assistance for purposes mentioned in rule 12D, shall submit his application to the Coal Controller in the form as may be specified by the Coal Conservation and Development Advisory committee

12F. Quantum of Assistance : TheAssistance shall be granted by the Central Government with due regard to the circumstances of each case.

12G. Acceptance of Conditions Attaching to the Grant of Assistance : Before granting assistance under these rules, the Central Government may specify the conditions to be fulfilled by the owner, agent or manager of a coal mine or any other person to whom assistance is proposed to be granted and secure the acceptance in writing by such owner, agent or manager of the coal mine or any other person of such conditions.

12H. Submission of Annual Reports : Every person to whom the money has been disbursed shall submit to the Coal Controller by 30 September in each year an Annual Report regarding the utilisation of the assistance received by him during the previous financial year along with a copy of the statement of Receipts and Payments, together with the Auditor's Report in respect of the Coal Mines Conservation and Development Account and the Statement of Receipts and Payments in the form as may be specified by the Coal Controller"

[No.12012/3/2021-PS-I)

BHABANI PRASAD PATI, Jt Secy.

The Principal rules were published in the Gazette of India. Extraordinary under Part II, Section 3, Sub Section (i) vide number GSR 540 (E), dated the 25th August 2004.

CC/TECH/CCO/ANNUALGRADE/360788
Government of India
Ministry of Coal
Office of the Coal Controller

Scope Minar, Core-I, 5th floor,
Delhi-110092.
Dated: 4th Feb 2025

Office Memorandum

Sub- Modified laid down procedure and method of sampling & analysis of coal for the purpose of declaration and maintenance of grade of coal mined in the Colliery.

In exercise of the powers conferred under sub-rule 1 of rule 4 of the Colliery Control (Amendment) Rules, 2021, I am directed to convey the laid down procedure and method of sampling & analysis of coal for the purpose of declaration and maintenance of grade of coal mined in the Colliery which are furnished in **Annexure-I.**

The modified laid down procedure and method of sampling & analysis of coal for the purpose of declaration and maintenance of grade of coal mined in the Colliery supersedes earlier issued procedures

This issues with the approval of Competent Authority.

Yours Faithfully,

4/2/25

(Aarti Mahawar)
Dy Director

Enclosure As above

1. All Nominated owners Coal and Lignite Companies
2. All OSD Regional CCO Dhanbad, Ranchi, Sambalpur, Bilaspur, Nagpur and Kothagudem
3. OSD CCO Delhi and Kolkatta
4. PS to DDG office Ministry of Coal

Annexure-I

GOVERNMENT OF INDIA
OFFICE OF THE COAL CONTROLLER'S ORGANISATION
MINISTRY OF COAL

LAID DOWN PROCEDURE AND METHOD OF SAMPLING & ANALYSIS OF COAL FOR THE PURPOSE OF DECLARATION AND MAINTENANCE OF GRADE OF COAL MINED IN THE COLLIERY.

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, MoC's Gazette (Extraordinary) Notification S.O. No 174 dated 24th January 2019 and MoC's Gazette (Extraordinary) Notification S.O. No S.O. 357(E) dated 20th January 2023, 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.

FACILITIES AND ASSISTANCE TO BE PROVIDED BY NOMINATED OWNER FOR 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 Coal Controller's Organization (CCO) officials & Government rganizations/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/quartering. Suitable manpower is also to be provided by concerned coal company at the sampling room.

SAMPLE PREPARATION: Procedure for collection of samples and preparation from seams/ loaded wagons/loaded trucks/conveyor belts for determination of grade/quality to be followed by the coal companies & Government Organizations/Academic Institutions shall be as per the guidelines given in Annexure IV. Mechanical sampling/auto samplers shall be preferable to manual sampling.

ANNUAL GRADING COAL SEAMS/SECTIONS:

1. All the grade proposals of seams must reach the office of the Coal Controller through online portal of CCO **(portal.coalcontroller.gov.in)** and email to coalcont-wb@nic.in; joginder.cco@gov.in; and ranvijay.singh77@gov.in; positively before 10th of January every year.

While submitting the grade proposals of seams, the Nominated Owner should furnish the following documents.

i) Number of samples tested and the dates of drawal of samples. (minimum 2 nos. of samples results are to be attached)

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) Borehole/s details (including its seam wise GCV/UHV) within the proposed working area for that year and in absence of any borehole within the working patch, any other borehole/s in immediate proximity of the working patch."

v) Particulars of Govt./NABL Accredited laboratory/laboratories where samples are analyzed.

vi) Copies of test results duly counter signed by the Colliery Manager and Head of Quality Management of the Company.

vii) All relevant documents stated above shall be uploaded in portal or submitted to Coal Controller's Organisation along with details as per the Annexure-II for Coal and Annexure-IIA for Lignite.

viii) Copy of the relevant extract of approved mining plan/project report depicting seams envisaged for extraction.

ix) GST registration certificate for raising invoice from the Laboratories.

2. Random sampling and analysis for finalization of the proposed grades of the seams of the mines shall be done by CCO. For this purpose, seam samples shall be collected and analyzed at any Govt. accredited Laboratory/Govt. Academic Institutional NABL Lab. The job shall commence from the 2nd week of January every year. Frequency and system of random sampling shall be decided by the Coal Controller. The effective date of approved grades of coal seams of mines declared during annual grade declaration process by the Coal Controller's Organisation are to be notified by the Nominated Owner with effect from 1 April of financial year and for confirmation of provisionally declared grades of seams/new seams if any, are to be declared from the date of declaration by the Coal Controller's Organisation.

3. The seam shall ordinarily be graded only in respect of the working thickness in case of underground development working.

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

5. The annual grade/quality of coal shall be finalized by CCO on the basis of sample to be drawn randomly from seam by selecting 3 locations spaced at minimum interval of 30 m and shall be sent for analysis by Regional Head of CCO to two different labs of any Govt. Institution/NABL Accredited laboratory as per the guidelines given in Annexure IV. The expenditure of such sampling & analysis shall be borne by the Coal Company including transport of samples to lab. All the reasonable facilities/logistics for sampling shall be provided by the Mine owner/Coal Company as requisitioned by the CCO offices as per statute under the Colliery Control (Amendment) Rules, 2021. Mine Owner/Coal Company shall make payment to the Laboratory/ Laboratories within 30 days from the date of receipt of invoice from the said Laboratory/Laboratories for all the samples collected by CCO including referee samples.

6. On the basis of lab wise average of the analysis result of the three samples, the higher average obtained out of the two labs shall be considered for annual grade declaration and 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. If there is a variation of two or more than two grades against the previous year declared grade or proposed grade by project proponent in the application, based on the lab analysis report, the Coal Controller Organisation may declare the grade as provisional subject to verification by re-sampling the same seam. No referee sample will be invoked, if the grade initially sampled and re-sampled is same.

PROVISIONAL GRADING OF COAL SEAMS IN-SITU

7. For provisional grading/quality, atleast two seam samples excluding pickable bands of 10cm thickness and above are to be drawn from atleast 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.

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 relevant information to the Coal Controller as specified in Clause-1.

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 coal field, 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 percent (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 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/Approved Mining Plan 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 to coalcont-wb@nic.in, joginder.cco@gov.in; and ranvijay.singh77@gov.in with detailed justification for 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.

RE-CLASSIFICATION OF COAL SEAMS:

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 31" 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 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 atleast 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 atleast 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. (percent 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 Indian Standard. classification and codification of Indian coals and Lignite (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 with in a financial year may not be accepted at the office of the Coal Controller unless otherwise permitted.

GRADING OF SEAMS AFTER REOPENING OF MINE/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/COMBINED QUALITY OF COAL

16. Nominated Owner may declare the composite grade/combined quality of coal based on seams/section grades confirmed by CCO on weighted average basis, for number of seams, if the

annual production 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 and Nominated Owner may also declare other composite grade of sizes/fraction obtained for marketing which shall be declared based on seam/section grades confirmed by CCO.

The composite/combined grade of seams/sections shall be declared by the nominated owner based on the grade of seams/sections confirmed by CCO on weighted average basis for working thickness of the seams/sections for number of seams.

Certificate for maintenance of composite grade/quality of such mixed proportion in the proposed grades of coal feeder streams and composite/combined grade of seams/sections shall be submitted to Coal Controller's Organisation.

DISPLAY OF GRADES/QUALITY OF COAL SEAMS COMPOSITE GRADE/QUALITY OF MIXED PROPORTION OF SEAMS/SECTIONS/MINE:

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 and composite grade/quality of mixed proportion of seams/sections/mines to be maintained in the coal feeder streams. Further, complete grade/quality list of all the seams and sections of seams of all collieries and composite grade/quality of mixed proportion of seams/sections/mines to be maintained in the coal feeder streams 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 record in non-editable digital mode and offline mode showing the following particulars of all seams being worked in the mine:

i) Analytical results of each sample.
ii) Declared grade/quality approved by Coal Controller.
iii) Date of declaration.
iv) Serial number of grade/Quality certificates.
v) Section of the seam graded showing details of bands.
vi) Composite/combined grade of multiple seams/dispatch grade declared by the Nominated Owner maintained in a bound page book along with composition (proportion) of such grade dispatched.
vii) 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. Owner of the colliery who wishes to prefer a challenge in respect of the correctness of seam grade declared by the Coal Controller's Organisation, may lodge protest to the Coal Controller. The protest shall be submitted to the Coal Controller's Organisation along with documents within the time limit as prescribed in Annexure IV.

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/SIDING 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 1 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:

i) METHODS OF TEST FOR COAL AND COKE: PART I PROXIMATE ANALYSIS IS: 1350 (PART-1) (2nd Revision) - 1984.

ii) 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.1)-1974: ULTIMATE ANALYSIS: DETERMINATION OF CARBON & HYDROGEN.

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

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

iii) 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/Siding /CHP etc,)

Serial No. of Grade/QualityCertificate_____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

Annexure-II

DATA REQUIRED FOR GRADE/QUALITY PROPOSALS FOR ANNUAL/PROVISIONAL GRADE/QUALITY OF COAL SEAMS OF MINES

1. Name of Colliery:
2. Name of Seam:
3. Thickness of Seam:
4. Height of Working Section:
5. 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:
6. 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
      Site No. 3
   b. Excluding pickable bands (of 10 cm & above)
      Site No. 1
      Site No. 2
      Site No. 3

7. 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

8. Grade proposed for the ----------seam for the year:

(Signature of the Nominated Owner with office seal)

Annexure-II A

DATA REQUIRED FOR GRADE/QUALITY PROPOSALS FOR ANNUAL / PROVISIONAL GRADE / QUALITY OF LIGNITE SEAMS OF MINES.

1. Name of Lignite mine:
2. Name of Seam:
3. Thickness of Seam:
4. Height of Working Section:
5. 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:
6. Analysis of seam samples

	Ash%	Moist%	VM%	GCV
a. Including all bands (ARB-As on received basis)				
Site No. 1				
Site No. 2				
Site No. 3				
b. Excluding pickable bands (of 10cm & above)				
Site No. 1				
Site No. 2				
Site No. 3				

7. Grade proposed for ---------seam 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 BY CONSUMERS 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, Scope Minar Core II 5th floor Delhi 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 in favour of "Pay and Account Officer (Secretariat) Ministry of Coal" for each grade of each colliery against which complaint is being raised.

Disputes only in respect of declaration of grade shall be admitted if consumers lodge statutory complaints against the variation of grade for period upto 6 months from the date of application and any dispute in respect of any financial transaction shall not be entertained.

PROFORMA

1. Name and address of the consumer.
2. Name of supplying Colliery and Seam/(Siding) 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 i.e., samples equilibrated at 40 degrees C and 60% Relative Humidity for non-coking coals
5. Detailed analysis report of TPSA if available. If not, what is the basis of the complaint? Detailed analysis report of referee samples processed by TPSA as the base for the complaint?
6. Particulars of Wagons/Trucks and dates of loading
7. Particulars of accompanying Bank Draft.
8. Any other relevant information. Like a copy of FSA and TPSA 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 AND PREPARATION OF SAMPLES FROM SEAMS IN-SITU/LOADED WAGONS/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]
For each colliery an 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. Collection, preparation and storage of samples from seams/loaded wagons/loaded trucks/conveyor belts for determination of grade/quality shall be done in presence of representatives authorized by the colliery management.

COLLECTION OF SAMPLES

1. In case of sampling from seam in-situ the following procedure shall be followed:

i) The section of seam to be sampled shall be exposed from the roof to floor.
ii) The exposed surface shall be as smooth as possible so that a rectangular channel may be cut.
iii) The seam sample shall be taken in a channel representing the entire cross-section of the seam having the dimensions of 30*10 cm, that is, 30cm in width and 10cm in depth. In case of underground development working, working thickness of the seam shall considered for sampling and in case of depillaring & opencast mining, the total working thickness of the seam or seams involved should be considered sampling.
iv) For this purpose, two parallel lines, 30cm apart end at right angle to the bedding planes of the seam shall be marked by as chalked string on smooth, freshly exposed surface of the seam.
v) Obvious dirt band exceeding 10cm in thickness shall be excluded.
vi) The channel between the marked chalk lines in the seam shall be cut to a depth of 10 cm and the coal sample collected on clean strong cloth or tarapaulin placed immediately at the bottom so that the changes of pieces frying off during excavation of coal are minimized.
vii) The total height of the channel shall be measured and noted.
viii) The excluded dirt bands shall, if required, be separately collected and analyzed.
ix) Preference shall be given for collection of samples by using mechanical means like machines, drilling, core drilling etc. so as to reduce manual intervention."

2. In case of sampling from static loaded wagons the following procedure shall be followed:

2.1. 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 I, 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 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. In case of sampling from loaded trucks, following procedure shall be followed:

3.1. Trucks shall be chosen at random which shall be the first truck for sampling & after that 2nd and 3rd truck may be randomly selected.

3.2. Procedure prescribed from 2.3 to 2.6 shall be adopted for collection of samples from selected loaded trucks.

4. In case of sampling from conveyor belts, following procedure shall be followed:

4.1. 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. Two gross samples shall be collected from a quantity upto 500 tonnes, three gross samples for a quantity ranging from 501 tonnes to 1000 tonnes, four 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.

4.2. 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.

4.3. Weight of one increment shall be 5 kg for all coal sizes.

4.4. 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).

4.5. 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.

4.6. Samples may be collected either from the moving belt or after stopping the belt periodically.

4.7. 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.

5. PREPARATION OF SAMPLE:

5.1. The total material thus collected from trucks without exclusion of anything other than foreign materials viz. Metallic pieces, wood, bricks, concrete chips etc., shall constitute the gross sample for the lot.

5.2. 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.

6. This pulverized sample of approximately 2.0 kg shall be divided into 4 equal parts in segments of 90 degree each and by taking each segment, four equal parts of 500 gm(approx.) of the sample be collected in suitable air-tight bags. One part shall be handed over to the mine management. The second and third 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 and shall be sent for analysis by Regional Head of CCO to two different labs of any Govt. Institution/NABL Accredited laboratory. The fourth part shall be a referee sample and shall be sent for analysis by Regional Head of CCO to lab of any Govt. Institution/NABL Accredited laboratory identified by the Coal Controller simultaneously along with above part. While sending the referee samples specific instruction shall be given by the Regional CCO to the lab for sending the result of referee in "sealed cover only" to CCO, Delhi. Identified/Designated lab shall submit the result of referee sample in a sealed cover to Coal Controller's Organisation Delhi.

7. CONING AND QUARTERING :

For reduction of sample the following procedure shall be followed.

7.1. 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.

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

7.3. 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.

8. 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, precautions shall be taken against loss of (a) fine wind-borne sample (b) contamination with moisture (c) contamination with foreign matter.

8.1. No part of the sample shall be removed during the process of preparation & reduction.

8.2. Hard clean surface, free from cracks shall be selected for mixing, coning and quartering of the sample.

8.3. 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.

8.4. 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.

9. SAMPLING REPORT as prescribed in the Annexure - V shall be prepared in triplicate with the signature of the representatives of the colliery as well as that of the Coal Controller.

10. 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 groups. 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.

10.1. When the analytical results are obtained from the accredited laboratory, 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.

10.2. The owner of the colliery may challenge the declared result supported by analysis result from NABL lab for the sample kept with him within a period of 60 days from the date of intimation of result by Coal Controller.

10.3. The referee sample part should be sent to a laboratory for analysis 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. The referee sample results received from lab in sealed cover shall be opened, if the owner of the colliery challenges the declared grade of seams/sections by the Coal Controller or any other official authorized by him.

10.4. 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.

10.5. System of rejecting suspicious test result shall be as per IS: 436 (Part I /Sec I) 1964 of BIS.

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

10.7. In order to ensure proper analysis, the Regional Head of CCO should analyze 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- Truck No if any:
8- Consignee & destination
9- Name of Seam:

a] Including all bands
Site No- 1
Site No- 2
Site No- 3

b] Excluding pickable bands of 10cm & above
Site No- 1
Site No- 2
Site No- 3

10- Declared Grade
11- Size fraction if any:
12- Method of loading:
13- Method of drawl of samples:
14- Name and Designation of the Company representative:

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

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

Signature of representative of Nominated 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

CHAPTER-5

SALIENT FEATURES OF THIRD PARTY SAMPLING AGREEMENT & DETAILED MODALITIES FOR THIRD PARTY SAMPLING

1. GENERAL:

As per the direction of MoP vide letter dated 30.03.2021 the Coal Consumers shall be free to take services of any of the empanelled agencies subject to selection of one (1) TPSA per coal subsidiary per project/ power generation plant (including captive/ group captive/ independent projects etc.) for all modes. The Terms of Reference for empanelment of the agency has been decided with the following broad guidelines:

- Multiple Agencies should be available.
- Sampling only at loading end with appellate/referee provision.
- Choice of taking services from empanelled agencies shall be of the buyer of coal and
- Review mechanism (6 monthly basis) to review the working of the system.

Accordingly, (Power Finance Corporation) PFC, acting on behalf of (Ministry of Power) MoP empanelled third party sampling agencies, in the second round, for power and non-power.

2. SCOPE OF THE AGREEMENT

(2.1) This Agreement details the terms and conditions, financial arrangement, responsibilities and obligation of Coal Producer, Coal Consumer and TPSA. Further, any specific terms or conditions, procedure or methodology specified/not specified in this Agreement, but relevant to the scope and deemed necessary to be amended/included, may be mutually discussed and agreed to between the Coal Consumer, TPSA and Coal Producer within two (2) months of signing of this Agreement and shall be included as an amendment as per Clause 12 of the Agreement.

3. FINANCIAL ARRANGEMENT

3.1 (a) Based on the expression of interest by Coal Consumer in writing, tentative quantity to be handled for Activity will be informed to TPSA by Coal Consumer and shall form part of this Agreement.

3.1 (c) The cost of the Activity will be shared equally by Coal Producer and Coal Consumer.

3.1 (d) TPSA shall submit Performance Security to the Coal Consumer and Coal Producer at the rate of three percent (3%) of the work value

3.1 (e) Penalty payable by TPSA under the Tripartite Agreement shall be on 50:50 basis to Coal Consumer and Coal Producer.

3.1 (f) Coal Producer and Coal Consumer will release fund against each monthly bill towards test results submitted by TPSA.

3.2 PERIOD OF TRIPARTITE AGREEMENT

Initially the Agreement shall be for a period of three (3) years and on successful completionof three (3) years, it may be extended on yearly basis (maximum up to two (2) years).

4. GENERAL TERMS & CONDITIONS

(4.3) It will be the sole responsibility of TPSA to comply with all statutory requirements relating to workmen engaged and towards the Activity during the term of this Agreement.

(4.4) All the terms & conditions of the RFP and subsequent corrigendum/amendments thereof, shall be treated as part and parcel of this Agreement.

(4.5) This Agreement shall be part of the Fuel Supply Agreement (FSA). In case of any discrepancy between the FSA and this Agreement regarding Third party sampling, the Agreement shall prevail.

5. PROCESS OF SAMPLING

5.1 (b) Collection of samples shall be done by TPSA. Further, sample preparation facilities/machineries like pulverisers/ crushers and testing equipment are to be provided by TPSA. TPSA shall adhere to equipment specifications provided in Schedule TPSA shall also ensure all required safety arrangements. TPSA shall arrange a porta cabin with requisite facilities for sample preparation, which shall be placed near the sampling point (within fifteen (15) km radial distance from the sampling point(s) or any other higher distance depending upon the place provided/identified by Coal Producer) in the premises of Coal Producer(the premises could be of different mine/area of the same Coal Producer).Coal Producer shall provide electricity and water facilities to the TPSA in this regard.However, TPSA shall ensure back up arrangement like diesel generator etc. for electricity in case of emergency, if required.

5.1 (e) The authorized representatives will put their signature on the sample tags as evidence of the process of sampling. The authorized representatives of all three Parties (Coal Producer, Coal Consumer and TPSA) will also sign on the samples register to be maintained by TPSAat the loading end.

5.1 (g) There needs to be arrangement of sampling by Auto Mechanical Sampler for silo loading as well as sampling by Mechanical Augur. Within one (1) year, the TPSA shall arrange the Mechanical Augur. Till the time Mechanical Augur (wherever feasible) is arranged (maximum period of one (1) year), TPSA shallbe allowed to carry manual sampling.

5.1 (h) The sample for testing by TPSA/ referee samples shall be packed and sealed in tamper-proof hard bottles with 3-D holograms, QR codes and RFID tags at the coal sampling site itself.

5.1 (i) After collection of samples, laboratory samples are to be prepared within two (2) days as per relevant BIS.

5.1 (j) TPSA shall make arrangements for online tracking of samples at all stages from sample preparation to analysis at agency lab and referee lab.

It may be noted that, if there is capacity/ infrastructure constraint at a particular mine/sampling location restricting the ability of the TPSA to fulfill its entire sampling requirements, the

sampling of power sector Coal Consumers shall be given priority before taking up the sampling of non-power sector Coal Consumers.

5.2 PARTING OF SAMPLE

5.2 (a) Sample of 212 Micron size shall be prepared, as per BIS norms. The final laboratory sample shall be divided into 4 (four) parts. Part 1 of the sample is for analysis by TPSA at NABL Accredited Laboratory (excluding those of Coal Producer and Coal Consumer) or other coal testing laboratories In India accredited against ISO/IEC 17025 by other equivalent accreditation agency (which is a full member of International Laboratory Accreditation Cooperation (ILAC) and/or Asia Pacific Accreditation Cooperation (APAC)*). Part-2 and Part-3 of the sample are to be handed over to Coal Producer and Coal Consumer respectively for their own analysis. Part-4 of the sample, to be called referee sample, shall be sealed jointly by TPSA, representatives of Coal Producer and Coal Consumer.

* Must be full member with respect to India as per website of ILAC/APAC.

(b) Further, analysis through Automatic Bomb Calorimeter (BIS) with print out facility will be done without manual intervention and necessary records will be kept by TPSA. For tests/analysis (moisture, ash, GCV on equilibrated moisture basis), prepared samples will be transported to the NABL Accredited Laboratory (excluding those of Coal Producer and Coal Consumer) or other coal testing laboratories in India accredited against ISO/IEC 17025 by other equivalent accreditation agency (which is a full member of International Laboratory Accreditation Cooperation (ILAC) and/or Asia Pacific Accreditation Cooperation (APAC)*) in tamper proof manner. TPSA will ensure software system based Double Blinding of coal samples before sending the same for analysis in a NABL Accredited Laboratory (excluding those of Coal Producer and Coal Consumer) or other coal testing laboratories in India accredited against ISO/IEC 17025 by other equivalent accreditation agency (which is a full member of International Laboratory Accreditation Cooperation (ILAC) and/or Asia Pacific Accreditation Cooperation (APAC)*).

* Must be full member with respect to India as per website of ILAC/APAC.

5.3 TPSA shall communicate the result of sampling within Twenty (20) Calender Days of sample collection to Coal Producer and Coal Consumer through web portal/email/ fax/ other electronic mode followed by hard copy. All analysis results submitted must contain sample wise details about source, date of collection, RR Number, Quantity, analysis details etc. Print outs of bomb calorimeter are also to be given with the hard copies of the analysis results of samples and also for referee samples by TPSA.

5.4 TPSA will also provide excel sheet of all the samples analyzed by them and facilitate auto updation of results and integration of TPSA coal sampling portal with portal of Coal Producer/Coal Consumer. TPSA is to develop online tracking system for all event of sampling and its analysis activities which is accessible to both Coal Producer and Coal Consumer.

5.5 Double Blinding of samples: TPSA has to ensure software system based double blindingof coal samples.

5.6 TPSA shall also provide results of analysis to respective Coal Producer (HQ/Area)/ Coal

Consumer in excel format for online updation of records. TPSA shall also provide means to seamlessly transfer data to any ERP/ software of Coal Producer/ Coal Consumer.

5.7 Precision / Adherence to Timeline / Non Collection of Samples/Penalty:

5.7 (a) Precision: In every sample involving referee analysis, the Bomb Calorimeter GCV value of referee sample analysis should be within the precision of (+/-) 71.7 Kcal/kg compared to the Bomb Calorimeter GCV value of initial analysis of that sample as specified under BIS norms.

5.7 (b) For every such sample, where the difference of Bomb Calorimeter GCV value of referee sample analysis and Bomb Calorimeter GCV value of TPSA sample analysis exceeds the above tolerance limit, no sampling charges shall be payable for that sample for TPSA sampling.

5.7 (c) In case the above variation exceeds beyond ten percent (10%) of total number of referee samples that are challenged in a month, it shall be construed unsatisfactoryperformance on the part of TPSA. In the event, the variation occurs in more than four (4) months in a continuous period of one year (12 months), it shall form ground for termination of the Agreement.

5.7 (d) The timeline for submission of result within twenty (20) Calender Days by TPSA is to be maintained strictly and non-adherence to the timeline shall attract penalty as per the following table:

Sl.	Delay (in Days)	Penalty
1.	1-2	5% of the total amount for that despatch
2.	3-5	10% of the total amount for that despatch
3.	6-10	20% of the total amount for that despatch
4.	11-15	50% of the total amount for that despatch
5.	>15 days	100% of the total amount for that despatch

Non-payment of penalty amount by TPSA to Coal Producer/ Coal consumer within thirty (30) days of its imposition shall lead to termination as per Clause 7.2 (h) of the Agreement.

Penalty provisions beyond the timeline of 15 working days from the date of sample collection will be as per the table below: **(Only for QCI)**

SR. NO	DELAY (IN DAYS)	PENALTY
1.	1-2	5%
2.	3-5	10%
3.	6-10	20%
4.	>10 days	50%
5.	>15 days	100%

To be computed against the charges payable to QCI for the quality covered under the respective sample(s). Coal Company/customer shall claim / realize the penalty directly from QCI @ 50:50.

5.7(e) Non collection of samples: In case any consignment goes unsampled due to the failure of TPSA, double the rate of sampling charge on unsampled quantity shall be imposed as penalty on TPSA towards its failure.

5.7(g) At any point of time, if a person engaged by TPSA is reported to be involved in some illegal/ nefarious activity, TPSA would remove such person forthwith, under intimation to both Coal Producer and Coal Consumer.

5.8 Referee Sample:

5.8 (b) Referee sample shall be stored in tamper proof metal bottles with 3-D holograms, QR codes and RFID tags/ Geo tagging and stored at a place with biometric lock/ GPS enabled lock and under 24x7 CCTV supervision with online streaming.

5.8(c)The referee sample shall be kept at the loading end, under the custody of TPSA with proper lock and key. TPSAshall ensure safety and security of these samples.
5.8(d) The referee sample shall be preserved for a period of thirty (30) days from the dateof communication of results by TPSA.

5.9 Raising of Dispute:

5.9 (a) Coal Producer or Coal Consumer may raise dispute within seven (7) days of the submission of results by TPSA. The Party challenging the result will raise referee challenge through Web Portal (along with uploading of its test reports and print outof result of bomb calorimeter). In case of unavailability of web portal, the party willsend email (for referee challenge), along with its test reports, in reply to TPSA results with a copy of mail to the other Party. Print out of result of bomb calorimeter shall be enclosed by the disputing/ challenging Party.

5.9(b)The referee process shall continue even if the information about the referee protest conveyed by the Party challenging the result is not acknowledged by the other Party.

5.9(c) Referee sample shall be sent to any of the list of designated NABL accredited referee laboratories (referee labs) as decided by Apex Committee for second round of empanelment. Till the time the list is finalized by Apex Committee, the referee sample may be sent to designated NABL accredited referee labs carrying out referee analysis for existing third-party sampling agencies. However, the choice of referee lab out of those empanelled, shall be done on rotational basis by the TPSA only.

5.9(d) Arrangement for full payment of charges in advance in case of challenging TPSA analysis results is to be made by the disputing/ challenging Party along with the request for referee sampling. Without deposition of advance payment, request of challenging Party for referee sampling shall not be considered and results of TPSA shall be treated as final. TPSA shall inform the list of disputed cases received from Coal Producer and/or Coal Consumer on fortnightly basis along with the estimated advance payment to be paid to the referee laboratories.

5.9(d) (i) The disputing/challenging party shall make the advance payment to the TPSA's account within fifteen (15) Calender days of information of estimated advance payment as shared by TPSA failing which the request of disputing challenging Party for referee sampling shall not be considered and results of TPSA shall be treated as final.

5.9(d) (ii) Within five (5) days of receipt of advance payment from challenging party, TPSA will make the referee payment charges in advance to the referee labs on behalf of the disputing/ challenging Party. In the event TPSA does not make such advance payment, as received from the challenging party in its account, to the referee lab the disputing/challenging Party shall have the right to deduct such payments from the monthly invoices raised by the TPSA as per Clause 3.1 (f) of this Agreement.

5.9(d) (iii) The advance payment to be made by the challenging party to the TPSA for onward payment to the referee lab shall be separate from the monthly invoices and shall not be included in the value of services of test results submitted as perClause 3.1 (f) for computation of GST as per CGST rules. TPSA will ensure compliance of CGST rules in respect of expenditure claimed as a "Pure agent" as per CGST Rules 2017.

5.9(e) TPSA shall process the request for analysis of referee sample and despatch the referee samples to referee labs with advance intimation to both Coal Producer & Coal Consumer.

5.9(f) TPSA shall ensure that the designated referee labs communicate the results of referee samples to TPSA, Coal Producer and Coal Consumer within forty five (45) days from the date of challenge by the party raising dispute, of which thirty (30) days from date of challenge shall be earmarked for submission of coal samples to designated referee labs and fifteen (15) days from the date of receipt of the samplesby the designated referee lab for communication of results. The time sub-limits beingused inter-changeably within an overall ceiling of forty five (45) days. TPSA shall forward the copy of original results as received from referee labs along with print out of bomb calorie meter results as received from referee labs to the Coal Producer and Coal Consumer. Non-adherence of the timeline by TPSA shall attract penalty as per the following table:

Sl.	Delay (in Days)	Penalty
1.	1-2	02% of the total amount for that despatch
2.	3-5	05% of the total amount for that despatch
3.	6-10	10% of the total amount for that despatch
4.	11-15	20% of the total amount for that despatch
5.	>15 days	50% of the total amount for that despatch

Non-payment of penalty amount by TPSA to Coal Producer/ Coal consumer within thirty (30) days of its imposition shall lead to termination as per Clause 7.21(h) of the Agreement.

Penal provision in case of default / delay in communication of referee results by QCI beyond 45 days from the date of challenge will be as per the following. **(Only for QCI)**

SR. NO	DELAY (IN DAYS)	PENALTY
1.	1-2	02%
2.	3-5	05%
3.	6-10	10%
4.	10-15 days	20%
5.	>15 days	50%

5.11. The performance of the TPSA shall be monitored and reviewed as per the performance parameters provided in Clause 5.7 above by a JS level Committee of Ministry of Power and Ministry of Coal, Apex Committee and Executive Committee. Non-performance of the TPSAshall result in invocation, encashment, or appropriation of Performance Security by the Coal Consumer/ Coal Producer.

8. DETAILED MODALITIESFOR THIRD PARTY SAMPLING

Modalities for collection, handling, storage, preparation and analysis of coal samples and submission of the analysis results, by TPSA shall be as under:

8.1. Collection of Samples by TPSA:

Samples of coal shall be collected by TPSA from the loading end as given below:

8.1.1 Collection of samples from loaded wagons (Rail and MGR):

(a) Rake-wise and grade-wise coal supplied from one loading end shall be considered as one lot, in case of supplies by rail.

(b) In case of coal despatches through MGR the sample collected from each rake (source wise, grade wise and consumer wise) loaded from the respective loading end during the day shall be pooled together and shall be considered as a lot for the purpose of sampling.

(c) Each lot shall be divided into a number of sub-lots in a manner that the quantity of coal/number of wagons in such sub-lots is more or less equal. One (1) gross sample shall be collected from each sub-lot. The number of sub-lots shall be determined as under:

No. of wagons in one Lot	Number of sub lots/ gross samples
Up to 30 wagons	4
>30 wagons up to 50 wagons	5
>50 wagons	6

(d) Each sub-lot consists of one (1) wagon selected as per random table given in IS: 436 (Part I/Section 1) 1964 for collection of gross sample/increments.

(e) In each wagon selected for sampling, the sample shall be drawn from one spot in such a manner so that if in the first randomly selected wagon, the sample is collected at one end, in the next random wagon the sampling spotwill be in the middle of the wagon. and in the third random wagon, the sampling spot will be at the other end and this sampling procedure shall be repeated for all subsequent random wagons.

(f) Before collecting the samples, the sampling spot will be levelled and at least 25 cm of coal from the surface shall be removed/ scrapped and the place will be levelled for an area of 50 cm by 50 cm.

(g) About 50 kg of sample shall be collected from each selected wagon in the lot by drawing 10 increments of approx. 5 kg each with the help of shovel/scoop.

(h) Any stone/shale of size more than that specified in Schedule (of FSA) shall be removed/discarded from the sample;
(i) Samples thus collected from all the selected wagons in a lot shall be mixed together to form one gross sample per lot.

(j) In case live overhead traction line exists in the siding, TPSA shall ensure that the power supply in the overhead traction is essentially switched off before commencement of sample-collection process from loaded wagons.

8.1.2 Collection of Samples of Coal Despatches by Road:

(a) Samples shall be collected source-wise and grade-wise on daily basis round the clock, depending upon the timing of loading at respective despatch point(s).

(b) The first truck for TPSA sampling on a day shall be selected randomly from the first eight loaded trucks before weighment at the road weighbridge. Every eighth (8th) truck being loaded of the same grade in the order of loading thereafter shall be subjected to TPSA sampling.

(c) The sampling spot at the top of the loaded truck, selected randomly, will be levelled and at least 25 cm of coal surface shall be removed/scrapped and the place will be levelled for an area of

50 cm by 50 cm for collection of sample.

(d) About 30 kg of sample shall be collected from each selected truck by drawing increments of approx. 5 kg each with the help of shovel/scoop.

(e) All the samples collected source-wise, grade-wise from every 8th truck in accordance with Clause 8.1.2 (b) as above on daily basis shall be mixed together to form a gross sample.

(f) Any stone/shale of size more than that specified in Schedule (of FSA) shall be removed/discarded from the sample.

8.1.3 Collection of Samples from Conveyor Belt/Piped Conveyors

(a) Samples shall be taken lot-wise, grade-wise.
(b) The quantity that passes over the conveyor in a day (00 hrs to 24 hrs) constitutes 1 lot, which needs to be divided into a number of sub-lots for the purpose of sampling. Number of sub-lots to be divided & quantity of gross sample to be collected from sub lots shall be as below:

Wt. of the Lot (Tons)	No. of sub-lots/gross samples	Qty to be collected (Kg)
up to 500	2	100
501 to 1000	3	150
1001 to 2000	4	200
2001 to 3000	5	250
Over 3000	6	300

Illustration

(i) If the quantity to be passed in a day over the conveyor is 600 tons (which is 1 lot), then there will be 3 sub-lots and total sample quantity will be 150 kg
(ii) 1 gross sample shall be collected from 1 sub-lot, @ 50 kg per sub-lot. Thus, total 150 kg gross sample shall be collected from 3 sub-lots over the whole day (from 00 hrs to 24 hrs)
(iii) If the conveyor is operated for 15 hours in a day, spacing the collection of 150 kg over 15 hours of conveyor operation, 10 kg will be collected every 1 hour (quantity& intervals can be mutually decided by Coal Producer &Coal Consumer depending on the running time of the conveyor and the qty that passes in a day)

(c) The belt needs to be stopped at the scheduled time to facilitate collection of the samples manually.
(d) While collecting the sample, the scoop should traverse the entire cross-section of the conveyor belt, drawing approximately 5kg per increment

(e) Any stone/shale of size more than that indicated in Schedule (of FSA) shall be

removed/discarded from the sample.

(f) There shall be one gross sample for the day mixing all the gross samples collected from all the sub lots during a day.

8.1.4 Collection of Samples by mechanical means (mechanical Auger & AMS) The modalities for collection of sample through mechanical augur as well as AMS sampling from moving streams shall be as per laid down procedure in IS:16143(Part 2): 2021 (Hard Coal and coke mechanical sampling sampling from moving streams) (First Revision). Further, the modalities for sampling from stationary lots shall be as per laid down procedure in IS: 16143(Part 3): 2021(Hard Coal and coke mechanical sampling sampling from stationary lots) (First Revision)

8.2. Preparation of laboratory samples

8.2.1 The gross sample shall be crushed into 12.5 mm laboratory sample. The 12.5 mm crushed laboratory sample shall be divided into two portions. One portion (one fourth of the above sample) called Part 1 shall be used for analysis of total moisture and the other portion (three fourth of the above sample) called Part 2 for determination of ash, moisture and GCV on Equilibrated Basis. Determination of total moisture shall be conducted by the TPSA, in the nearest NABL Accredited Laboratory at the loading end of the Coal Producer (only under CCTV camera with live feed and recording facility to be provided by Coal Producer) by the competent chemist of TPSA.

In case of non-availability of NABL lab of the Coal Producer, sample should be tested for total moisture in any other nearest available NABL Accredited laboratoryor other coal testing laboratoriesin India accredited against ISO/IEC 17025 by other equivalent accreditation agency (which is a full member of International Laboratory Accreditation Cooperation (ILAC) and/or Asia Pacific Accreditation Cooperation (APAC)*).

* Must be full member with respect to India as per website of ILAC/APAC.

8.2.2 The Part-2 sample shall be reduced into laboratory sample. For the general procedure for reduction of gross sample and preparation of moisture sample and laboratory samples, IS: 436 (Part I/Set 1)-1964 or it's latest version shall be followed.

8.2.3 For samples collected by Mechanical Augur/AMS Clause 8.2.2 may be followed as "Modalities for sample preparation by reducing the Part 2 into laboratory sample shall be as per laid down procedure in IS 16143 (Part 4): 2021 (Reaffirmed on 2020). [superseding IS 436(Part I/Sec 2):1976 and IS 436(Part I/Sec I): 1964] Hard Coal and coke mechanical sampling -Preparation of test samples."

8.2.4 Final Laboratory samples shall be in the size of 12.5 mm for determination of Total Moisture and in the size of 212 micron IS sieve for determination of ash, Equilibrated Moisture (at 40

degree C and 60% RH) and GCV. Due care shall be taken by TPSA to ensure that the final lab sample is essentially in 212 micron size before the same is collected from the loading end so that no further sieving or pulverizing is warranted at the laboratory before analysis. Final Lab sample shall not behanded over by TPSA in size other than that of 212 micron IS sieve.

8.2.5 The final pulverized sample shall be divided into four equal parts viz. Set -I, Set- II, Set -III and Set - IV of 500 gms each as detailed below:

(a) Set I shall be taken by TPSA to NABLAccredited Laboratory

(excluding those of Coal Producer and Coal Consumer) or other coal testing laboratoriesin India accredited against ISO/IEC 17025 by other equivalent accreditation agency (which is a full member of International Laboratory Accreditation Cooperation (ILAC) and/or Asia Pacific Accreditation Cooperation (APAC)*) for analysis of ash, moisture and GCV (on equilibrated conditions' basis at 40 degree C and 60% RH) as per latest BIS Standards (IS: 1350 Part 1-1984) or (IS: 1350 Part-II-2017), as applicable

* Must be full member with respect to India as per website of ILAC/APAC.

(b) Set II of the sample shall be handed over by TPSA to Coal Producer.

(c) Set III of the sample shall be handed over by TPSA to Coal Consumer.

(d) Set-IV of the sample called as Referee Sample shall be sealed jointly by TPSA in presence of authorized representatives of Coal Producer and Coal Consumer and shall be kept in the custody of TPSA at the loading end under proper and secured arrangements. The referee sample shall be retained in double sealed condition (duly signed by TPSA and the authorized representative of Coal Producer and Coal Consumer for minimum of thirty (30) days from the date of sample collection, beyond which it may be destroyed after necessary details are properly recorded by TPSA. For the purpose of Referee Analysis, the referee sample(s) shall be packed and transported by TPSA in a tamper-proof metal bottles with 3-D holograms, QR codes and RFID tags/ Geo tagging and stored at a place with biometric lock/ GPS enabled lock and under 24x7 CCTV supervision with online streaming, to the referee lab from the loading end. Coal Producer and Coal Consumer can exercise the liberty to accompany TPSA to the referee lab at their own expenses. The referee sample shall be analyzed in the situations specified in paragraph 8.2.7 below. (Double-blinding)

8.2.6 Samples shall be collected, packed and transported by TPSA to the sample preparation site(s) at the loading end in such manner so as to make them tamper-proof.

8.2.7 In the event that a dispute is raised by the relevant Parties within the time period stipulated at Clause 5.9(a) above the referee sample shall be analyzed by a designated government NABL Accredited Laboratory selected on rotational basis from the list as provided in Clause 5.9 (c) (other than the laboratory at which the original sample has been analyzed by a TPSA) for even distribution of referee samples across designated referee laboratories. The analysis cost of the referee sample shall be borne by the challenging/ disputing Parties. The non-disputing Party may witness transportation of referee sample to the above-mentioned government laboratory at their own cost. The findings of such government laboratory, post

analysis of the referee sample, shall be binding for Coal Consumer and Coal Producer.

8.2.8 Notwithstanding anything to the contrary contained herein the analysis results communicated by TPSA or the government NABL Accredited Laboratory under paragraph 8.2.5(a) and paragraph 8.2.7 respectively, shall be binding only with respect to the samples of coal collected for a particular consignment/day, as applicable, and shall not impact any past/ future supply of the contracted grade of coal made/ to be made to Coal Consumer in accordance with the terms of this Agreement.

8.3 Records of Samples/ Third Party sampling

8.3.1 Proper analysis records like electronic print-out of the analysis results obtained from the Automatic Bomb Calorimeter, source-wise, grade-wise and date-wise details of coal samples received, etc. shall be maintained at the laboratories where the coal samples are analyzed by TPSA. Coal samples shall be analyzed only at an NABL Accredited Laboratory (excluding those of Coal Producer and Coal Consumer)or other coal testing laboratories in India accredited against ISO/IEC 17025 by other equivalent accreditation agency (which is a full member of International Laboratory Accreditation Cooperation (ILAC) and/or Asia Pacific Accreditation Cooperation (APAC)*).

* Must be full member with respect to India as per website of ILAC/APAC.

8.3.2 Name of the colliery/Siding/ Coal Consumer, date of collection and other identification details (e.g. Rake no. in case of rail supply etc.) shall be properly recorded by TPSA and a proper code number is assigned for each sample for identification and reconciliation of the analysis results.

8.3.3 Monthly statements containing the details of each and every analysis. result source wise, mode-wise, grade-wise and consumer-wise, finalized during a month based on analysis by a TPSA or referee analysis, as the case may be shall be prepared by TPSA and submitted to Coal Producer and Coal Consumer before the 5th of the following month stating inter alia, the quantity of Coal covered against the respective analysis results. Copies of the monthly statement/ report shall be submitted by TPSA to (i) the General Manager (Quality Control) of Coal Producer or his representative; and (ii) the representatives of Coal Consumer.

8.4 Analysis of sample(s)

8.4.1 Tests/analysis for determination of moisture, ash, GCV on Equilibrated Basis shall be done by TPSA at NABL Accredited Laboratory (excluding those of Coal Producer and Coal Consumer)or other coal testing laboratories in India accredited against ISO/IEC 17025 by other equivalent accreditation agency (which is a full member of International Laboratory Accreditation Cooperation (ILAC) and/or Asia Pacific Accreditation Cooperation (APAC)").

* Must be full member with respect to India as per website of ILAC/APAC.

8.4.2 Analysis of sample(s) shall be carried out as per latest version of IS 1350 (Part-1)1984 or any latest version for determination of Total Moisture, Equilibrated Moisture and Ash and as per latest version of IS 1350 (Part-II), 2022 for determination of GCV.

CHAPTER-6

QUALITY CONTROL MEASURES

(i) Quality Control Measures at Mining Operations:

To ensure that quality of coal is maintained as per the grade declared, following Quality Control Measures have been framed for implementation throughout WCL with immediate effect, in addition to those measures already in place.

A). Before Commencement of Mining Operations:

1. Proper OB/Coal Benching and cleaning of coal benches before undertaking blasting operations.
2. Identification of bands of more than 1 Mtr thickness and ensuring that such bands are clearly demarcated and excluded from the coal seams earmarked for blasting. In case above segregation is not possible due to any reason whatsoever before blasting, then the admixed matter of foreign nature must be segregated before dispatch to the sidings / dispatch points
3. Quenching of fire on coal face(s), if any.

B). At the time of Mining Operations:

1. Selective blasting by resorting to proper blasting pattern.
2. Selective Mining by engaging machines of suitable size and engaging in extraction of coal only. In case selective mining is not possible due to any reason whatsoever, then the admixed matter of foreign nature must be segregated before dispatch to the sidings / dispatch points.

C). After completion of mining operations (at the mines):

1. Separate stacking of coal of different grades/ quality, if any.
2. Ensuring that adequate amenities are available on a continous basis so as to prevent on-set of fire in coal stocks.
3. Ensuring that proper fire-fighting measures are always in place for quenching fire, in case the coal in stock yards catches fire.
4. Ensuring that fresh coal is always stacked separately but not dumpred over the same coal stock in which there is already on-set of fire or which is contaminated from the quality point of view.
5. Intensive segregation of stones / shale & other extraneous material from conveyour belts and from stock yards at mines (Phase-I of segregation).
6. Creation of separate Reject yards far away from coal stocks for stacking stones/ shale & other extraneous material.
7. Arrangements for disposal of the rejects in such Reject yards or OB yards and maintenance of proper accounting of the same.

D). Before Transportation to Railway Sidings (at the mines):

1. Ensuring that CHPs/FBs are maintained in proper working condition with adequate number of picks/teeth (at least 80% of the original number) available in place on the crusher drums at any given point of time.
2. Ensuring proper sizing of coal by compulsorily passing through CHPs/FBs so as to facilitate dispatch of coal of agreed size.

E). At the Railway Sidings:

1. Transportation of only properly crushed coal of the agreed size and quality, free from any extraneous material to the sidings.
2. Non-acceptance of either uncrushed coal or coal mixed with stones / shale / mud/slush and other extraneous material at the siding.
3. Intensive segregation of the carried over stones / shale & other extraneous material, if any, from the coal stock at the siding(s) before loading into wagons (Phase-II of segregation)
4. Ensuring selective loading, i.e., loading of only properly sized coal totally free from stones, shale, slush, mud, earth & other extraneous material into wagons.
5. Intensive segregation of the still carried over stones / shale & other extraneous material, if any, from top of the loaded wagons (Phase-III of segregation)
6. Erection of Boards of proper size prominently displaying grades/quality declared and other relevant information at the entry points.
7. Proper maintenance of consumer register under joint signatures, with relevant rake-wise details, specifically stating corrective action taken against complaints lodged by the consumers representatives, if any before dispatch of the rake(s).

F). At Units, Sub Areas and Area Hqs.

1. Prominent display of grades/quality declared at the Offices of Colliery Manager, Sub Area Manager, Area Sales Managers and Area General Managers
2. Monthly consumer meetings.

The list of above Quality Control Measures is not exhaustive and any more measure that may be found necessary for implementation at any given point of time in future shall be included to the above list for necessary compliance as and when the same are finalized.

(ii) Stage wise responsibility for maintaining Coal Quality:

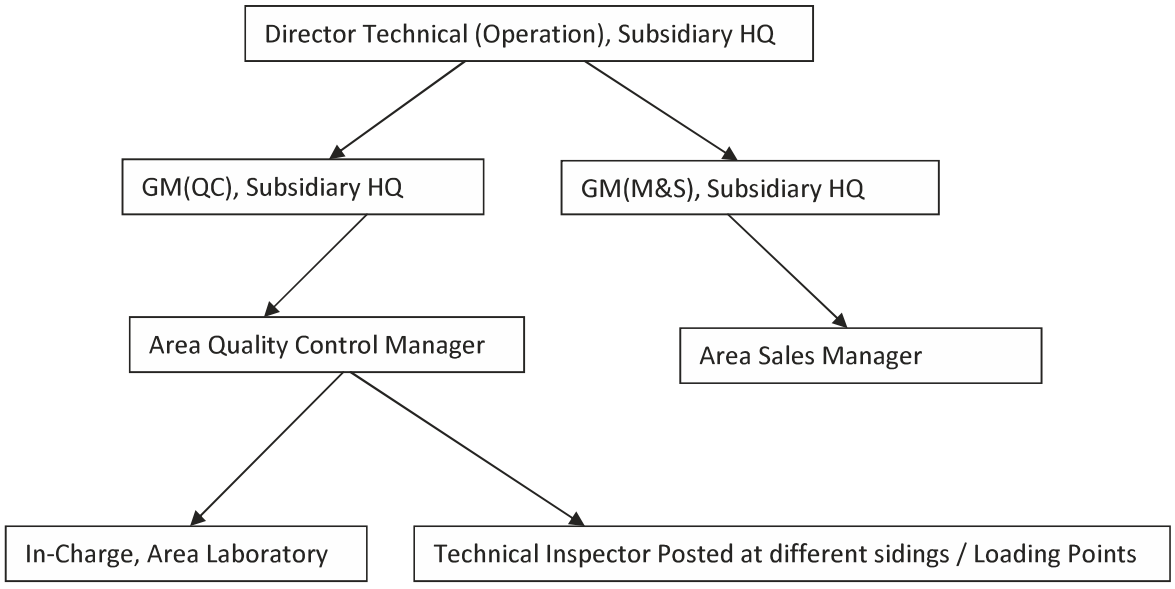
The following responsibilities have been entrusted for maintaining coal quality at various stages of coal production to dispatch point to the persons mentioned in the last column:

Working Point	Q.C Measures To be enforced	System Designed	Person(s) Responsible for implementation.
Coal Face	Proper OB/Coal benching	No coal shall be extracted without proper benching of either OB or coal face(s)	Colliery Manager
	Quenching of fire	Coal shall be extracted only after quenching the fire on coal face(s) if any, wherever feasible. If quenching of fire on coal face(s) is not feasible in totality, then proper and adequate fire fighting measures must be in place round the clock.	Colliery Manager Colliery Engineer Shift I/c
	Selective Blasting	Blasting shall be resorted to only after finalizing proper and relevant blasting pattern. No blasting shall take place over the areas where UG galleries are existing.	Colliery Manager Blasting Officer
	Selective Mining	Coal alone shall be extracted after scrupulously segregating all bands of (+) 1 mtr thickness	Colliery Manager Machine Operator Shift I/c Shift Over-man Shift Mining Sirdar
Pit-head Stock	Intensive segregation of stone / shale	Stone / shale picking from coal stocks by manual / mechanical means and proper disposal of the same	Sub Area Manager Colliery Manager Dispatch I/c
	Quenching of fire	Invariable quenching of fire found if any, on coal stocks. Proper and adequate fire fighting measures must be in place round the clock.	Sub Area Manager Colliery Manager Colliery Engineer
	Separate stacking of fresh coal	Separate stacking of fresh coal, in case the existing coal stock is either contaminated or on fire	Sub Area Manager Colliery Manager Dispatch I/c
CHPs/ FBs	Sizing of coal to the agreed size	Ensuring that the crusher drums of CHPs/FBs have minimum 80% of the original number of picks at any given point of time.	Colliery Engineer Dispatch I/c CHP/FB I/c
		Invariable routing of coal through CHPs/FBs	-do-
Railway Sidings	Transportation of coal of agreed size and quality to the railway	Transportation of only proper crushed coal free from any extraneous mater to the sidings.	Sub Area Manager Dispatch I/c Siding I/c

	sidings	No un-sized / poor quality coal mixed with extraneous matter / fire shall be accepted at sidings	Area Sales Manager Area Nodal Officer(QC) Shift Loading Supervisor Shift Technical Inspector
	Segregation of stones / shale from siding stocks	Invariable manual segregation of stones / shale from siding stocks before loading and its proper disposal	-do-
	Selective loading	Loading of coal free from any extraneous matter	Siding I/c Loading Supervisor
	Segregation of stones / shale from top of loaded wagons	Segregation of stones / shale from top of loaded wagons before dispatch	Siding I/c Loading Supervisor Technical Inspector

(iii) Short term and medium term action plan to Address systemic issues for Quality Assurance

(I) Organizational Structure of Quality Control Department in Subsidiary Company



To check the degradation of quality of coal in different stages of production, transfer, stacking and loading, a uniform Code of Practice has been prepared enumerating responsibility of persons involved and SOPs to be followed in different stages.

(II) Code of practice for maintenance of Quality of Coal

General :

The coal seam bands if any is cut separately, so the chance of mixing with coal is less, and hence there is a better quality control in the coal produced through surface miner. Apart from surface miner, extraction of coal from opencast mines is being done with shovel dumper combination in below mentioned scenario:

a) Virgin seam
b) Fiery coal seams
c) On developed / depillared underground workings.
d) On developed / depillared underground workings under fire.

Wining of coal by shovel dumper combination using blasting under above circumstances require utmost care for maintaining quality.

There are chances of degradation in quality of coal during stacking of coal. Coal may be mixed extraneous material if dump site is not clean. There are chances of fire in coal stock, which is a major cause for degradation in quality of coal.
In Washery / Siding, there are chances of degradation in quality if the coal is mixed with extraneous material while loading in wagons or if the coal catches fire.

(III) Objective, Implementation:

1. To produce clean coal free from extraneous material from face using different mining technologies.
2. To stock coal in such a manner that no extraneous material get mixed while stacking the coal in stockyard and to ensure no fire catches in stock
3. To dispatch clean and quality coal from siding/loading points.

The SOP recognizes the various conditions which affect the quality of coal at the working site, stock yard and siding. For implementation of this SOP it is a requirement that written operating instructions be prepared at each mine and dispatch point and every involved person is issued with a copy of such instructions.

(IV) Responsibility of persons:

General Manager:
) He will ensure that the coal dispatch from the area conforms to declared schedule grade.
b) He will ensure the enforcement of this code of practice.
c) He will ensure proper facilities for sampling and testing of samples.
d) He will ensure proper infrastructure at siding, washery eg. Crushers, spare parts and required manpower.

Project Officer:
a) He will ensure that coal dispatched from mine is in declared schedule grade.
b) He will be responsible for providing necessary infrastructure at coal face and stock so that quality shall be maintained in production, transportation and stacking of coal.
c) He will be responsible for segregation of extraneous material / stone at coal stock and siding and ensure that only good quality coal is dispatched through siding.
d) He will be responsible for crushing coal in proper size before dispatching it to siding.

Area Sales Manager:
a) He will be overall responsible for dispatch of area and ensure minimum deductions on quality.
b) He will be responsible for supply of rakes in siding and ensure that wagons are free from extraneous material/stones.
c) He will exercise such managerial control that no coal with inferior quality enter into the siding.

Area Nodal Officer(Quality Control):
a) He will serve as link between production unit and dispatch unit of area.

b) He will be responsible for dispatch of coal in declared grade.
c) He will be responsible for collection of samples, preparation of samples and analysis of samples.
d) He will be responsible for third party sampling and ensure that the challenge of referee sample shall be done within stipulated time and as per the guidelines issued from time to time by CIL. He will also coordinate with the Area Finance Managers for timely release of fund for the same.
e) He will exercise such managerial control that no coal with inferior quality is received at the siding and in case wherever intervention of Area General Manager is required, he will immediately report the same.
f) He will give regular feedback of analysis report from Area Quality Control lab to SubArea Managers / Project Officers and Managers of feeding mines for necessary corrective measures, if required.
g) In case of grade slippage of more than 2 grades continuously for three months, he will arrange revised grade proposals from Manager of the mines and after observing all due formalities and approval of the DT(Oprn) of the subsidiary company, the proposals will be sent to CCO for necessary actions.

Staff Officer (E&M)/Project Engineer (E&M)/In-charge of CHP/Silo:
a) He will be responsible for the proper functioning of Crushers/CHP/Silo.
b) He along with SO (MM) will ensure adequate availability of spare parts for timely maintenance of Cruhers/CHP/Silo.

Mine Manager:
a) He will ensure that the bands are mined separately. Whenever any band encounters in course of mining he will ensure extraction of such bands separately.
b) He will be responsible for maintenance of quality in the stock and ensure proper stock management in such a way that no fire catches in coal stock.
c) In particular the manager is responsible for, either personally or by a nomination of a competent person ensuring;
i) Written operating instructions are prepared, and available for reference and training,
ii) Operating instructions are strictly enforced.
iii) The employment or engagement of persons suitable qualified to ensure the requirements are met.

Siding Manager:
a. He will ensure picking and segregation of extraneous material / stone at railway siding and in case of excessive extraneous material received from any of the mines, he will immediately report the same to Manager of the mines for corrective measures.
b. Segregated extraneous materials / stones at sidings have to be transported on regular basis so that the entire loading platform of the siding shall be free from boulders / extraneous material.
c. He will ensure that only coal of declared grade free from extraneous materials/stones shall be dispatched from siding.
d. He will assist Area Quality Control Officer in collection of samples.
e. He will ensure proper supervision in siding.

Despatch In-Charge of Mine

a) He will ensure transportation of coal free from extraneous materials / stones from stock to railway siding.
b) In case of dispatches of coal by Road Mode, he will be responsible for collection and preparation of samples as per provisions of Third Party Agreement.
c) He will be responsible for collection and preparation of samples by Third Party Agencies from Trucks/Tippers.
d) He will also maintain proper recording of the dispatches of coal by Road Mode on day to day basis.

Drilling and blasting In-charge:

a) He will ensure the cleaning of the face before the start of the drilling.
b) He will also ensure effective control in blasting.

Overman/Mining Sirdar:

He will ensure proper cleaning of coal face.
Extraction of coal from virgin seam by shovel dumper combination.

1. OB bench shall be at least 30 meter in advance of the coal bench from where coal is planned to be extracted.
2. Before drilling, the top of the coal bench shall be thoroughly cleaned and ensured that no extraneous material shall remain on top of the coal bench.
3. Shovel bench shall be thoroughly cleaned before blasting the coal.
4. Any band between coal seam shall be allowed in coal benches.
5. No subgrade drilling shall be allowed in coal benches.
6. Both bucket of loading machine and dump body of the hauling machine shall be thoroughly cleaned before loading of coal.
7. Blasting operation should also be effective and controlled.
8. All stones near the mine face are to be cleaned before blasting of the coal.

Extraction of coal from seam on developed pillars by OC Method.

1. It should be ensured that galleries are free from OB/ extraneous material before extraction of pillars.
2. Before drilling it shall be ensured that all the extraneous material are removed.
3. In case of fire proper arrangement for quenching shall be made before extraction of pillars.
4. DGMS circulars in extraction of coal shall be followed.
5. Coal produced from seam on developed pillar and under fire shall be stacked separately and shall be dispatched as per sampled grade and not on declared grade. A committee headed by GM(QC) will decide the samples grade of stock after sampling of coal.

Extraction of coal by surface miner:

1. It shall be ensured that the bands are cut separately and not mixed with the coal.
2. The coal rib left by the surface miner shall be properly crushed before dispatch.

Coal Stock:

1. While preparing the stock it shall be ensured that stone / extraneous material shall be removed from the stock yard.
2. Height of the stock shall be maintanined in such a way that the possibility of fire is eliminated. Arrangement for firefighting shall be ensured.
3. It shall be ensured that stocks are dispatched on First in First Out (FIFO) basis.
4. Stone/extraneous materials if any shall be segregated and kept at separate places.
5. Proper lighting and dust suppression measures shall be ensured.
6. Crawler mountd machines should be avoided in the coal stock yard, as far as practicable.
7. In case of composite grades, while dispatching, the coal produced from 2 or more seams shall be judiciously blended to remain within the grade at the stock itself.
8. All stones in the vicinity of the coal stockyard are to be removed on a weekly basis and proper record is to be maintained.

Siding:

1. It shall be ensured that only sized coal with good quality shall be allowed to enter in siding.
2. Proper segregation of extraneous material/stone, if any shall be ensured before loading into wagons.
3. Coal of different grades shall be stacked separately and properly marked.
4. Proper lighting in siding to facilitate proper loading in the night.
5. Dust suppression measures shall be ensured.
6. Supervision during loading to reduce the issues of under-loading and overloading.
7. Strict supervisions to be ensured while collection of samples by Third Party Agencies from wagons.
8. All sidings should have the provisions of 360-degree camera (like Pan-Tilt-Zoom (PTZ) camera or similar) for monitoring of the activities of the sidings.

(V) Grade Declaration:

1. Mines where bands are inseparable / not planned for separation during production, the grade declaration must include such bands in the sampling.
2. In case of slippage of 3 or more grades in respect of more than 50% of sample results analyzed by Third Party Agency for 3 consecutive months, the declared grade of these sidings/feeding mines should be reviewed.

   In case of improvement by 2 or more grades in more than 25% results analyzed by Third Party Agency for 3 consecutive months, the declared grade of these sidings / feeding mines be considered for upgradation.

(VI) Sampling & Analysis

1. **Presently, samples are being collected from 10% of wagons selected randomly in a rake. For better representativeness sample is to be collected from 25% wagons as recommended in BIS.**

2. Laboratory samples are to be prepared of 212-micron size only so that further pulverization of the sample is not required at the time of analysis in the laboratory.
3. Sampling by Augur is to be considered for avoiding human intervention in the sampling process.
4. **Online Analyzer may be installed in the big projects initially for supply of coal to pit head power plants.**
5. Strict supervision of the sample collection process by the representative of coal companies is to be ensured as 80% of variation in analysis results occur due to improper collection of samples.
6. CCTV cameras are to be installed in all sample collection points.
7. Double blinding of the samples shall be ensured.
8. **The third party sampling agency should be different from that of the agency deployed by customer at unloading end. This may require discussion at appropriate level.**

(VII) Suggested short term and medium-term measures for improvement in quality:
Short Term measures:

i. Vigorous supervision at the time of loading of wagons, truck/tippers/ collection and preparation of samples.
ii. Segregation/ picking of shale /stone at coal stock and siding.
iii. Provision of CCTV camera at stock, loading point of dispatch/sampling point.
iv. If there is a slippage of grade in three consecutive samples collected from any dispatch point, immediate corrective measures shall be taken by dispatch In charge, Manager, Project Officer, Area Sales Manager and Area Nodal Officer (QC) of the concerned units with information to Area General Manager.
v. Recruitment of required manpower i.e Technical Inspector (min Qualification -B.Sc. With chemistry) Sales Inspector (min Qualification-Graduate) from internal sources.

Long Term measures:
i. Installation of mobile crushers/feeder breaker for assuring 100% crushing.
ii. Loading from Silo or Chute system.
iii. Making of picking arrangement of shale/stones at Belt.

CHAPTER-7

DIFFERENT CIRCULARS RELATED TO QUALITY CONTROL

(1) SURFACE MOISTURE

कोल इंडिया लिमिटेड		COAL INDIA LIMITED
विपणन एवं विक्रय विभाग कोल भवन् परिसर सं. 04 MAR प्लॉट सं.- AF-III एक्शन एरिया -1A न्यूटाउन, राजरहाट, कोलकाता-700156 फोन 033-23244214 फैक्स 033-23244229 कॉर्पोरेट पहचान संख्या L23109WB1973GOI028844 ईमेल: gmqc.cil@coalindia.in वेब: www.coalindia.in		MARKETING AND SALES DEPARTMENT COAL BHAWAN, PREMISE NO-04 MAR PLOT-NO-AF-III, ACTION AREA-IA, NEWTOWN, KOLKATA-700 156 Ph:033-23244214, Fax: 033-23244229 CIN: L23109WB1973GOI028844 E-MAIL: gmqc.cil@coalindia.in WEBSITE www.coalindia.in

CIL/C-4B/TPS/2024/42 Date: 18.04.2024

To.
General Manager (QC/QM),
ECL/BCCL/CCL/MCL/NCL/SECL/WCL

General Manager NEC

Sub: Computation of compensation of surface moisture

Dear Sir,
The relevant provision of the Model FSA(s) with regard to computation of compensation of Surface Moisture are given as under:

Quote:
9.2 Excess Surface Moisture
(i) In the event that monthly weighted average Surface Moisture in Coal exceeds seven percent (7%) during the months from October to May and nine percent (9%) during the months from June to September, the Coal quantities delivered to the Purchaser during such month shall be adjusted for the resultant excess Surface Moisture, which shall be calculated in percentage by which the Surface Moisture exceeds the foregoing limits.

(ii) The seller shall give regular credit note on account of excess Surface moisture, as per clause 9.2(I) above, calculated at the rate of Base Price of Analyzed Grade of coal and other charges, pursuant to clause 8.2 but excluding statutory charges pursuant to clause 8.3, if any, and railway freight for the quantity of excess Surface Moisture.

(iii) Sampling/ analysis and determination of Surface Moisture for compensation shall be done as per the procedure given in Schedule V.

Unquote

In pursuance to the aforesaid guidelines, vide letter No. C/4-CB/TPS/2024/16 dated 23.02.2024 **(Annex-1)**, it was clarified to all Coal Companies that "the compensation on account of excess surface moisture is to be calculated on source, wise grade wise and power station wise (in case of Rail) from the siding, it being loaded. Further, in case of Road Mode, it is to be calculated on Colliery wise/Grade." However, the implementation of the same was kept on hold vide email dated 21.03.2024 pending approval.
Thereafter, the aforesaid matter has been discussed in the 333rd CFD Meeting of CIL held on 02.04.2024. In the said meeting following has been approved, which is reproduced below:
Quote:
"**RESOLVED THAT** approval be and is hereby accorded for implementation of computation of excess surface moisture based on following modalities through ERP:
(i) Computation of excess surface moisture on the basis of source wise, grade wise & power station wise (In case of Rail) from the siding, it is being loaded. In case of Road Mode, it is Colliery wise & grade wise.

Contt.....2

(ii) In case, in the event of monthly weighted average exceeds 7% during the months of October to May and nine percent (9%) during the months from June to September, the coal quantity delivered to purchaser during such months shall be adjusted for the resultant excess surface moisture, which shall be calculated in the percentage by which the surface moisture exceeds the forgoing limits.

(iii) In respect of NCL, since NCL vide letter No. NCL/Sales/09/1723 dated 29.10.2009, has inter alia informed that "In respect of NCL the monthly weighted average surface moisture in coal should be read as 9% throughout the year, which was accepted by NTPC & Other Power Utilities" the surface moisture compensation considering the average surface moisture in coal to the extent of 9% throughout the year may be implemented.

Unquote

This is for information and necessary implementation of all concerned.

Yours sincerely

18/11/2014

General Manager (QC/CP)

Copy for kind information to:
1. General Manager (M&S), ECL/BCCL/CCL/MCL/NCL/SECL/WCL
2. General Manager, ERP, CIL
3. HOD (M&S-FSA/ Linkage)

कोल इंडिया लिमिटेड
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WEBSITE www.coalindia.in

CIL/C-4B/TPS/2024/16 Date: 23.02.2024

To.
General Manager (QC/QM),
ECL/BCCL/CCL/MCL/NCL/SECL/WCL

General Manager NEC

Sub: Modalities of computation of excess Surface Moisture

Dear Sir,

This is to inform that WCL vide email dated 15.02.2023, had requested for an Office order/ Circular, regarding the methodology/modalities of computation of excess Surface Moisture.

In this connection, the methodology/modalities of computation of excess Surface Moisture are given as under:

1. Vide email dated 08-05-2020, the then GM (QC/ M & S), CIL had sent the guidelines/clarification regarding computation of Surface Moisture, which is reproduced below:

Quote:
As per FSA provisions, computation of excess Surface Moisture is to be done, Source wise/Siding wise/Loading point wise.

Unquote

2. The relevant provisions with regard to Excess Surface Moisture available in the Model FSAS (LOA Route Power) is reproduced below:

Quote:

10.2 Excess Surface Moisture

i. In the event that monthly weighted average Surface Moisture in Coal exceeds seven percent (7%) during the months from October to May and nine percent (9%) during the months from June to September, the Coal quantities delivered to the Purchaser during such month shall be adjusted for the resultant excess Surface Moisture, which shall be calculated in percentage by which the Surface Moisture exceeds the foregoing limits.

Contt.....2

ii. The seller shall give regular credit note on account of excess Surface moisture, as per clause 10.2(I) above, calculated at the rate of Base Price of Analyzed Grade of coal and other charges, pursuant to clause 9.2 but excluding statutory charges pursuant to clause 9.3, if any, and railway freight for the quantity of excess Surface Moisture.

iii. Sampling/analysis and determination of Surface Moisture for compensation shall be done as per the procedure given in Schedule V.

Unquote:

3. Further, as per the Schedule V (Detailed modalities for Third Party sampling) of the FSA, inter-alia states as under:

Clause No. 1.1 General
(a) Sample shall be collected source wise, grade wise and Power station wise.

1.2. Collection of samples from wagons:

Clause No. 1.2 (a) In case of dispatch by Rail each rake (source wise, grade wise and Power Station wise) of Coal supplied from one Delivery Point shall be considered as a Lot for the purpose of sampling.

1.3 Collection of Samples of Coal Dispatches By Road

1.3 (a) Sample shall be collected colliery wise / grade wise on daily basis during a day i.e. 0.00 Hr to 24.00 Hrs of the day.

From the above, it is evident that the compensation on account of Surface Moisture is to be given on source wise, grade wise and Power Station wise (in case of Rail) from the Siding, it is being loaded. Further, in case of Road Mode, it is to be given on colliery wise / grade wise.

This issues with the approval of the Competent Authority.

Yours sincerely

23/02/2024

General Manager (QC/CP)

Copy to:
1. GM (M&S): ECL/BCCL/CCL/MCL/NCL/SECL/WCL
2. HOD (FSA-Linkage), CIL, Kolkata

(ii) GUIDELINES FOR SENDING SAMPLES FOR REFEREE ANALYSIS

कोल इंडिया लिमिटेड		COAL INDIA LIMITED
विपणन निदेशालय, गुणवता नियंत्रण विभाग कोल भवन, प्रांगण स. 04 एमएआर, प्लाट सं एएफ III, एक्शन एरिया 1ए न्यू टाउन, राजरहाट, कोलकाता- 700 156 सीआईएन: L23109WB1973GOI028844 ईमेल: gmqc.cil@coalindia.in cilqualitycontrol@gmail.com वेबसाइट :www.coalindia.in		MARKETING AND SALES Quality Control Division COAL BHAWAN, PREMISE NO-04 MAR PLOT-NO-AF-III, ACTION AREA-1A, NEWTOWN, RAJARHAT, KOLKATA-700156 Ph.033-23244214, Fax: 033-23244229 CIN: L23109WB1973GOI028844 E-MAIL: gmqc.cil@coalindia.in cilqualitycontrol@gmail.com WEBSITE: www.coalindia.in

No. CIL/C-4B/TPS/17-18/180 Date: 14/06/2017

To
The General Manager (QC/QM)
BCCL, ECL, CCL, MCL, NCL, SECL, WCL, NEC

Sub: Guidelines for sending samples for Referee analysis

Dear Sir,

In order to bring uniformity in the decision making with regard to referring of samples for referee analysis in the context of 3rd Party Sampling & Analysis across all Subsidiary Cos.. following modalities may be adopted:

(1) The decision to send the referee samples for analysis should be taken at the level of Area GM and that, too, after due diligence.

(2) Samples should always be sent for referee in following cases -
(a) When 3rd Party declared grade is lower than the grade found in Coal Companies lab test.
(b) When GCV of the lab or 3rd party test result is within error of measurement of Bomb Calorimeter i,e, 70 K Cal/Kg GCV of the transition point to the next higher grade (Borderline cases).
(c) In the case of washery grade coal declared as such by CCO and confirmed in Coal Companies' lab test, but in third party test the coal ash content is found more than 35% leading to failure to qualify as washery grade coal.

(3) In addition, the subsidiary companies may also decide to refer any other sample based on their own judgement.

This is issued with approval of Competent Authority

Yours faithfully,
14/06/17
General Manager (M&S)-II,CIL

Copy for kind information:
1. Director (M), CIL
2. CVO, CIL
3. Director In-Charge (QC/QM)
DT(P&P), BCCL, DT(P&P), ECL, DT(O), CCL, DT(P&P), NCL, DT(O), MCL, DT(O), SECL, DT(O), WCL
NOO
4. GM(S&M)-II, CIL This is for kind information that letter issued to Sub Cos. as advised.

(ii) GUIDELINES FOR SENDING SAMPLES FOR REFEREE ANALYSIS

	वेस्टर्न कोलफील्ड्स लिमिटेड **Western Coalfields Limited** (मिनीरत्न कंपनी) (A Miniratna Company) (कोल इंडिया लि. की अनुषंगी कंपनी) *(A Subsidiary of Coal India Limited)*	विपणन एवं विक्रय **Marketing & Sales**
पंजी. का. कोयला विहार, सिविल लगइन्स, नागपूर (महाराष्ट्र) -440001 Regd. Off.: Coal Estate, Civil Lines, Nagpur (MS)-440001		
email-gmsmwcl@gmail.com ☎:0712-2511061 www.westerncoal.in CIN U10100MH1975GOI018626		

Ref: NGP/WCL/M&S/Comml.332 Date: 07.09.2022

NOTICE

Amendments in the Fuel Supply Agreement executed with State Gencos & IPPs

Further to the CIL Price Notification No. CIL/M&S/1325 dated 18.07.2022 (Annexure-1) and WCL Notice No. NGP/WCL/M&S/Comml/256 dated 20.07.2022 (Annexure-2) regarding the pricing of raw coal with GCV from 1500 kcal/kg to 2200 kcal/kg, CIL vide Notice No. CIL/M&S/417 dated 02.09.2022 (Annexure-3) has notified the following:

"The following clauses of respective FSAs shall have applicability for GCV of "less than 1500kcal/kg" instead of "less than 2200 kcal/kg" wef 18th July'2022 i.e. from the date of issue of price notification no. CIL/M&S/1325 dated 18th July'2022:

Clause 4.2 of FSAs for State Gencos and
Clause 5.2 of FSAs for IPPs [including Shakti B(ii) & B(iii)]"

Encl: As above

7/9/2022
General Manager (M&S)

Copy to:
1. CMD, WCL for kind information
2. GM(System), WCL: with a request to host the notice on WCL website
3. GM(Fin.-I), WCL
4. GM(QC), WCL
5. AGMS, WCL, All Areas
6. HOD(M&S-FSA/Linkage), CIL
7. Chief Manager (Finance/SA)
8. All Sectional Heads, M&S Deptt., WCL HQ
9. Notice Board

Coal India Limited
A MAHARATNA COMPANY
Registered Office:- Coal Bhawan,
Premises No.04 MAR, Plot No.AF-III,
Action Area-1A, New Town, Rajarhat,
Kolkata 700156.
WEBSITE:www.coalindia.in
CIN-L23109WB1973G01028844

Sub: Price Notification: CIL: Ref. No. CIL: M&S/1325 Dated 18th July'2022
Pricing of Raw Coal with GCV from 1500 kcal/kg to 2200 kcal/kg as approved by CIL Board

1. Price of Raw coal with GCV 1500 to 2200 Kcal/kg shall be into two slabs as below:

a. Coal with GCV from 1500 to 1899 Kcal/kg shall be @ 90% of the Notified price of G-17 Grade.
b. Coal with GC from 1900 to 2200 Kcal/kg shall be @95% of the Notified price of G-17 Grade.

The current price will therefore be as under:- (Rounded off to the nearest Rs.)

Particulars	Other than WCL		WCL	
Rs./tonne	Regulated Sector	Non-Regulated Sector	Regulated Sector	Non-Regulated Sector
Coal with GCV from 1500 to 1899 Kcal/kg	412	492	492	588
Coal with GCV from 1900 to 2200 Kcal/kg	435	519	519	621

2. The coal with GCV from 1500 to 2200 kcal/kg shall be kept outside the purview of gradation.

3. Coal with GCV from 1500 kcal/kg to 2200 kcal/kg shall be identified with a nomenclature of "Below Grade Coal".

4. The prices are basic prices excluding all Government taxes / levies and other charges, which will be applicable as notified from time to time by the Government/CIL/Coal companies.

5. As and when the notified price of G-17 grade is modified, the price of coal with GCV froin 1500 to 2200 kcal/kg would also change as per the formula above.

The above would be applicable for all Coal Companies of Coal India Limited including North Eastern Coalfields Limited with immediate effect.

Anurag Garg 18/7
General Manager (M&S)(OC & Sales policy)

वेस्टर्न कोलफील्ड्स लिमिटेड
Western Coalfields Limited
(मिनीरत्न कंपनी) (A Miniratna Company)
(कोल इंडिया लि. की अनुषंगी कंपनी)
(A Subsidiary of Coal India Limited)
ISO: 9001:2008 Certified

Marketing & Sales Department

विपणन एवं विक्रय विभाग
Telephone: 0712-2511061-2511323
CIN. U10100MN1975GOI018626

Fax: 0712-2512977
Website: www.westerncoal.nic.in

पंजी. का. कोयला विहार, सिविल लगइन्स, नागपूर (महाराष्ट्र) -440001 Regd. Off.: Coal Estate, Civil Lines, Nagpur (MS)-440001

Ref: NGP/ WCL/M&S/Cornml 256

Date: 20.07.2022

NOTICE

Sub: Notification of coal prices for Raw Coal having GCV from 1500 keal/ kg to 2200 kcal/kg

CIL. vide price notification no CIL: M&S/ 1325 dt 18.07.2022 (copy enclosed at annex 1) has notified the pricing for Raw Coal having GCV from 1500 kcal/kg to 2200 keal/ kg. In reference to the aforesaid notification, the pricing for Raw Coal for WCL from Mine Specific sources is notitied us follows:

Fig in Rs/te (Rounded off to the nearest Rs)

GCV range	Mine Specific sources		Remarks
	Regulated Sector	Non Reguinted Sector	
Coal with GCV from 1500 to 1899 keal/ kg	897	943	90% of Mine Specific Notified price for G17 grade
Coal with GCV from 1900 to 2200 keal/ leg Bic 1	947	1048	95% of Mine Specific Notified price for G17 grade

Above is effective front 18.07.2022.

This is for the information of all the customers/ bidders of WCL..

Enel: a.a.

20/7/2022
General Manager (M&S)

Copy:
1. CMD, WCL
2. GM (M&S) (QC & Sales Policies), CIL
3. GM (Fin)/GM (QC), WCL.
4. GM (System), WCL: with a request to host the notice on WCL.'s website
5. AGM. All Area, WCL
6. Sectional Heads, M&S, WCL
7. Chief Manager (F) (SA), WCI.
8. ASM/AFM. All Area. WCL

Ammexure-

COAL INDIA LIMITED
MARKETING & SALES

Ref: CIL/M&S/417 Date: 02.09.2022

Sub: Pricing of Raw Coal having GCV from 1500 kcal/kg to 2200 kcal/kg

Notice

This is for Information to all FSA holders that as per extant FSA provisions, seller is entitled to issue price notification for various classes of coal. MOC Issued directives vide letter no CA-28012/2/2021-CA dated 21.10.2021 and CA-28012/02/2021-CA Dated 15.07.2022 advising CIL to charge the price for coal between 1500-2200 GCV as decided by CIL board. Accordingly, CIL has issued price notification vide Ref. No. CIL:M&S/1325 dated 18th July, 2022 (annexed).

In view of the above, this is to notify that:

"The following clauses of respective FSAs shall have applicability for GCV of "less that 1500 Kcal/kg" instead of "less than 2200 Kcal/kg" w.e.f 18h July, 2022 i.e., from the date of issue of price notification no. CIL/M&S/1325 dated 18th July, 2022:

Clause: 4.2 of FSAs for State Gencos and
Clause: 5.2 of FSAS for IPPS (including SHAKTI B (ii) & B (iii)]"

HoD (M&S-FSA/Linkage)

Copy for kind information:

1. Director (Marketing), CIL
2. Director (CLD), Ministry of Coal, New Delhi
3. Director (Fuel Management), Central Electricity Authority, New Delhi
4. ED (Co-ord)/TS to Chairman,, CIL
5. Executive Director (Marketing & Logistics), CIL

Distribution:

1. Notice Board
2. GM (System), for uploading in CIL website
3. GM (M&S/Comm!), CIL, Kolkata
4. GM (M&S/Oprn.), CIL, Kolkata
5. GM/HOD (M&S) ECL/BCCL/CCL/NCL/SECL & WCL
6. HoD (M&S-FSA/Linkage), CIL, Kolkata
7. HoD (M&S), New Delhi

CHAPTER-8

LIST OF LABORATORY EQUIPMENTS AND USES IN BRIEF

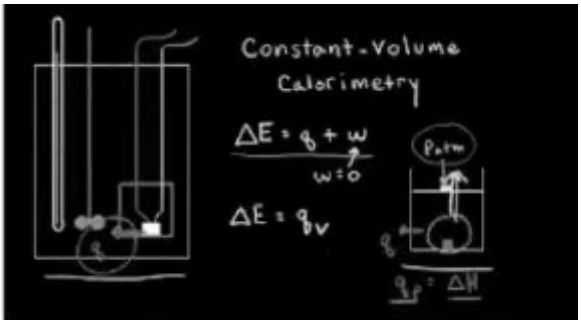
Sr. No.	Laboratory Equipment	Uses
1	Auto bomb Calorimeter	The instrument is used for the determination of GCV.
2	Electronic Weigh Balance	Electronic weighing balances are devices used in various industries, laboratories, and even households to **accurately measure the weight of objects.**
3	Muffle Furnace	Muffle Furnace is used for the determination of Ash at high-temperature (At 815 ±10° C)
4	Moisture Oven	Moisture Oven is used for the determination of Moisture at temperature (At 108 ± 2° C)
5	Thermocouple	The thermocouple is a simple, widely used component for measuring temperature.
6	Humidity Chambers	A humidity chamber is a specially designed environmental chamber used for determination of Equilibrated Moisture at 60 % RH and 40 ° C.
7	Hygrometer	This is an instrument which measures the humidity of air or some other gas: that is, how much water vapour it contains. Humidity measurement instruments usually rely on measurements of some other quantities such as temperature, pressure, mass and mechanical or electrical changes in a substance as moisture is absorbed.
8	Dry & Wet Bulb Thermometers	The instruments are commonly used to measure temperature and humidity.

Basic Principle of Bomb Calorimeter

The basic principle of the bomb calorimeter is **to measure the heat at a constant volume.** The heat that is measured using this apparatus is heat of combustion because the reaction is a combustion reaction.

The body at higher temperature releases heat while the body at lower temperature absorbs heat. The principle of calorimeter indicates the law of conservation energy, i.e. the total heat lost by the hot body is equal to the total heat gained by the cold body.

Bomb calorimeter consists of a strong steel vessel (called bomb) which can stand high pressure when the substance is burnt in it. Hence, it is called bomb calorimeter.



In this technique, a sample is burned under constant volume in a device called a bomb calorimeter. The amount of heat released in the reaction can be calculated using the equation **q = -CΔT,** where C is the heat capacity of the calorimeter and AT is the temperature change.

Is a bomb calorimeter a closed system?

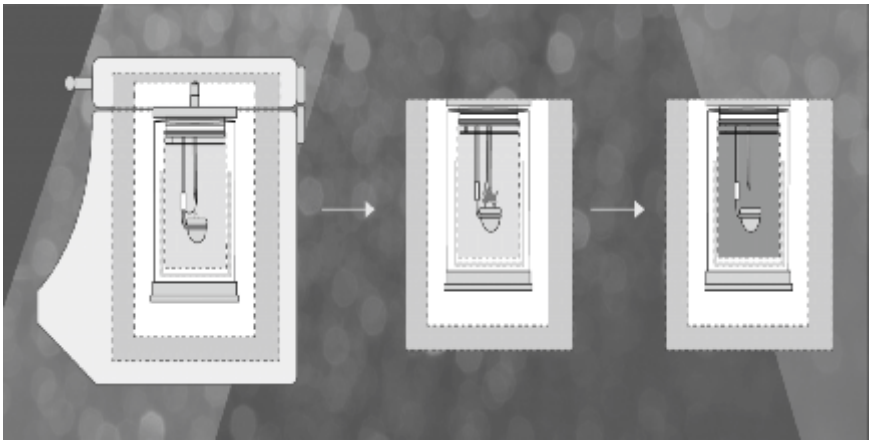
The bomb, with the known mass of the sample and oxygen, form a closed system - no gases escape during the reaction. The weighed reactant put inside the steel container is then ignited.

In short, the process of a calorimeter involves measuring the heat of a fuel sample when burned under stable temperature conditions to evaluate the heating energy of the fuel sample. The fuel sample can be a solid or liquid, but not a gas.

Our calorimeters require approximately 0.5g of sample matter (i.e. Coal) weighed in a crucible. We need to have the weight entered with four decimal places (i.e. 0.4972g). Place crucible inside the stainless steel container ("the bomb vessel") and fill bomb vessel with 30 bar (435psi or 30 atm) of pure oxygen.

Place the filled bomb vessel inside the calorimeter and close the lid. The bomb vessel is now sealed and isolated from outside temperature influences. Once the bomb vessel temperature has stabilized in the bomb well, the sample is then ignited.

An electrical ignition charge instantly heats the ignition wire, which in turn burns the attached firing cotton. The burning cotton thread falls into the fuel sample below causing the sample to ignite.

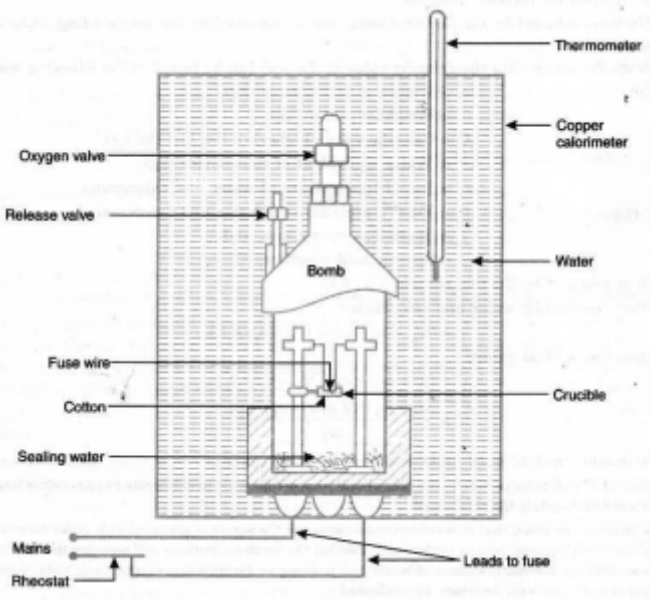


During the burning of the fuel sample, the crucible can momentarily rise to above 1000 Deg C with the pressure spiking to 3 x the initial pressure. Within seconds, the heat of the reaction starts to dissipate into the bomb vessel and the pressure starts to subside.

To accurately measure the temperature of the vessel, sensitive high resolution temperature sensors are used, measuring every 6 seconds for the duration of the determination.

Once the determination is complete, typically within 4 minutes, the calorimeter calculates the Calorific Value (CV) of the fuel sample. At this point in time, the bomb vessel is removed from the bomb well to be cooled. Typically the bomb vessel is now between 8 to 14 Deg C higher in temperature.

Once the bomb vessel is sufficiently cooled in a cooler, it can be reused again.



CHAPTER-9

SOP for Updating Data in ERP

वेस्टर्न कोलफील्डस लिमिटेड
Western Coalfields Limited
निर्देशक (तकनीकी) / (संचालन) का कार्यालय
Office of the Director (Technical)/(Operation),
कोल इस्टेट, सिविल लाइन्स, नागपुर 440001
Coal Estate, Civil Lines, Nagpur - 440 001 (MS)
Tel No: (0712) 2510516, (0712) 2510532
E-mail: dtop@coalindia.in CIN-U10100MH1975GOI018626

Ref. No. WCL/D(T)OP/Sectt/2023/753 Date: 14.03.2023

To
GM(Excav), GM(E&M), GM(M&S), GM(Finance), GM(P&P), GM(MM), CM(IED/ERP/Module owner - HCM), WCL HQ

Sub: SOP for Input Data Accuracy and accountability for proper Implementation of ERP.

Dear Sir,

WCL Board in 348th meeting held on 28/1/2023 has directed to prepare SOP for Input Data Accuracy and accountability for proper Implementation of ERP at various stages.

The directives were informed through e-Mail by CM/HOD(System) on 18/2/2023 & on 10/3/2023(copy attached).

You are directed to submit SOP Immediately for onward submission to WCL Board.

Yours faithfully,
14/3/23
Director (Technical)/OP,
Western Coalfields Limited.

Annexure - 1

SOP FOR SD MODULE FOR DATA MANAGEMENT AND MONITORING TEAM				
S.NO.	TEAM COMPOSITION	NATURE OF JOB	PERSON RESPONSIBLE	TASKS TO BE PERFORMED
1	Master Data Management Team	Maintenance of Master Data pertaining to Pricing Components and other misc configurations related to SD activities	SME SD, Commercial Section and SME SD-FICO (Sales Accounts) having Administration Access for Maintenance of table records	Timely maintenance of Master Data for uninterupted SD Module Activities
2	SD Activities Monitoring Team	Monitoring the SD Module activities like timely generation of Delivery Document, Shipping Doc, Post Goods Issue (PGI), Invoices	Operation Section-MIS, WCL HQ	Regular Monitoring to ensure that Area level activities are completed timely and identify and inform the lagging areas to Module Owner/Management for remedial action
3	SD Activities Monitoring Team	Monitoring the SD Module activities like timely generation of Delivery Document, Shipping Doc, Post Goods Issue (PGI), Invoices and initiation of refund to customers against the unlifted Quantity/ Excess Amount	Area Sales Manager, Nodal Officer (ERP)	Regular Monitoring and coordinating with concerned users at Areas as well as HQ to ensure that Area level activities are completed timely and Identify and inform the lagging mine/siding to Area Management and HQ for necessary action.
4	SD-QC Activities Monitoring Team HQ	(i) Timely entry of Sampling data (ii) Generation of Credit/Debit Memo request (iii) To cross check the number of CR/DR against the total entries.	QC Dept., WCL HQ	Regular Monitoring to ensure that Area level activities related to all the three are completed timely and Identify and inform the lagging areas to GM (QC)/Management for remedial action
5	SD-QC Activities Monitoring Team -Area	(i) Timely entry of Sampling data (ii) Generation of Credit/Debit Memo request (iii) To cross check the number of CR/DR against the total entries.	Area Nodal Officer (QC), Nodal Officer (ERP)	Regular Monitoring and coordinating with concerned users at Areas as well as HQ to ensure that Area level activities of SD QC are completed timely and identify and inform the lagging Lab timely to Area Management and HQ for necessary action.

Premchand Kanther
Chief Manager (CP)/QC

Indira Swarnalatha
Chief Manager (M&S)/IC-Road Sale

Dilip N. Ganvir
Sr. Manager (M&S)/IC Oprn

Ajay Pal Yadav
Manager (Fin)/Taxation
SD-FICO SME

Rajapriyan S
Manager (M&S)/Comml
SD SME

Annexure - 2

SOP FOR INPUT DATA ACCURACY AND RESPONSIBILITIES FOR SD MODULE USERS			
S. NO.	SD ACTIVITIES	NATURE OF TASK IN ERP	PERSON RESPONSIBLE
1	Customer Creation	New Customer details are required to be sent to CIL for creation as per the circulated format	(i) Commercial Section, WCL HQ for New Linkage Consumers (ii) Road Sale Section, WCL HQ for all Auction customers (iii) SME SD for all other non linked customers other than coal
2	Add/Modify/Delete Basic Customer details like Bank and Contact details	Add/Modify/Delete Basic Customer details like Bank and Contact details based on the request of customers	Road Sale Section and Commercial Section, WCL HQ
3	Offer to Service Providers for conducting Spot Auction	Add/Modify/Delete offer and send it to service providers for conducting Auction through Interface	Road Sale Section, WCL HQ for all customers
4	Verification of Auction Bidsheet and EMD Sheet received through Interface post Auction	Verification of Auction Bidsheet and EMD Sheet received through Interface post Auction with that of the bidsheet received in email from Service Providers	Road Sale Section, WCL HQ for all customers
5	Contract Creation	Contract Creation for New FSA/MOU and Other Linkage Consumers	Commercial Section, WCL HQ
		Contract Creation from Bidsheet and EMD Sheet for Auction Customers (Both Rail & Road)	Road Sale Section, WCL HQ
6	EMD Posting for Auction Event	Posting EMD in Customer Pool A/c and Thereafter at Customer ledger post creation of contracts	Associate Finance, Road Sale, WCL HQ
7	Maintenance of BG/SD/LC against Contracts	Mapping of BG/SD/LC against contracts and Monitoring thereon	Commercial Section, WCL HQ
8	Sales Order preparation and change in pricing components.	All Advance Road Mode despatch (Auction, Non Power FSA/FSA Linkage Auction) as per the prescribed time limit in the scheme and position/ loadability of Mines to deliver coal within validity period.	Road Sale Section, WCL HQ
		All Advance Rail Mode despatch and Road Mode (Power/IPPS/SHAKTI/Cost Plus/NRS Linkage Auction Rail to Road) as per the prescribed time limit in the scheme and Stock position/loadability of Siding.	Operation Section, WCL HQ
		All Sales Orders with Credit Payment Method issued for Rail/Road/MGR/Rope/Belt Mode to State and Central Power Gencos	Operation Section, WCL HQ
9	Proforma Invoice Creation	Timely Creation of Proforma Invoice for collection of advance/dues payment from customers.	Concerned Section, M&S, WCL HQ
10	Email of Proforma Invoice	After generation of Proforma Invoice, the Output (PDF) is sent to the registered email ID of the customer through ERP.	Concerned Section, M&S, WCL HQ

10/2023-SnM, WCL HO-WESTERN COALFIELDS LIMITED (Computer No. 1034331)
by RAJAPRIYAN, DM(SOM)(RP)-WCL-HQ, DEPUTY MANAGER(S&M), WESTERN COALFIELDS LIMITED 16/07/2024 12:25 PM

S. NO.	SD ACTIVITIES	NATURE OF TASK IN ERP	PERSON RESPONSIBLE
11	Mapping of Sales Order against 11 the Programme ID in FOIS Cockpit of ERP	Timely mapping of Sales Order against the Programme ID in FOIS Cockpit and release of rakes for creating delivery document by Siding	Operation Section, M&S, WCL HQ
12	Sales Order Issuance (Advance Payment)	After receipt of payment in case of advance payment, Sales Orders are issued after checking the requisite amount and Quantity	Officer (M&S) Road/Rail, Associate Finance Road/Rail and Sectional Head Road/Rail
	Sales Order Issuance (Non Advance Cases)	Sales Order is released after checking the price and Quantity	Officer (M&S) Rail, Commercial Section and Sectional Head Rail
13	Payment, EMD and TCS Posting	Verification of payment posting received through Bank Interface. Posting Bid Security, EMD (only Auction) as advance and TCS posting verification in case of Traders/SNA and TDS if any. Posting of Differential Amount in Sales Orders arising out of price/taxes and levies during/post lifting and other bank receipts.	Associate Finance, Road Sale/Rail Sale, WCL HQ
14	Email of Sales Order	After generation of Sales Order, the Output (PDF) is sent to the registered email ID of the customer through ERP.	Concerned Section, WCL HQ
15	Capturing Internal Transportation Data in ERP	Capturing internal transportation data from one storage location to another at the earliest for making stock available for delivery creation, PGI which are pre-requisites for timely Invoice creation	Despatch Incharge, Mines in co-ordination with Manger of Mines and Siding Incharges
16	Crushing Process	Capturing vendor-wise, Crusher-wise crushed quantity on daily basis at the earliest for making stock available for delivery creation, PGI which are pre-requisites for timely Invoice creation	Despatch Incharge, Mines in co-ordination with Manager of Mines and CHP Incharge
17	Delivery Document Creation for Road Mode	Creation of Delivery Document within 2 days from the despatch for Road Mode	Despatch Incharge for Road, Mines
	Delivery Document Creation for Other Modes (Rope, Belt & MGR)	Creation of Delivery Document within Next day of despatch	Concerned Incharges of Belt/Rope/MGR, Area
	Delivery Document Creation and Shipping Document for Rail Mode	Creation of Delivery Document within 3 days from the date of rake movement for Rail Mode desapatch.	Siding Incharges, Area
18	Post Goods Issue (PGI)	Creation of Post Goods Issue (PGI) through background job for Road. Any failed PGI due to stock deficit has to be completed immediately after creation of delivery document. For Other Modes PGI has to be completed immediately after generation of Delivery Document till such time Auto PGI is enabled..	Despatch Incharge for Road, Rope, MGR and Belt and Siding Incharges for Rail Mode
19	Invoice Generation	Generation of Invoice from the due list after necessary checking.	Associate Finance, Area
20	Accounting Document	Release of Invoice to accounting and IRN generation	Associate Finance, Area
21	Email of Tax Invoice with IRN	After generation of Tax Invoice, the Output (PDF) is sent to the registered email ID of the customer through ERP.	Associate Finance, Area

by RAJAPRIYAN, OM(SHM)(RP)-WCL-HO, DEPUTY MANAGER(SSM), WESTERN COALFIELDS LIMITED

S. NO.	SD ACTIVITIES	NATURE OF TASK IN ERP	PERSON RESPONSIBLE
22	For Letter of Credit (LC) Payment Method Cases	The Delivery document, Shipping Document, PGI and Invoice, Release to Accounting and IRN genration to be completed within 2-3 days.	Siding Incharges and Associate Finance
23	EMD Forfeiture HQ (for Short booking)	Processing of EMD forfeiture for Short booking quantity in Auction after due date of payment. Officer M&S shall initate the forfeiture process and Sectional Head shall approve it in ERP. Associate Finance shall check and release to accounting.	Officer (M&S)/Road, Sectional Head (Road Sale) and Associate Finance, WCL HQ
24	Processing Customer Refunds -Road	As per the existing SOP, the Despatch Incharge shall expire the Sales Order and input the reason for short lifting. Then the refund is approved by ASM, Associate Finance Area, AGM, Sectional Head (Road), Associate Finance-Road and prepare the voucher and send it to Cash Section for making payment to customer.	Despatch Incharge-Mine, ASM, Associate Finance-Area, Area General Manager, Sectional Head (Road) HQ Associate Finance (Road) HQ
25	Sampling Data Entry	Capturing CIL Lab results, Third Party results, Referee Results, Joint Sampling Results and Weighted Avg. results.	Lab Technician, Area Lab
26	Credit/Debit Memo Request Generation	Generation of Credit/Debit Memo Request based on difference in analyzed grade vis a vis declared grade (Invoice grade), which is automatically fetched by the system based on the input data.	Lab Technician, Area Lab
27	Approval of Credit/Debit Memo Request	Debit/Credit Memo request approval through a Worflow Screen to check the correctiveness of data captured by ANO (QC) and ASM. ANO (QC) shall verify the data pertaining to Quality parameters and ASM will verify other data before approval.	ANO (QC) and ASM
28	Generation and Issuance of Credit Debit Note	The Credit/Debit Note is generated by Associate Finance based on the Credit/Debit Memo Request approvals provided by ANO (QC) and ASM after verification. Credit/Debit Note is released to Accounting and IRN generation.	Associate Finance, Area
29	Stone Compensation (Process to be started)	ANO (QC) to input Stone Quantity for a Ship to Party as per provision of FSA or guideline in vogue from CIL for approval by ASM and for generation of Invoice by Associate Finance, Area	ANO (QC), ASM & Associate Finance, Area
30	Moisture Compensation (Pending development by TechM)	ANO (QC) to input Moisture Quantity for a Ship to Party as per provision of FSA or guideline in vogue from CIL for approval by ASM for generation of Invoice by Associate Finance, Area	ANO(QC), ASM & Associate Finance, Area
31	Email of Debit/Credit Note Invoice with IRN	After generation of Credit/Debit Note, the Output (PDF) is sent to the registered email ID of the customer through ERP.	Associate Finance, Area
32	Providing data for GST return filing	Completeing the Invoices of preceding month and provide data for GST return filing latest by 5th of every month.	Associate Finance Area and Associate Finance WCL HQ
33	Data for filing TCS to Taxation Dept	Finalization of data for filing TCS latest by 3rd of every month for the preceding month Sales Orders.	Associate Finance Road, WCL HQ and Associate Finance Rail, WCL HQ

WESTERN COALFIELDS LIMITED

by RAJAPRIYAN, DM(S&M)-WCL-HQ, DEPUTY MANAGER (S&M), WESTERN COALFIELDS LIMITED

NOTE	Auto generation of Invoice post PGI creation is envisaged and when rolled out, Invoice shall get generated from the Concerned User creating Delivery Document. Till such time Associate Finance shall generate Invoices. In case If Auto PGI, Auto Invoice fails due to stock deficit or User lock then it has t o be created manually by the user generating Delivery document.
	#-Future development-After Credit/Debit Memo Request approval, Debit/Credit Note shall be generated through a background process automatically and Associate Finance, Area shall verify and release to Accounting and generate IRN

Premchand Kanther
Chief Manager (CP)/QC

Dilip N. Ganvir
Sr. Manager (M&S)/IC Opl

Ajay Pal Yadav
Manager (Fin)/Taxation
SD-FICO SME

Indira Swarnalatha
Chief Manager (M&S)/IC-Road Sale

Rajapriyan S
Manager (M&S)/Commi
SD SME

5 DECADES OF UNEARTHING ENERGY

वेस्टर्न कोलफील्ड्स लिमिटेड

Western Coalfields Limited

(मिनीरत्न कंपनी) (A Miniratna Company)

(कोल इंडिया लि. की अनुषंगी कंपनी) (A Subsidiary of Coal India Limited)

गुणवत्ता नियंत्रण **(Quality Control)**

Disclaimer:
1] Only for ready learning any commerical dispute only follow the latest FSA/TPSA.
2] No legal obligation.
3] In case any problem kindly followed english word.

CREATION OFFSET WORK : 98230 33083