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## EDITORIAL

*We are back with yet another issue of the ENVIS newsletter!!!*

Ministry of Coal, GoI report states that India produced a total of 730.87 million tonnes of raw coal in 2019-20, with around 94 percent (i.e. 690.39 million tonnes) of the coal was produced from open-cast mining during the mentioned period. Blasting is the most common method of rock breakage used in mining all around the world. This may be probably due to various advantages such as cost-effectiveness, efficiency, convenience, and the ability to break even the hardest rock. However, only a fraction of the explosive's entire energy is utilised in breaking rocks, with the remainder being dissipated. Ground vibrations have become a crucial environmental and social consequence as mining activities have increased in places close to human populations, causing human irritation and structural damage. The study for the reduction of ground vibration, involving experimental blasts in dragline and large capacity shovel benches, using electronic detonators, on account of its advantages in providing precision delay and maximizing the utilization of explosive energy was carried out in Jayant Mine of NCL.

The current issue of the ENVIS Newsletter features gazette notifications (MOEFCC, MOC & MOM), news of the mining environment, important parliament questions (MOC & MOM), list of the environmental clearance for non-coal mining and a glimpse of events conducted during July to September, 2021.

EDITOR



# USE OF ELECTRONIC DETONATORS FOR REDUCING THE SOCIAL AND ECONOMIC IMPACTS OF BLASTING IN LARGE OPENCAST MINE: CASE STUDY

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## Abstract

India has reached the forefront of world coal scene, largely due to rapid increase in contribution from opencast coal mines. The share of dragline operated opencast mine is also more than 45% of total coal production by opencast mining in India. But India with a very large density of population, is in a very disadvantageous position in acquiring large tracts of land for opencast coal mining with the concurrent problem of depletion of forest area, resettlement and rehabilitation of people affected by opencast mining projects. The study for reduction of ground vibration, involved experimental blasts in dragline and large capacity shovel benches, using electronic detonators, on account of its advantages in providing precision delay and maximizing the utilization of explosive energy was carried out in Jayant Mine of NCL. Blast design parameters, including programming of electronic detonators, were varied for different blasts of dragline and shovel benches, during the study, to find out the resultant profile of ground vibrations at strategic locations in the Medhauli village. 'Stemming retention' observed in the deep hole blasting, even for a few milliseconds, has demonstrated better utilization of explosives energy, resulting in finer fragmentation and better heaving action (loose muck piles). The paper deals in optimization of blast design parameters, while using electronic detonators for deep hole blasting, for minimizing the surface ground vibration around the dip side dwellings, with a view to mitigate the social and economic impact of mining operation.

**Keywords :** Electronic detonators, NONELS, Fragmentation, Vibration, Air over-Pressure, Social impact

## 1.0 Introduction

Blasting is the principal method of rock breakage in mining throughout the world. This may be probably due to distinct advantages like economy, efficiency, convenience and ability to break the hardest rock [1]. However, only a portion of the total energy of the explosive is consumed in breaking rocks while the rest is dissipated. With increasing mining activities in areas close to human settlements, ground vibrations has become a critical environmental and social impacts as it can cause human annoyance and structure damage [2].

The mining & explosives industries rapidly embracing new technology in order to improve overall performance, efficiency & cost effectiveness in various types of blasting & also to mitigate its adverse effect [3, 4]. Most recently technology that is developed to improve techno-economics & reduction of adverse effects in usage of explosives & blasting is "precise & accurate delay timing-Digital & electronic detonators system". Accurate & flexible timing allows blasters to make small hole to hole & row to row changes to account for drilling in accuracies [5, 6, 7]. The mining method at optimum is multi-seam mining, using dragline in successive parallel strips 80 m meters wide and upto 2000 m long. This method involves removing the top soil to a depth of approximately 180 meters, drilling and blasting the overlaying waste material and the removal of this overlaying burden by draglines. The timing/delay element of blasting of blast hole firing is enabled through a delay element in the detonator.

In the pyrotechnic detonator this relates to burning through some material before the fuse head is reached. The delay element length would determine the delay period [4, 5].

The long awaited arrival of high accuracy electronic detonator provides new opportunities to the explosive end user. The blasting community can become better equipped and able to improve upon the current approaches and methodologies used in blast design [3, 7]. The last few years have seen dramatic progress in blasting technologies, the quality and performance of products. The high accuracy detonator brought with it new meaning to one of the fundamental aspects of blast design: accurate controlled sequence of blast hole detonation is one of the most critical parameters that has a direct impact on overall blast performance in many ways.

## 2.0 Field Description

Jayant Opencast mine is running opencast mine in Northern Coalfields limited which is a subsidiary of Coal India Ltd., since 1975 and which is a prime producer of non-coking coal, mainly power grade, in the country. It operates coal mines in the states of M.P. and U.P. Presently Jayant OCP is a 15.5 MTY project in which the excavation started in the year 1976-77 and the approximate depth of the mine is approaching 180 meters. The project is 3.6 km wide along strike length and the dip side length is 3.5 km, whereas the average lead of the mine is 3.5 km. (The environmental clearance for annual coal production from the project is 15.5 M. Tes.). The area geographically lies between Latitudes 24°06'45" to 24°11'15" and longitude 82°36'40" to 82°41'15". The Project is situated on a high plateau ranging from 300 m to 500m above M.S.L. The rocks are of Lower Gondwana formation. There are three coal seams namely Turra, Purewa Bottom and Purewa Top. Direction of strike is towards E-W with board swings. The dip of the coal seam is 1° to 3° in northerly direction. The overview of the Jayant Project is presented in Fig. 1. Fig. 2 depicts the cross sectional view of the Jayant project.

## 3.0 Impacts of blasting

Deployment of large draglines and large capacity shovels requires deep hole blasting with high explosive consumption. In such circumstances reduction of impacts of blasts in the nearby villages, while ensuring the efficiency of mining operation is a challenging task. The main impacts due to blasting are

1. Ground Vibration
2. Noise / air blast over pressure
3. Flyrock
4. Human Response.

The psychological response, particularly the fear, real or imaginary, for structural damage to the persons residing in the vicinity of the mines like Medhauli village, Singrauli, is undoubtedly an important additional factor.

Ground vibration is considered as one of the most undesirable side effects of blasting. It can produce structural damage to the residential buildings in the villages near the mines and often hear about the

complaints made by the residents which may hinder the normal mining operations. The three factors that determine the intensity of the ground vibration are peak particle velocity (PPV), its duration and the frequency. The PPV can be predicted by using the below formula

$$V = k \left( \frac{D}{D_{0.5}} \right)^{-b}$$

where v= Peak Particle Velocity

k,b = Mine constants

D= Distance of the point from the blasting site

Q= Maximum charge per delay



Fig. 1. Overview of Jayant Project.



Fig. 2. Cross sectional view of Jayant Project.

### 3.0 Methodology

Wedge The Method of Work adopted at Jayant Project is Dragline-cum-Shovel-Dumper combination mining. Two flanks namely East and West are operating in the length of 1.8 KM and 2.0 KM respectively with a total length of 3.8 KM. The Coal Seams are dipping towards North and the Sump is located at intersection point of both flanks. An average of 80 meter width is taken in the Dragline Cut with average working height 40 meters and rest of the parting i.e. 15-20 meters is taken by Shovel-Dumper combination. There are two Draglines 15/90 and 24/96 in West side and two nos. 24/96 Draglines are in the Eastern side. There are two Mid-Entries i.e. East and West Mid-Entry apart from Central Entry to mine out Turra Seam. These Entries facilitate the Draglines to operate continuously without idling while taking the new Seating in the next Cut. Also the Lead of Dumpers reduces with the provision of Mid-Entries. The OB cover varies from 10 meter at Outcrop to about 180 meter peak. Shovel and Dumper combination are deployed for Turra, Purewa Top and Bottom Coal Seam and all OB benches beyond the dragline benches. In the Shovel-Dumper combination 40 meter width and 15 meter height is taken as a standard practice. Average working height of dragline bench is 32 to 35 meters with a cut width of 80 meters. The normal drilling pattern for Dragline bench is 10 X 12 meters with 259/311 mm dia. Drills and for Shovel-Dumper combination the pattern is 9 X 11 meters with 259 mm dia. Drills.

### 3.1 Blast design parameters for electronic detonators and detonating fuse

Electronic Delay Detonators are perfect initiation systems for blasting optimization such as fragmentation optimization, vibration control or slope stability improvement. It has a number of advantages, e.g. higher precision, improved blasting result owing to a wide range of delays, reduction of ground vibration, noise, flyrock and safe use in extraneous electric environments, and the possibility of limiting the amount of detonators per shot. It has some disadvantages too, e.g. higher cost per detonator and the need for intensive training for users. The typical setup of electronic detonators is depicted in fig. 3.

Detonating fuse is an initiation material or explosive consisting of a flexible line with a core of detonating explosive (a high explosive, e.g. PETN) with a small enough critical diameter to propagate a detonation. The core is wrapped with textile yarns. Usually the cord is reinforced or completely enclosed in a strong waterproof outer plastic cover. It must itself be initiated by a blasting cap.

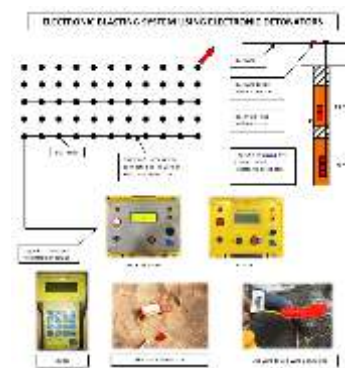


Fig. 3. A typical set up of Electronic detonation system.

Experimental blasts were conducted at Dragline bench of Jayant East and West. Among these some were conducted using Detonating fuse and some were conducted using Electronic detonators. Blast induced vibrations were recorded using Minimate Plus seismograph of Instanetel Ltd. at different locations. The videos of blasting, pre-blast and pro blast pictures have been recorded to analyse the fly rock and fragmentation of the rock. The parameters such as borehole diameters, hole depth, burden, spacing, number of holes, maximum charge per delay in each of the blasts have also been recorded. A typical blast design used for detonating fuse at Jayant Project is depicted in Fig. 4. Blast firing pattern and its results using electronic detonators for dragline benches of Jayant Project is presented in Fig. 5 & 6. TABLE 1 represent the blast design parameters adopted at Jayant project for electronic detonators. Fig. 7. The impact of in the hole delay and hole to hole delay were analysed for electronic delay detonators (Fig. 7).

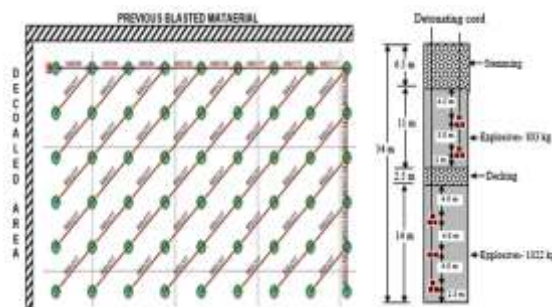


Fig. 4. Blast design used for detonating fuse at Jayant Project.



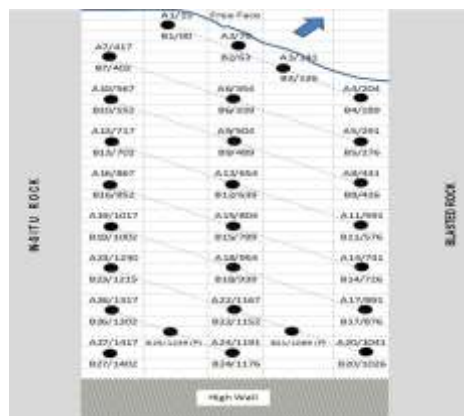


Fig. 5. Blast design firing pattern for electronic detonators at Jayant Project.



Fig.6. Pre and post blast images of a blast conducted at Jayant project using Electronic Detonators

Table 1. Blast Design Parameters adopted in Jayant Project for Electronic detonators.

Blast No.	25
Date of Blast	14.05.2016
Name of Mine	Jayant, NCL
Face location	East Dragline bench
Strata	Medium Hard Strata (O8)
Face condition	Face choked one side with blasted material
Bench Height	28.0 mts
Depth of drilled holes	29.0 mts
Dia. Of drilled holes	269 mm
No. of rows	8
Pattern of holes	Square pattern
Nos. of holes	25+2(Pilot holes)
Average spacing	10 mts
Average Burden	10 mts
Sub grade drilling(if any)	1 m
Name and type of explosive used	ROCL (BHP) - SMI: - 40149 kgs Cast booster- Solar - 72.5 kgs
Type of initiation used	Electronic Detonator- Solar
Explosive charge per Hole	1550 kgs
Maximum charge per delay	1550 kgs
Percentage of booster	0.2%
No. of decks(if any)	One deck - 3mts
Stemming Material used	Drill cuttings
Water column in hole(if any)	7-9 mts
Length of stemming (top)	3.5
Volume of rock blasted	72000 cu.m
Powder Factor	1.79 cu.m / kg
Blast results	
i. Fragmentation	Very Good
ii. Throw	10-12 mtrs from face on previous blasted side
iii. Percentage of boulders	1 to 2 %
iv. Vibration	2.76 mm/sec at 3 km, 3.03 mm/sec at 2 km distance
v. Noise	Very low
vi. Muck Pile profile	Power trough of 4mts at back

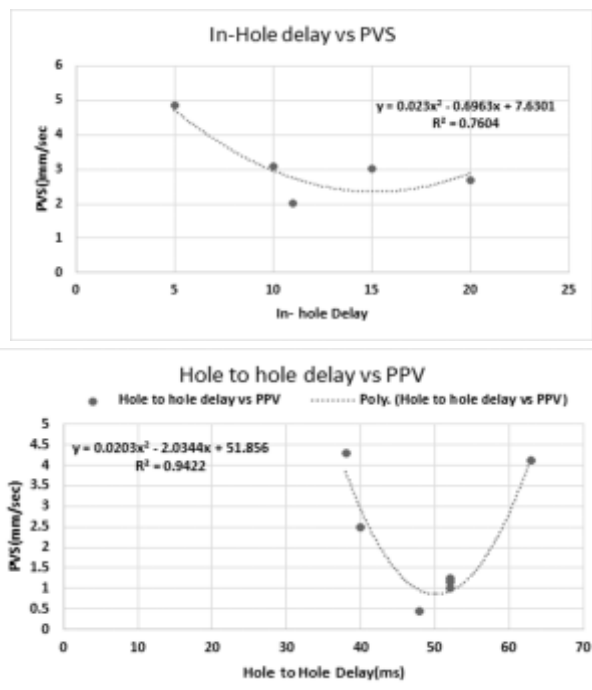


Fig. 7. Impacts of in the hole delays and hole to hole delays on PVS using electronic delay detonators.

#### 4.0 Analysis of blast vibration data

In total 20 blasts were conducted. 10 blasts were performed using electronic delay detonator and 10 blasts were executed with detonating fuse which is previously being used for dragline bench blasts. Blast induced ground vibration data were recorded at various distances. The data collected from both initiation systems were analyzed to find out the impact of Electronic delay detonator on recorded vibration data and fragmentation of the particular blasts. The main important parameters which decide the fragmentation level of particular blasts are burden to hole diameter ratio, spacing to burden ratio, stemming column length, stiffness ratio, explosives amount and its type, initiation mode and charge/powder factor. The maximum vibration recorded in case of electronic detonator was 5.03 mm/s at a distance of 776 m from the blast face whereas the blast conducted with the detonating fuse generated ground vibration of 10.89 mm/s at a distance of 720 m. The regression plot of vibration data recorded from both electronic and detonating fuse at their respective scaled distances is presented in Figure 8.

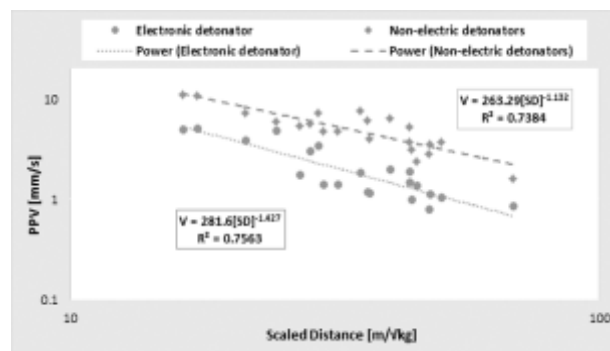


Fig. 8. The regression plot of vibration data recorded at their respective scaled distances.

#### 4.1 Fragmentation Analysis

The fragmentation analysis of the fragmented rocks from both electronic detonator and detonating fuse were accomplished with the help of WipFrag software. The comparative analysis shows significant improvement in fragmentation in case of electronic detonators in comparison to detonating fuse (Fig. 9). The process involved in fragmentation analyses is depicted in Fig. 10 11 and 12. A comparative percentage sieve data of fragments at Jayant Project is depicted in Figure 12.



Fig. 9a. A comparative view of the fragmented rock of the blasts conducted at dragline bench of Jayant project.



Fig. 9b. Over view of fragmentation resulted due to blasting at East D/L bench using E-det.

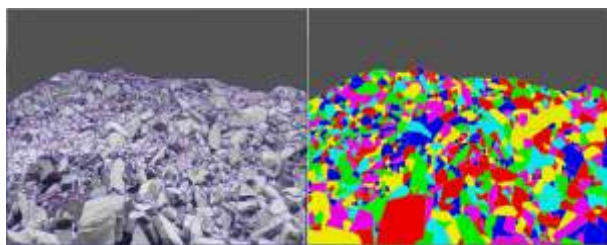


Fig. 10. Netting and contouring of fragmented material shown in Fig. 9.

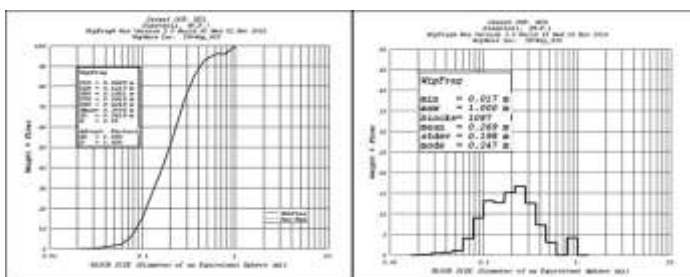


Fig. 11. Histogram and cumulative size view of fragmented blocks.

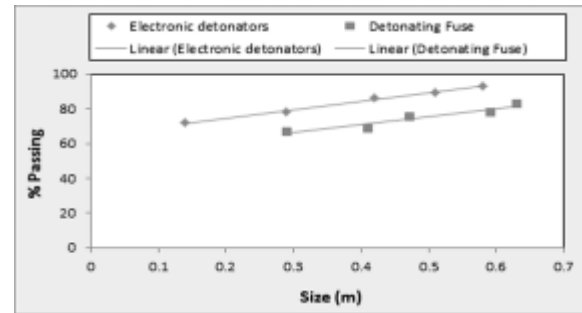


Fig. 12. A comparative percentage sieve data of fragments at Jayant Project.

#### 4.2 Cost Analysis

Explosive consumption and their cost has been compared for cost analysis. It is evident that the cost of blasting using e-det is about 3% more than the cost of blasting using D-fuse, but it has enormous advantages as stated at the start of this paper (TABLE 2). There is a significant decrease in PPV and increase in frequency observed for Electronic detonating system in comparison to detonating fuse (TABLE 3). The use of electronic detonators is little bit costlier than detonating fuse but overall production and productivity has increased.

Table 2. Explosive consumption and their cost.

Item Used	40 Holes Detonating FUSE	Cost in Rs.	40 HOLES Electronic detonator	Cost in Rs.	40 HOLES Electronic detonator	Cost in Rs.
D-FUSE	5325 M	15833.25	00	0	+	0
MS -connector	101 NOS.	21832.24	00	0	+	0
Electric Detonator	1 NO.	5	00	0	+	0
Electronic Detonator	00	0	136 NOS.	90074.00	132	102498.00
CB in Kg	136.75	47965.06	141.50	40631.13	166.25	58312.19
SME in kg	72809.00	2064803.24	75901.00	2152552.40	89576.00	2540375.00
Vol. of rock blasted (in m³)	113256Cum		136689Cum		137904Cum	
Total cost of explosive	Rs 2149680.79		Rs 2292257.48		Rs 2701185.55	
Cost of Blasting per Cum	Rs 18.98		Rs 19.64		Rs 19.59	

Table 3. Impacts of detonating fuse and E-det on PPV and frequency.

S. No.	PPV (mm/s)	Frequency (Hz)	Quantity of Exp (Kg)	Location
<b>Data while blasting with Detonating fuse</b>				
1.	6.40	7	79087.0	Madhuli
2.	6.0	6	78891.95	Hanuman Mandir
3.	3.06	5	77827.75	NCL HQ.
<b>Data while blasting with electronic-detonator</b>				
4.	3.43	13	37130.75	Hanuman Mandir
5.	1.89	17	55555.75	Singrauli
6.	1.29	18	76042.50	Madhuli

#### 5.0 Conclusions

Based on the study, the following conclusions are drawn:

- Results are quite encouraging analysis confirmed that the fragmentation in same type of rocks improved substantially by use of digital detonator, in comparison to the conventional D-fuse system, for same amount of explosive used.
- Better blast efficiencies/fragmentation has been acknowledged by the dragline production. While mucking, ease in digging and handling had been reported by dragline operator.

- iii. It is being envisaged that there will be prominent increase in life of dragline bucket, its tooth picks, adaptors and drag/ hoist rope used during operation on account of better blast fragmentation.
- iv. No complaints have been received from local residents in the vicinity of the mine boundary in respect of the blasts by electronic detonator.
- v. In the hole delays between 10 to 12 ms results in to less PPV generation whereas hole to hole delay of 45 to 52 ms provided better results.
- vi. Blast frequency records for blasting with electronic detonator in comparison to prevalent technology using detonating fuse shows a significant increase i.e. good as far as damages in structures are concerned.
- vii. The use of electronic detonators is little bit costlier than detonating fuse but overall production and productivity has increased.

Electronic detonators are extremely important tools for future blasting needs, in varied conditions, for the reason they are precise in delay timing, field programmable, and much safer to use. They can reduce mining costs, when used technically correct. They can help mines in blast control and thus meet difficult environmental conditions. Good fragmentation and loose muck pile achieved in the primary blasts are very crucial for further downstream operations. It has been observed that the electronic delay detonators improve the blasting performance for open pit operations

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#### NOTIFICATIONS

#### MINISTRY OF ENVIRONMENT, FOREST & CLIMATE CHANGE, GOVT. OF INDIA, NEW DELHI

**S.O. 4029 (E) [29.9.2021]** Amendment in the notification published by the Government of India in erstwhile Ministry of Environment and Forests vide number S.O. 1545 (E), dated the 25th June, 2009 for declaration of Mount Abu and its surrounding region in the State of Rajasthan as an Eco-sensitive Zone was Published in the Gazette of India, Registered. NO. D. L.-33004/99 Part - II, Section - 3, Sub - Section (ii) on 29th Sept., 2021.

**S.O. 4021 (E) [28.9.2021]** Draft Notification of notifies an area to an extent varying from 0.36 kilometres to 12.46 kilometres around the boundary of Panidehing Bird Sanctuary, in Sibsagar District in the State of Assam as the Ecosensitive Zone was Published in the Gazette of India, Registered. NO. D. L.-33004/99 Part - II, Section - 3, Sub - Section (ii) on 28th Sept., 2021.

**S.O. 3922 (E) [21.9.2021]** Notifies an area to an extent varying from 50 meters to 11.5 kilometres around the boundary of Coringa Wildlife Sanctuary, in East Godavari district in the State of Andhra Pradesh as the Coringa Wildlife Sanctuary Eco-sensitive Zone was Published in the Gazette of India, Registered. NO. D. L.-33004/99 Part - II, Section - 3, Sub - Section (ii) on 21st Sept., 2021.

**S.O. 3921 (E) [21.9.2021]** Notifies an area to an extent varying from 0 (zero) to 3.0 kilometres around the boundary of Binsar Wildlife Sanctuary, in Almora and Bageshwar Districts in the State of Uttarakhand as the Binsar Wildlife Sanctuary Eco-sensitive Zone was Published in the Gazette of India, Registered. NO. D. L.-33004/99 Part - II, Section - 3, Sub - Section (ii) on 21st Sept., 2021.

**S.O. 3884 (E) [20.9.2021]** Amendment in the notification of the Government of India in the Ministry of Environment, Forest and Climate Change, published in the Gazette of India, Extraordinary, Part II, Section 3, Subsection (ii), vide number S.O. 554(E) dated the 30th January, 2019 was Published in the Gazette of India, Registered. NO. D. L.-33004/99 Part - II, Section - 3, Sub - Section (ii) on 20th Sept., 2021.

**S.O. 3794 (E) [15.9.2021]** Constitutions the Tamil Nadu Coastal Zone Management Authority was Published in the Gazette of India, Registered. NO. D. L.-33004/99 Part - II, Section - 3, Sub - Section (ii) on 15th Sept., 2021.

**S.O. 3747 (E) [10.9.2021]** Amendments in the notification of the Government of India in the Ministry of Environment, Forests and Climate Change, published in the Gazette of India, Extraordinary, Part II, Section 3, Subsection (ii), vide number S.O. 3978(E), dated the 14th August, 2018 was Published in the Gazette of India, Registered. NO. D. L.-33004/99 Part - II, Section - 3, Sub - Section (ii) on 10th Sept., 2021.

**S.O. 3721 (E) [14.9.2021]** Draft Notification of notifies the area to an extent of 0.05 kilometres to 3.4 kilometres around the boundary of Tal Chhapar Wildlife Sanctuary in the State of Rajasthan as the Tal Chhapar Wildlife Sanctuary, Ecosensitive Zone was Published in the Gazette of India, Registered. NO. D. L.-33004/99 Part - II, Section - 3, Sub - Section (ii) on 14th Sept., 2021.

**S.O. 3688 (E) [10.9.2021]** Constitutions the Lakshadweep Coastal Zone Management Authority was Published in the Gazette of India,



Registered. NO. D. L.-33004/99 Part - II, Section - 3, Sub - Section (ii) on 10th Sept., 2021.

**S.O. 3683 (E) [10.9.2021]** Notifies an area to an extent of 0 (zero) to 9.6 kilometres around the boundary of Bhainsrodgarh Wildlife Sanctuary in the district of Chittorgarh in the State of Rajasthan as the Bhainsrodgarh Wildlife Sanctuary Eco-sensitive Zone was Published in the Gazette of India, Registered. NO. D. L.-33004/99 Part - II, Section - 3, Sub - Section (ii) on 10th Sept., 2021.

**S.O. 3682 (E) [10.9.2021]** Notifies an area to an extent varying from 0.38 kilometre to 2.042 kilometres around the boundary of Sri Renuka Ji Wildlife Sanctuary, in Sirmour District in the State of Himachal Pradesh as the Sri Renuka Ji Wildlife Sanctuary Eco-sensitive Zone was Published in the Gazette of India, Registered. NO. D. L.-33004/99 Part - II, Section - 3, Sub - Section (ii) on 10th Sept., 2021.

**S.O. 3653 (E) [9.9.2021]** Amendments in the notification of the Government of India, Ministry of Environment, Forest and Climate Change, published in the Gazette of India, Extraordinary, Part II, Section 3, Sub-section (ii) vide number S.O 1198 (E), dated the 12th March, 2021 was Published in the Gazette of India, Registered. NO. D. L.-33004/99 Part - II, Section - 3, Sub - Section (ii) on 9th Sept., 2021.

**S.O. 3631 (E) [6.9.2021]** Constitutions the State Level Environment Impact Assessment Authority, National Capital Territory (NCT) of Delhi was Published in the Gazette of India, Registered. NO. D. L.-33004/99 Part - II, Section - 3, Sub - Section (ii) on 6th Sept., 2021.

**S.O. 3592 (E) [27.8.2021]** Amendments in the notification of the Government of India in the erstwhile Ministry of Environment and Forests, published vide number S.O. 133(E), dated the 4th February, 2003 for declaration of Matheran and surrounding region in the State of Maharashtra as an ecologically fragile area was Published in the Gazette of India, Registered. NO. D. L.-33004/99 Part - II, Section - 3, Sub - Section (ii) on 27th Aug., 2021.

**S.O. 3494 (E) [25.8.2021]** Draft Notification of notifies an area to an extent varying from 294 metres to 16.32 kilometres around the boundary of Deepar Beel Wildlife Sanctuary, in Kamrup (Metropolitan) District in the State of Assam as the Eco-sensitive Zone was Published in the Gazette of India, Registered. NO. D. L.-33004/99 Part - II, Section - 3, Sub - Section (ii) on 25th Aug., 2021.

**S.O. 3460 (E) [23.8.2021]** Constitutions the Odisha Coastal Zone Management Authority was Published in the Gazette of India, Registered. NO. D. L.-33004/99 Part - II, Section - 3, Sub - Section (ii) on 23rd Aug., 2021.

**S.O. 3371 (E) [16.8.2021]** Notifies an area to an extent of 100 metres uniform around the boundary of Nahar Wildlife Sanctuary, in Rewari District in the State of Haryana as the Eco-sensitive Zone was Published in the Gazette of India, Registered. NO. D. L.-33004/99 Part - II, Section - 3, Sub - Section (ii) on 16th Aug., 2021.

**S.O. 3288 (E) [13.8.2021]** Constitutions the State Level Environment Impact Assessment Authority, Gujarat was Published in the Gazette of India, Registered. NO. D. L.-33004/99 Part - II, Section - 3, Sub - Section (ii) on 13th Aug., 2021.

**S.O. 3271 (E) [12.8.2021]** Constitutions the State Level Environment Impact Assessment Authority and the State Level Expert Appraisal Committee (SEAC) Bihar was Published in the Gazette of India,

Registered. NO. D. L.-33004/99 Part - II, Section - 3, Sub - Section (ii) on 12th Aug., 2021.

**S.O. 3169 (E) [9.8.2021]** Constitutions the Regional Empowered Committee at Integrated Regional Office, Jammu was Published in the Gazette of India, Registered. NO. D. L.-33004/99 Part - II, Section - 3, Sub - Section (ii) on 9th Aug., 2021.

**S.O. 2918 (E) [23.7.2021]** Draft Notification of notifies the area to an extent varying from 0.277 kilometers to 2.10 kilometers around the boundary of Nandini Wildlife Sanctuary, in the Union Territory of Jammu and Kashmir as the Nandini Wildlife Sanctuary Eco-sensitive Zone was Published in the Gazette of India, Registered. NO. D. L.-33004/99 Part - II, Section - 3, Sub - Section (ii) on 23rd July, 2021.

**S.O. 2859 (E) [16.7.2021]** Following further amendments in the said notification, namely:- In the said notification, in the Schedule, against item 5(f), in column (5), for the third paragraph the following paragraph shall be substituted, namely:- *“All proposals for projects or activities in respect of Active Pharmaceutical Ingredients (API), received from 16th July, 2021 to 31st December, 2021, shall be appraised, as Category 'B2' projects, provided that any subsequent amendment or expansion or change in product mix, after the 31st December, 2021, shall be considered as per the provisions in force at that time.”* was Published in the Gazette of India, Registered. NO. D. L.-33004/99 Part - II, Section - 3, Sub - Section (ii) on 16th July, 2021.

**S.O. 2817 (E) [13.7.2021]** Following further amendments in the EIA Notification, namely:- In the said notification, in paragraph 11, for sub-paragraph (3), the following sub-paragraph shall be substituted, namely:- *“(3) The prior Environmental Clearance vested with the previous lessee shall be deemed to have been transferred during its validity period in terms of the Mines and Minerals (Development and Regulation) Act, 1957 (67 of 1957) as amended by the Mines and Minerals (Development and Regulation) Amendment Act, 2021 (16 of 2021) to the successful bidder of the mining leases, from the date of commencement of new lease for the remaining validity period (calculated from the date from which the said Environmental Clearance was initially granted), subject to the new lessee registering online on PARIVESH portal along with an undertaking to comply with all the conditions of the transferred Environmental Clearance”* was Published in the Gazette of India, Registered. NO. D. L.-33004/99 Part - II, Section - 3, Sub - Section (ii) on 13th July, 2021.

**S.O. 2781 (E) [12.7.2021]** Constitutions the State Level Environment Impact Assessment Authority, Manipur was Published in the Gazette of India, Registered. NO. D. L.-33004/99 Part - II, Section - 3, Sub - Section (ii) on 12th July, 2021.

**S.O. 2780 (E) [12.7.2021]** Amendments in the notification of the Government of India in the Ministry of Environment, Forests and Climate Change, published in the Gazette of India, Extraordinary Part II, Section 3, sub-section (ii), vide number SO 3170(E), dated the 29<sup>th</sup> June, 2018 was Published in the Gazette of India, Registered. NO. D. L.-33004/99 Part - II, Section - 3, Sub - Section (ii) on 12th July, 2021.

**S.O. 2777 (E) [12.7.2021]** Draft Notification of notifies an area to an extent varying from 0 (zero) to 3.5 kilometres around the boundary of Rupri Bhaba Wildlife Sanctuary, in Kinnaur District in the State of Himachal Pradesh as the Rupri Bhaba Wildlife Sanctuary Eco-sensitive Zone was Published in the Gazette of India, Registered. NO.

D. L.-33004/99 Part - II, Section - 3, Sub - Section (ii) on 12th July, 2021.

**S.O. 2776 (E) [9.7.2021]** Draft Notification of notifies an area to an extent varying from 0.272 kilometres to 6.976 kilometres around the boundary of Nokrek National Park, in East Garo Hills, West Garo Hills and South Garo Hills Districts in the State of Meghalaya as the Eco-sensitive Zone was Published in the Gazette of India, Registered. NO. D. L.-33004/99 Part - II, Section - 3, Sub - Section (ii) on 9th July, 2021.

**S.O. 2775 (E) [12.7.2021]** Notifies an area to an extent varying from zero to 1.0 kilometre around the boundary of Kugti Wildlife Sanctuary, in Chamba district in the State of Himachal Pradesh as the Eco-sensitive Zone was Published in the Gazette of India, Registered. NO. D. L.-33004/99 Part - II, Section - 3, Sub - Section (ii) on 12th July, 2021.

**S.O. 2765 (E) [9.7.2021]** Amendment notification of published in the Gazette of India vide number S.O. 3026(E), dated the 13th September 2017, the Central Government notified an Eco-sensitive Zone (ESZ) surrounding the Valmiki Wildlife Sanctuary, Valmiki National Park and Valmiki Tiger Reserve in the State of Bihar was Published in the Gazette of India, Registered. NO. D. L.-33004/99 Part - II, Section - 3, Sub - Section (ii) on 9th July, 2021.

**G.S.R. 657(E) [10.9.2021]** Amendment the Environment (Protection) Third Rules, 2021 was Published in the Gazette of India, Registered. NO. D. L.-33004/99 Part - II, Section - 3, Sub - Section (i) on 10th Sept., 2021.

**G.S.R. 656(E) [10.9.2021]** Amendment the Environment (Protection) Fourth Rules, 2021 was Published in the Gazette of India, Registered. NO. D. L.-33004/99 Part - II, Section - 3, Sub - Section (i) on 10th Sept., 2021.

**G.S.R. 647(E) [17.9.2021]** Amendment the Plastic Waste Management (Second) Rules, 2021 was Published in the Gazette of India, Registered. NO. D. L.-33004/99 Part - II, Section - 3, Sub - Section (i) on 17th Sept., 2021.

**G.S.R. 593(E) [27.8.2021]** Amendment the Commission for Air Quality Management in National Capital Region and Adjoining Areas (Appointment, Salary, Allowances and other Terms and Conditions of Service of Chairperson, Full-time Members and Member-Secretary) Rules, 2021 was Published in the Gazette of India, Registered. NO. D. L.-33004/99 Part - II, Section - 3, Sub - Section (i) on 27th Aug., 2021.

**G.S.R. 571(E) [12.8.2021]** Amendment the Plastic Waste Management Rules, 2021 was Published in the Gazette of India, Registered. NO. D. L.-33004/99 Part - II, Section - 3, Sub - Section (i) on 12th Aug., 2021.

**G.S.R. 541(E) [6.8.2021]** Amendment the Environment (Protection) Second Rule, 2021 was Published in the Gazette of India, Registered. NO. D. L.-33004/99 Part - II, Section - 3, Sub - Section (i) on 6th Aug., 2021.

#### **MINISTRY OF MINES, GOVT. OF INDIA, NEW DELHI**

**S.O. 2807 (E) [12.7.2021]** Authorised, for the purposes specified in the said sub-section, the following officers of the Atomic Minerals Directorate for Exploration and Research (AMD) to exercise all or any of the powers specified in that sub-section, in respect of minerals

specified in Part B of the First Schedule to the said Act, namely: — 1. Head, Mining Regulatory Group. 2. In-charge, Mining Regulatory Group. 3. In-charge, Exploration nominated by the Director, AMD from time to time. 4. Technical Officer (Mining) was Published in the Gazette of India, Registered. NO. D. L.-33004/99 Part - II, Section - 3, Sub - Section (ii) on 12th July, 2021.

**S.O. 2805 (E) [12.7.2021]** Authorised the following officers of the Atomic Minerals Directorate for Exploration and Research to prefer complaints in writing in respect of any offence punishable under the said Act or the rules made thereunder in respect of minerals specified in Part B of the First Schedule to the said Act, namely: — 1. The Director. 2. Head, Mining Regulatory Group was Published in the Gazette of India, Registered. NO. D. L.-33004/99 Part - II, Section - 3, Sub - Section (ii) on 12th July, 2021.

**No. 4/2/2021-M.II. [22.9.2021]** Combined Geo-Scientist Examination, 2022 was Published in the Gazette of India, Registered. NO. D. L.-33004/99 Part - I, Section - 1 on 22th Sept., 2021.

**G.S.R. 638(E) [10.9.2021]** Amendment the Ministry of Mines, Indian Bureau of Mines, Junior Mechanical Engineer and Mechanical Foreman (Group 'A' and 'B' Posts) Recruitment Rules, 2021 was Published in the Gazette of India, Registered. NO. D. L.-33004/99 Part - II, Section - 3, Sub - Section (i) on 10th Sept., 2021.

**G.S.R. 573(E) [5.8.2021]** Notification of Ministry of Mines, Indian Bureau of Mines (Laboratory Assistant, Mechanical Supervisor, Electrical Supervisor, Senior Laboratory Attendant, Laboratory Attendant, Multi Tasking Staff) Group 'C' Posts Recruitment Rules, 2021 was Published in the Gazette of India, Registered. NO. D. L.-33004/99 Part - II, Section - 3, Sub - Section (i) on 5th Aug. 2021.

#### **MINISTRY OF COAL, GOVT. OF INDIA, NEW DELHI**

**S.O. 3026 (E) [28.7.2021]** Decides to reserve areas with sand lease boundary co-ordinates for sand for stowing in its underground mines to Steel Authority of India (SAIL) was Published in the Gazette of India, Registered. NO. D. L.-33004/99 Part - II, Section - 3, Sub - Section (ii) on 28th July, 2021.

**G.S.R. 542(E) [6.8.2021]** Amendment Mineral Concession Rules, 2021 was Published in the Gazette of India, Registered. NO. D. L.-33004/99 Part - II, Section - 3, Sub - Section (i) on 6th Aug. 2021.

#### **PRESS RELEASE**

#### **Opening of Technical Bids for Auction of Coal Mines for Sale of Coal. 34 bids received for 19 mines.**

The auction process of 67 coal mines for sale of coal was launched by the Nominated Authority, Ministry of Coal on March 25, 2021. The last date of submission of Technical Bid was July 08, 2021. As part of the auction process, Technical Bids comprising of online and offline bid documents were opened today i.e. July 09, 2021, 10:00 am onwards at New Delhi, in the presence of the bidders.

The online bids were decrypted and opened electronically in the presence of the bidders. Subsequently, sealed envelopes containing offline bid documents were also opened in the presence of bidders. Entire process was displayed on the screen for the bidders. A total of 34 (thirty four) bids have been received for 19 (nineteen) coal mines of which 10 (ten) are fully explored mines and 9 (nine) are partially explored mines. 4 (four) of these mines are coking coal mines and the



remaining 15 (fifteen) mines are non-coking coal mines. Two or more bids have been received for 8 (eight) coal mines. Mine-wise list of bids received is appended below:

Sl No	Name of Coal Mine	No of Bids
1.	Alaknanda	1
2.	Beheraband North Extn	1
3.	Bhaskarpara	3
4.	Bhivkund	2
5.	BurakhapSmall Patch	5
6.	Burapahar	1
7.	Choritand Tiliaya	1
8.	Dahegaon/Makardhokra-IV	1
9.	Dip Extn of Belpahar	1
10.	Gondbahera Ujheni East	1
11.	Gondkhari	2
12.	Jhigador	2
13.	Jogeshwar & Khas Jogeshwar	3
14.	Khargaon	2
15.	Lalgarh (North)	1
16.	Ramnagar	1
17.	Rauta Closed Mine	4
18.	Shankarpur Bhatgaon II Extn	1
19.	Tokisud Block II	1
	<b>TotalBids</b>	<b>34</b>

A total of 20 companies have submitted their bids in the auction process as per the following list:

Sl No	Name of the Bidder	No of Bids Submitted
1.	Adani Power Maharashtra Ltd	1
2.	Adhunik Power & Natural Resources Ltd	2
3.	Aurobindo Realty & Infrastructure Pvt Ltd	4
4.	Bharat Aluminium Company Ltd	1
5.	CG Natural Resources Pvt Ltd	2
6.	Chhattisgarh Mineral Development Corporation Ltd	1
7.	Dhansar Engineering Co Pvt Ltd	1
8.	Godavari Power & Ispat Ltd	1
9.	Hiltop Hirise Pvt Ltd	1
10.	Hindalco Industries Ltd	1
11.	Jhar Mineral Resources Pvt Ltd	2
12.	MP Natural Resources Power Ltd	1
13.	Prakash Industries Ltd	1
14.	Ramgarh Sponge Iron Pvt Ltd	1
15.	Rungta Mines Ltd	1
16.	Shree Sai Urja Ltd	2
17.	Shree Satya Mines Pvt Ltd	3
18.	South West Pinnacle Exploration Ltd	3
19.	Sunflag Iron and Steel Company Ltd	4
20.	Vedanta Ltd	1
	<b>Total Bids</b>	<b>34</b>

The bids will be evaluated by a multi-disciplinary Technical Evaluation Committee and Technically Qualified Bidders would be shortlisted for participation in the electronic auction to be conducted on MSTC portal.

## CURRENT NEWS

### Tata Steel becomes the first steel producer in the world to join the Sea Cargo Charter (SCC) to reduce 'Scope 3' greenhouse gas emissions in ocean trade

(Source: <https://www.tatasteel.com/>)

Sept. 27, 2021: In line with its sustainability objectives and initiatives on reduction of Scope 3 greenhouse gas emission in ocean trade, Tata Steel joined the Sea Cargo Charter (SCC) on September 3, 2021. Tata Steel becomes the first steel producing signatory of the Sea Cargo Charter. The Company is the 24th organisation to join the association working to reduce environmental impacts of global seaborne cargo.

### Coal Mines Auction: launch of second attempt of auction process for eleven coal mines

(Source: <https://www.psuconnect.in/>)

NEW DELHI, Sept. 27, 2021: The Nominated Authority of the Ministry of Coal, has launched today the second attempt of the auction process for eleven coal mines (4 mines under the Tranche 12 of CM(SP) Act and 7 mines under the Tranche 2 of MMDR Act) earmarked for Sale of Coal in accordance with the rules prescribed under these Acts. Out of these 11 mines, six are fully explored and five are partially explored. These were the mines that were offered in the first attempt launched on March 25this year and had fetched single bids.

### Coal Ministry executes agreements with successful Bidders of 8 coal mines in ongoing auction tranche

(Source: <https://www.psuconnect.in/>)

NEW DELHI, Sept. 23, 2021: Ministry of Coal has executed agreements with the eight successful bidders pursuant to the auction of the second tranche of coal mines for commercial mining (Tranche 12 under CMSP Act and Tranche 2 under MMDR Act) here today. Addressing the successful bidders, Union Minister of Coal, Mines, and Parliamentary Affairs, Shri Pralhad Joshi congratulated them for their successful participation in the auction process. The Minister stressed that the Government of India and the Ministry of Coal are on a continuous journey to reform the coal sector and unlock values for the nation's economy. The success of these auctions will help in further strengthening the vision of an Aatmanirbhar Bharat as it will help reduce India's coal imports, the Minister added.

### CIL's new project enhancing Green cover along with Coal Mining activity

(Source: <https://www.psuconnect.in/>)

NEW DELHI, Sept. 14, 2021: Even as the notion is that coal mining degrades the land, new projects of Coal India Ltd. (CIL), under the Ministry of Coal are not only reclaiming land to its original shape but also enhancing Green cover along with Coal Mining activity. Emphasis is to have simultaneous backfilling of land after opencast Coal Mining operation and dense plantation thereon to maintain environmental equilibrium. Out of many such greenfield projects, one of the largest projects of CIL, the Jayant Opencast Coal Project in Singrauli District of Madhya Pradesh is forging ahead with a mission of looking beyond coal mining with the land restoration & enhancing green cover day by day. This has helped in lowering down the effect of pollution substantially & has also helped in increasing Carbon offset.

The project is under Northern Coalfields Ltd. (NCL), a subsidiary of CIL.

#### **Additional Secretary, Ministry of Power reviews Coal Mining Projects at NTPC CMHQ, Ranchi**

(Source: <https://www.psuconnect.in/>)

RANCHI, Sept. 13, 2021: Shri Vivek Kumar Dewangan, IAS, Additional Secretary, Ministry of Power, Government of India and Independent Director of NTPC Ltd visited NTPC Coal Mining Headquarters at Ranchi and reviewed the activities of coal mining projects of NTPC on 11.09.2021. Shri Partha Mazumder, Regional Executive Director (Coal Mining) welcomed Shri Dewangan and made a presentation on the activities of coal mining. Shri Dewangan, during his address, highlighted the issue of shortage of coal availability prevailing at thermal power stations across the country due to an unprecedented increase in power demand because of the surge in economic activities in our country.

Though he appreciated that, NTPC has surpassed coal production with respect to pro-rata target in this FY21-22, but coal production needs to be enhanced from NTPC's three operational mines i.e Pakri-Barwadih, Dulanga & Talaipali. He also stressed for early operationalization of the developing coal mines. He assured to take up the critical issues of NTPC mines with the respective State Governments.

During his introductory address, Shri Mazumder expressed his sincere thanks to the Additional Secretary and Ministry of Power team for continuous support and guidance from the Ministry which helped in resolving long pending issues of coal mining projects and also for ensuring uninterrupted coal production in mines and supply to its power stations.

#### **Union Mines Minister thanks PM for exempting 165 District Mineral Foundation Trusts**

(Source: <https://www.psuconnect.in/>)

NEW DELHI, Sept. 11: The Union Mines, Coal, and Parliamentary Affairs Minister, Shri Pralhad Joshi has thanked Hon'ble Prime Minister Shri Narendra Modi for exempting 165 District Mineral Foundation Trusts (DMF), from Income Tax payment. Through the amendment in Mines & Minerals (Development & Regulation) (MMDR) Act, in 2015, the Government of India has made provision for the establishment of a District Mineral Foundation in all the districts affected by mining. The object of the District Mineral Foundation is to work for the interest and benefit of persons, and areas affected by mining-related operations in such manner as may be prescribed by the State Government. So far, DMFs have been set up in 600 districts in 22 states in the country which have framed DMF rules.

Shri Joshi has also thanked the Union Finance Minister Smt. Nirmala Sitharaman. A Gazette notification has been issued to this effect yesterday by the Ministry of Finance (Department of Revenue) (Central Board of Direct Taxes). Ministry of Mines has taken up with the Ministry of Finance regarding issuance of notification for Income-tax exemption u/s 10(46) of the Income-tax Act, 1961 in respect to the District Mineral Foundations. Ministry of Finance has taken measures to get the DMF trust exempted from Income Tax. Section 10(46) of the Act was amended by Finance Act 2018 so that all the DMF Trusts could be notified as 'Class of Authority'.

#### **Glass ceiling shatters again in coal industry, Shivani Meena becomes 1st woman excavation engineer at CCL open cast mine**

(Source: <https://economictimes.indiatimes.com/>)

Sept. 10, 2021: Gone are the days when only men covered in soot would clamber out of the inhospitable and exacting confines of a coal mine. Breaking the glass ceiling, Shivani Meena, an IIT Jodhpur alumna, has become the first woman excavation engineer to work in an open cast mine at Coal India arm NSE -2.00 % . She will be posted at CCL's Rajrappa project, one of the important enterprises of the coal mining behemoth. Until now the position belonged to men. The feat follows another milestone when Akanksha Kumari became Coal India's first woman mining engineer to work in an underground mine at CCL's Churi facility in North Karanpura area in Jharkhand. "Nari Shakti (women power) all the way! Congratulations @ CCL Ranchi. Hoping that this will open avenues for more female professionals to join the mining sector," Union Coal Minister Pralhad Joshi said in a tweet. Union Women and Child Development Minister Smriti Irani wrote CCL: "Women power on a roll. After CIL's first female mining engineer in UG mines Team CCL now gets first woman excavation engineer Shivani Meena to work in a OC mine." The Central Coalfields Ltd said Meena joined at its Rajrappa project, a mechanised opencast mine, in the Rajrappa area of CCL, as an excavation engineer. "This is unprecedented as Shivani is the first woman engineer in the excavation cadre to work in an open cast mine," a CCL statement said.

#### **Pralhad Joshi urged mining sector to increase its contribution to the country's GDP**

(Source: <https://www.psuconnect.in/>)

NEW DELHI, Sept. 8, 2021: Union Minister of Coal, Mines and Parliamentary Affairs Shri Pralhad Joshi has said that the Ministry of Mines is contemplating a further amendment to the Mines and Minerals (Development and Regulation), MMDR Act to bring about tangible reforms in the mining sector of the country. He urged the mining sector to increase the contribution of the sector to the country's GDP to 2.5 percent. Addressing a function organized by the Ministry of Mines here today for handing over 100 G4 mineral blocks reports of Geological Survey of India (GSI) to different State Governments, Minister Joshi stated that the Ministry of Mines is in the process of finalizing the accreditation process for private exploration entities.

#### **CIL launches software for better assessment of coal resources**

(Source: <https://www.psuconnect.in/>)

NEW DELHI, Sept. 4, 2021: National Miner Coal India Ltd (CIL) has launched a software named "Spectral Enhancement"(SPE), which will help in identifying thin coal seams under the earth crust and improve assessment of coal resources using seismic survey during the coal exploration process. The launch of SPE software assumes significance as the present seismic survey techniques for coal resource exploration have their limitations in identifying the thin coal seams under the earth, which will now be possible as this new software helps in enhancing resolution of seismic signals leading to the delineation of thinnest coal seams.

#### **Coal India supply exceeds pre-Covid levels even as utilities face fuel shortage**

(Source: <https://www.psuconnect.in/>)



NEW DELHI, Sept. 3, 2021: State-run Coal India said on Thursday the miner's supplies to coal-fired utilities were higher than before the pandemic, even as many power plants are on the verge of running out of coal. The world's largest coal miner supplied about 206 million tonnes of coal to utilities from April to August, 27 percent higher compared with the same period last year and up 8 percent compared with April-August 2019, it said on Thursday. The Kolkata-headquartered company accounts for over 80 percent of India's domestic production, and production typically slows during India's annual monsoon in the June-September period. "Coal India's offtake held steady at 1.7 million tonnes/day in the last week of August. Never in August of any previous year (have) the company's despatches exceeded 1.6 million tonnes/day," it said.

#### **MCL has a potential to achieve targets: Chairman Coal India**

(Source: <https://www.psuconnect.in/>)

SAMBALPUR, Sept. 2, 2021: Mahanadi Coalfields Limited (MCL) is steadily building up First Mile Connectivity (FMC) infrastructure in Odisha with a total CapEx of Rs 3,600 crore for rapid and pollution-free coal loading transportation, which would enable the company to increase production and help Coal India achieve one billion tonnes by 2024. Mr. Pramod Agrawal, Chairman, Coal India Limited, today reviewed coal transportation operations at Sardega railway Sidings and laid the foundation stone of a 20 MTPA Coal Handling Plant and Rapid Loading System (RLS) for Mahalaxmi Area in district Sundergarh.

#### **Union Minister of Coal and Mines congratulates Akanksha Kumari, first-ever woman mining engineer of CCL**

(Source: <https://www.psuconnect.in/>)

NEW DELHI, Aug. 31, 2021: Union Minister of Coal, Mines and Parliamentary Affairs Shri Pralhad Joshi has congratulated Ms. Akanksha Kumari, the first-ever woman mining engineer of Central Coalfields Ltd under the Ministry of Coal. In a tweet, the Minister complimented Akanksha Kumari for becoming the first-ever woman mining engineer to work in an underground mine at Churi, North Karanpura area of Central Coalfields Ltd. Shri Joshi said that Akanksha Kumari's achievement is the true example of progressive governance to promote gender equality and generate more opportunities by the present Government under Prime Minister Shri Narendra Modi by allowing women to work in underground coal mines.

#### **NCL geared up for Rs 3.5 Crores Skill Development Project**

(Source: <https://www.psuconnect.in/>)

NEW DELHI, Aug. 27, 2021: Northern Coalfields Limited (NCL), a subsidiary of Coal India Limited, will train 500 Youth, living in and around the operational areas of NCL, in the Plastic engineering trade and ensure their Job Readiness in the Competitive market. This training will be organized with the help of the Central Institute of Petrochemicals Engineering and Technology (CIPET), Chennai. In this regard, an MoU has been signed between the holding company of NCL, Coal India Limited, and (CIPET), Chennai earlier.

For the selection of Candidates, NCL in association with CIPET has organized Two days screening sessions in Block B, Nigahi, and Khadia projects, and subsequently 345 eligible candidates were selected for this Skill Development program. The remaining candidates will be selected in the next screening rounds.

#### **Naveen Jindal hails Odisha's 'industry-friendly' policies; JSPL to participate in next iron ore block auction**

(Source: <https://economictimes.indiatimes.com/>)

Aug. 24, 2021: Jindal Steel & Power Ltd Chairman Naveen Jindal on Sunday lauded the efforts of the Odisha government to conduct the upcoming auction of iron ore blocks in a transparent manner and said the company will participate in it. Jindal, after meeting Chief Secretary S C Mohapatra, expressed confidence upon the state's "industry-friendly" policies. He also hailed the pre-emption policy for ensuring raw materials to local steel industries. Replying to a question, Managing Director V R Sharma said, "JSPL will participate in the forthcoming auction of iron ore mines in Odisha. Irrespective of the auction's outcome, we are confident the state government would make all out efforts to protect the raw material security for industrial units in the state."

#### **Monetisation pipeline: Coal mining assets worth Rs 28,747 crore to be monetised till FY25**

(Source: <https://economictimes.indiatimes.com/>)

Aug. 24, 2021: The government has identified 160 coal mining assets worth an estimated at Rs 28,747 crore for monetisation over four years till FY25. The Ministry has identified more than 160 projects for private-sector participation towards improving efficiency as well as scaling up production. "The projects are expected to be implemented over the next 2-3 years," according to the National Monetisation Pipeline (NMP) prepared by Niti Aayog and released by Finance Minister Nirmala Sitharaman on Monday.

#### **Northern Coalfields Limited officials visits IIT-BHU, Varanasi**

(Source: <https://www.psuconnect.in/>)

NEW DELHI, Aug. 23, 2021: Director (Technical/Operations), NCL Dr. Anindya Sinha, and other Officials from Northern Coalfields Limited Visited the Indian Institute of Technology (BHU) Varanasi, a public technical and research university located in Varanasi for Discussion on clean coal technologies, energy-efficient operation, and strengthening Industry-academia collaboration in a multidimensional approach. The meeting was done with the Director of IIT(BHU) and Senior professors.

#### **Vriksharopan Abhiyan - 2021 of Coal Ministry to be Launched on 19th August**

(Source: <https://www.psuconnect.in/>)

NEW DELHI, Aug. 17, 2021: During this year, coal/lignite PSUs of the Ministry of Coal have set an ambitious target under the "Go Greening" drive to cover 2385 hectares of area under bio-reclamation/plantation. The "Go Greening" drive is to be provided the right impetus through the launch of the "Vriksharopan Abhiyan 2021" on 19th August 2021 by the Union Minister of Coal, Mines, and Parliamentary affairs Shri Pralhad Joshi in the presence of the Minister of State for Coal, Mines and Railways Shri Raosaheb Patil Danve. It is expected that more than 300 plantation sites in and around coalfields across the country will be connected during the Abhiyan on 19th through live Video Conferencing.

#### **CIL commissioned oxygen generation plant at the Sadar Hospital in Simdega**

(Source: <https://www.psuconnect.in/>)

JHARKHAND, Aug. 16, 2021: Coal India Limited has commissioned an oxygen generation plant and centralised oxygen supply at the Sadar Hospital in Simdega, Jharkhand, under the mission "Praan Vaayu". With a capacity to produce 167 litres of oxygen per minute, the oxygen plant will support 50 ICU beds.

### **Adani Group, Prakash Industries, Shreesatya preferred coal mine bidders on Day 3**

(Source: <https://economictimes.indiatimes.com/>)

Aug. 4, 2021: Adani Group has emerged as preferred bidder for one more large commercial coal block in Chhattisgarh, Prakash Industries for another mine in the same state and newly-incorporated Shreesatya Mines Pvt Ltd quoted highest for a mine in Jharkhand on the final day of tranche two of auctions. CG Natural Resources Pvt Ltd, Adani Group company, is likely to bag Khargaon coal mine in Chhattisgarh as it offered 6% revenue, an official statement said.

### **Adani Group bags two commercial coal mines on Day 1 of tranche-2 auctions**

(Source: <https://economictimes.indiatimes.com/>)

Aug. 2, 2021: Adani Group has emerged as the preferred bidder for two coal blocks for commercial use in Maharashtra and Chhattisgarh. Gurgaon-based exploration services firm South West Pinnacle Exploration emerged as the highest bidder for a coal mine in Jharkhand quoting a premium of 24.25%, sources said. A senior government official said online coal auctions for three blocks concluded on Monday, while five more mines will be bid on Tuesday and Wednesday. The second tranche of commercial coal auctions began on Monday. The official said.

### **Funds to Develop Infrastructure of Coal Industry under DTIC, CSS: Coal Minister**

(Source: <https://www.psuconnect.in/>)

NEW DELHI, Aug. 2, 2021: Minister of Coal, Mines and Parliamentary Affairs Shri Pralhad Joshi in a written reply Today in Rajya Sabha mentioned the Funds to be assisted under CSS to develop Infrastructure of the Coal Industry. There is a sub-scheme namely, "Development of Transportation Infrastructure in Coalfield Areas (DTIC)" under Central Sector Scheme (CSS) namely, "Conservation, Safety and Infrastructural Development in Coal Mines" to give financial assistance for the development of transportation infrastructure in coal fields.

### **Coal India organised Workshop on 'People development, Tech-based Healthcare & Digital solutions for Mining'**

(Source: <https://www.psuconnect.in/>)

KOLKATA, July 31, 2021: Coal India Ltd. organised a Coal India 2022 Workshop on "People development, Tech-based Healthcare & Digital solutions for Mining" in Kolkata. Shri. Pramod Agrawal, Chairman, CIL, Functional Directors, CIL and CVO, CIL inaugurated the workshop by lighting the traditional lamp. Shri. Vinay Ranjan, Director (P&IR), CIL delivered the welcome address which was followed by an inaugural address by Shri. Binay Dayal, Director - Technical, CIL. Shri. Pramod Agrawal, Chairman, CIL, then addressed the workshop which was attended by CMDs & Directors of various CIL subsidiaries.

### **CIL arm CCL seeks reconciliation on Jharkhand's Rs 56,000 cr dues demand from Coal India**

(Source: <https://economictimes.indiatimes.com/>)

July 26, 2021: Jharkhand-based Coal India arm CCL has sought 'reconciliation' of amount of claims post the state government slapping the behemoth with a whopping demand of Rs 56,000 crore in lieu of land allotted to it for mining. Jharkhand Chief Minister Hemant Soren had on Friday sought immediate payment of Rs 56,000 crore "dues" to the state from the coal giant in addition to payment of royalty on coal on 'ad valorem' basis when CIL Chairman cum Managing Director (CMD) Pramod Agrawal called on him.

### **Schneider Electric and AVEVA to support mining companies achieve sustainability through tech solutions**

(Source: <https://economictimes.indiatimes.com/>)

July 19, 2021: Global firms, Schneider Electric and AVEVA announced Monday that their combined technology offerings will support the mining companies to achieve energy efficiency, yield improvement and will help in reducing greenhouse emissions. Schneider Electric's IoT platform, EcoStruxure™ Combined with AVEVA's Digital Transformation Solutions is proven to drive industrial sustainability initiatives, the companies said.

### **Coal India signs MoA with IIT-ISM, Dhanbad MOU**

(Source: <https://www.psuconnect.in/>)

NEW DELHI, July 14, 2021: Coal India Limited signed an MoA (Memorandum of Agreement) with IIT (ISM), Dhanbad to setup a CIL Innovation and Incubation Centre (CII Centre). The objective of this MoA is to create a platform for promotion of entrepreneurship and innovation and support startups in the core business areas of CIL, through NITI Aayog's flagship program - Atal Innovation Mission (AIM). As a part of this initiative, CIL will provide financial support to IIT (ISM) Dhanbad to set up the CII Centre while providing them with a conducive environment, infrastructure facilities and other value-added services in an equitable fashion to accelerate the growth and spread of innovation in the country. An MoA to this effect was signed by Shri. Binay Dayal, Director - Technical, CIL on behalf of CIL and Prof. Rajiv Shekhar, Director for IIT (ISM) Dhanbad. Shri. Pramod Agrawal, Chairman, CIL and Shri. S.N.Tiwary, Director - Marketing / MP&IR were present on the occasion.

### **Ministry of Coal conducts workshop on way ahead for Jharia and Raniganj Master Plan**

(Source: <https://www.psuconnect.in/>)

NEW DELHI, July 14, 2021: The Ministry of Coal, Govt. of India, organized a day-long workshop on "way ahead for Jharia and Raniganj Master Plan" at Central Coalfields Limited, a Jharkhand-based subsidiary of Coal India Ltd. today. The workshop was aimed at expediting rehabilitation of affected families to safer locations in Jharia (Jharkhand) and Raniganj (West Bengal). To avoid any natural mishaps at Jharia and Raniganj coalfields in Jharkhand and West Bengal, a master plan was drawn to rehabilitate the affected families to a safer location. Bharat Coking Coal Ltd (BCCL) and Eastern Coalfields Ltd (ECL)- both subsidiaries of Coal India- have active mines in Jharia and Raniganj respectively.



## 19 mines have received bids in second tranche of auctions for commercial mining of coal

(Source: <https://www.psuconnect.in/>)

NEW DELHI, June 10, 2021: The second Tranche of Auction for commercial Mining of Coal have received a total of 19 bids. Shri Pralhad Joshi mentioned, "Transforming the coal sector to make it more competitive, we have adopted a rolling auction mechanism for coal blocks."

He further mentioned, Glad to note that 19 mines have received bids in the second tranche of auctions for commercial mining of coal. A total of 34 bids have been received for 19 coal mines of which 10 are fully explored mines and 9 are partially explored mines. 4 of these mines are coking coal mines and the remaining 15 mines are non-coking coal mines. Two or more bids have been received for 8 coal mines.

## Commercial mining: Vedanta, Hindalco among 20 bidders for coal blocks

(Source: <https://economictimes.indiatimes.com/>)

July 9, 2021: Vedanta Ltd, Hindalco Industries, Adani Power Maharashtra and Bharat Aluminium Company Ltd (Balco) are among the 20 companies that have submitted bids for 19 coal mines put up for sale in the second round of auctions for commercial mining. Of the total 34 bids submitted by these firms, the maximum (four each) were from Aurobindo Realty & Infrastructure Pvt Ltd and Sunflag Iron and Steel Company Ltd.

## State-run CIL exports coal for first time

(Source: <https://economictimes.indiatimes.com/>)

July 5, 2021: State-run Coal India Limited exported coal for the first time to Bangladesh, nearly a month after tweaking its e-auction coal sale policy lifting the restriction on export of coal. The coal below 2200 gross calorific value coal purchased under spot e-auction from Dahibari siding of Bharat Coking Coal Limited (BCCL), the Jharkhand-based coal producing subsidiary of CIL has been shipped to Rampal Power Station, Khulna in Bangladesh.

## LOK SABHA UNSTARRED QUESTION

### Question No. 2650 answered on 4.8.2021

#### Coal Mines

2650. SHRI RAJESH VERMA:

Will the Minister of COAL be pleased to state:

- the total number of coal mines in Uttar Pradesh;
- whether any new coal reserves has been explored in Uttar Pradesh and if so, the details thereof;
- whether any coal mining scheme is also pending for approval; and
- if so, the details thereof?

ANSWER: MINISTER OF PARLIAMENTARY AFFAIRS, COAL AND MINES (SHRI PRALHAD JOSHI)

(a): There are 4 number coal mines of Coal India Limited in Uttar Pradesh.

(b): No Sir.

(c): No Sir.

(d): Does not arise in view of reply to part (c) above.

### Question No. 2583 answered on 4.8.2021

#### Coal Auction

Will the Minister of Coal be pleased to state:

(a) whether the Government is having any proposal for auction based coal linkage for companies with long term Power Purchase Agreements (PPAs) for obtaining coal supply from Coal India Ltd (CIL);

(b) if so, the details thereof;

(c) if not, the reasons therefor;

(d) whether CIL in the year 2013 had signed FSAs with certain firms producing stipulated MW of capacity;

(e) if so, the total mega watt generated by these firms against the target fixed; and

(f) whether the benefit of concession in coal supply will be passed on to the consumer by reduction in unit cost and if so, the details thereof?

ANSWER: MINISTER OF PARLIAMENTARY AFFAIRS, COAL AND MINES (SHRI PRALHAD JOSHI)

(a) to (c): SHAKTI Policy was introduced on 22.05.2017 for providing coal linkages to various categories of power plants. Para B (ii) of SHAKTI Policy provides for granting long term coal linkages through auction route to the power plants having long term Power Purchase Agreements (PPAs). Under Para B (ii) of SHAKTI policy, 3 rounds of linkage auctions have been conducted so far whereby about 33 Million Tonnes (MT) coal linkage has been successfully booked by the participating power plants for obtaining coal supply from Coal India Limited (CIL). The round-wise performance is as given below:

Round	Conducted by	Conducted during	Successful bidders	Qty. Booked (Mt)	Discount on Tariff (in paise/unit)
Round 1	CIL	Sept' 2017	10	27.18	1-4 paise
Round 2	CIL	May'2019	8	2.97	4-7 paise
Round 3	PFCL	May'2020	5	2.80	7-10 paise

(d): Ministry of coal on 17.7.2013 through Presidential Directive advised CIL to sign Fuel Supply Agreement & supply of coal to the Thermal Power Plants (TPPs) commissioned or likely to be commissioned by 31.3.2015.

(e): Information is being collected.

(f): Para B(ii) of SHAKTI policy provides that CIL/SCCL may grant coal linkages on notified price on auction basis for power producers/IPPs having already concluded long term PPAs (both under section 62 and section 63 of The Electricity Act, 2003) based on domestic coal. Power producers/IPPs, participating in auction will bid for discount on the tariff (in paise/unit). The discount by generating companies would be adjusted from the gross amount of bill at the time of billing.

Accordingly, coal supply is made by CIL to the FSA holders, who have obtained linkages under B(ii) linkage auctions.

### Question No. 226 answered on 4.8.2021

#### Ban on Asbestos Mines

226. SHRISANGAMLAL GUPTA:

SHRI P.P. CHAUDHARY:

Will the Minister of MINES be pleased to state:

(a) the number of asbestos mines which are currently functional in the country, State-wise including Uttar Pradesh and Rajasthan;

(b) whether the Government has put a ban on asbestos mines for health-related reasons;

(c) if so, the details thereof including the date when the said ban was imposed along with details of any deadline to comply with the conditions of the ban;

(d) the details of the health hazards/crises associated with asbestos mining as noted by the Government; and

(e) the action taken by the Government to ensure closure of open cast asbestos mines in the country including in Uttar Pradesh and Rajasthan?

ANSWER: THE MINISTER OF MINES, COAL AND PARLIAMENTARY AFFAIRS (SHRI PRALHAD JOSHI)

(a) to (e): A Statement is laid on the Table of the House.

#### STATEMENT

(a): As per information made available by Indian Bureau of Mines (IBM), a subordinate office under the Ministry of Mines, currently no asbestos mine is functional in the country.

(b) & (c): Considering the deleterious effect of asbestos on the health of the workers as it exposes them to various diseases, like silicosis, pneumoconiosis etc., Central Government decided on 09th July, 1986 not to permit the expansion of mines of asbestos. Accordingly, the State Governments/UTs had been directed not to grant any new mining lease for asbestos in the country. However, there were no deadlines provided to the State Governments/UTs to comply with this decision at that time.

(d): As per information made available by Ministry of Labour and Employment, following diseases have been notified under section 25(1) of Mines Act, 1952 as the diseases associated with asbestos mining:

(i) Asbestosis

(ii) Cancer of Lung or the stomach or the pleura and peritoneum (i.e. mesothelioma).

(e): In compliance of Hon'ble NGT, Delhi order dated 29.10.2015, joint inspections were carried out in the State of Rajasthan by Directorate of Mines & Geology, Rajasthan State Pollution Control Board and IBM to ensure closure of Asbestos mines. As per records available with IBM and information provided by the State Government of Uttar Pradesh, there are no asbestos mines in Uttar Pradesh.

**Question No. 1578 answered on 28.7.2021**

#### Coal Mines

1578. SHRI B.N. BACHE GOWDA:

Will the Minister of COAL be pleased to state:

(a) whether the Government has opened commercial coal mining to the private sector;

(b) if so, the details thereof and the time since when it has been opened;

(c) whether currently the Coal India Limited (CIL) is the world's largest miner being allowed to sell coal to end-users and if so, the details thereof;

(d) whether CIL has not been able to fulfil its responsibility due to which the commercial coal mining has been allowed/opened to the private sector and, if so, the details thereof and the reasons therefor;

(e) the percentage of Coal that is being imported to India from various countries; and

(f) the steps taken/being taken by the Government to ensure that the opening of coal mines to the private sector is transparent?

ANSWER: MINISTER OF PARLIAMENTARY AFFAIRS, COAL AND MINES (SHRI PRALHAD JOSHI)

(a): Yes, Sir.

(b): Methodology for auction of coal and lignite mines/blocks for sale of coal/lignite on revenue sharing basis was approved by CCEA on 20.05.2020 and the order was issued on 28.05.2020. Salient features of the Methodology are as under:

Based on Revenue sharing mechanism. Floor percentage at 4%.

Applicable to fully explored as well as partially explored coal blocks.

Upfront amount is based on value of estimated geological reserves.

Successful Bidder to pay monthly revenue share based on percentage of revenue share quoted, total quantity of coal and notional or actual price whichever is higher.

Incentives for early production, gasification and liquefaction of coal.

Exploitation of CBM is allowed.

No restriction on the sale and/or utilisation of coal. More flexibility in coal production schedule.

(c) & (d): Coal India Limited (CIL) is the largest company in the world in terms of coal production. CIL sells coal to its linked Power and non-Power consumers through bilateral Fuel Supply Agreements and Memorandums of Understanding. CIL also sells coal to the end consumers including traders through various e-auction schemes.

(e): Imported coal constituted 23.7% of the actual demand of coal during the year 2020-21.

(f): As per the provisions of the Coal Mines (Special Provisions) Act, 2015 [CMSP Act] and the Mines and Minerals (Development and Regulation) Act, 1957 [MMDR Act], coal mines are allocated to private sector companies by way of auction. Auction of coal mines is done on e-platform after conducting security audit of the e-platform. Further, any prior allottee who is convicted of an offence relating to coal block allocation and sentenced with imprisonment for more than three years is not eligible to participate in the auction.

**Question No. 1518 answered on 28.7.2021**

#### Cancer Centres in Coal Mining Areas

1518. SHRI RITESH PANDEY:

Will the Minister of COAL be pleased to state:



- (a) whether the Government plans to set up cancer centres in coal mining areas and if so, the details thereof;
- (b) whether the cancer centers will be financed fully by the Union Government and if so, the details thereof;
- (c) whether these cancer centers will provide research facilities and funds for further study to combat this disease; and
- (d) if so, the details thereof and if not, the reasons thereto?

ANSWER; MINISTER OF COAL, MINES AND PARLIAMENTARY AFFAIRS (SHRI PRALHAD JOSHI)

- (a): The coal companies functioning under Ministry of Coal have no plan to set up cancer hospitals/centres in coal mining areas.
- (b) to (d): Do not arise in view of reply given in part (a) above.

**Question No. 1398 answered on 28.7.2021**

**Carbon Emission in mining operation**

1398. SHRI VINOD KUMAR SONKAR:

Will the Minister of Coal be pleased to state:

- (a) whether the total coal resulting in a production of production in India registered a marginal decline of 2.02 percent to 716.084 million tonnes during the 2020-21 fiscal year and if so, Government's reaction thereto;
- (b) whether Coal India Ltd (CIL) decided to replace the huge fleet of Heavy Earth Moving Machines equipment on diesel consumption with Liquid Natural Gas (LNG) and if so, the details thereof;
- (c) the estimated financial savings to CIL through this move as well as the environmental impact on converting to LNG;
- (d) whether the Government has entered into any contract with GAIL in this regard and if so, the details thereof;
- (e) whether the CIL has also taken series of measures to offset carbon emission in mining operations in all its coal producing companies and if so, the details thereof;
- (f) whether the CIL envisaged creating a carbon offset of around 2.5 lakh tonnes in the next five years and if so, the details thereof
- (g) whether the CIL will be introducing around 1700 energy efficient motors for pumps in all its mining operations as a replacement of orthodox equipment; and
- (h) whether the CIL planned to add around 1500 E-Vehicles in all its mining areas for the next five years and if so, the details thereof?

ANSWER: MINISTER OF PARLIAMENTARY AFFAIRS, COAL AND MINES (SHRI PRALHAD JOSHI)

- (a): The total coal production marginally declined by 2.03% from 730.874 Million Tonnes (MT) in 2019-20 to 716.012 MT during the year 2020-21. Owing to Covid-19 pandemic, the subdued demand in power and non-power sectors had adversely affected coal dispatch from the coal companies. The pithead coal stock at Coal India Limited was 99.13 MT as on 1st April, 2021 and 28.66 MT at the Thermal Power Plants. The coal production of the Country got regulated due to high levels of coal inventory and less demand from the consumers.
- (b): LNG can be used in Mining Dump Truck as an alternate fuel by converting existing diesel dump trucks to Dual Fuel (Diesel – LNG) system by retrofitting LNG kits. CIL has initiated feasibility study for

use of LNG in Dump trucks under CIL mining condition by retrofitting LNG kits in 02 nos. 100T dumpers at Lakhanpur Open Cast Project of Mahanadi Coalfields Limited, on Pilot Project basis with the association of GAIL (India) Limited and BEML Limited (both PSUs).

(c): The dual fuel system has potential to replace 30 - 50% of diesel with LNG which may go up to 70% depending on the engine characteristics. The actual figures may be worked out after the outcome of the Pilot Project.

(d): The proposal for signing of tripartite MOU between CIL, GAIL and BEML has been approved by the CIL Board in its 426th meeting held on 12th July, 2021.

(e): CIL and its Subsidiaries have taken up a series of measures to offset carbon emission in mining operations, which are mentioned as under:

1. Massive plantation & bio-reclamation :

CIL & its subsidiaries have already planted approximately 94.19 Lakh saplings over about 3,873 Ha. inside mine lease area. The CO<sub>2</sub> offset value is about 1.55 lakh Tonnes per year.

2. Other measures are:

- i. Replacing conventional lights by LED lights;
- ii. Replacing conventional ACs and other appliances by Super-efficient ACs.
- iii. Energy efficient pumps
- iv. Super-efficient fan
- v. Auto-timer in street lights,

3. CIL & its subsidiaries have installed 5.3 MW of solar energy.

(f) : CIL and its subsidiaries have planned following measures for carbon offset as under.

- 1. CIL & its Subsidiaries have planned to carry out plantation over about 6,800 Ha. in next 5 years (i.e. 2021-2026) which will offset CO<sub>2</sub> about 2.72 lakh Tonnes per year.
- 2. CIL and its Subsidiaries have planned to install 3000 MW of solar energy in next 5 years (i.e. 2021-2026) which will also offset CO<sub>2</sub>.
- 3. CIL and its Subsidiaries have planned for other energy efficient measures in next 5 years (i.e. 2021-2026) which includes replacing conventional light by LED lights, installing energy efficient ACs, Super fan, Efficient water heaters, Energy efficient motors for pumps, Auto-timer in street lights and to add E-Vehicles also.

(g): CIL have planned to replace 2,044 No. motors with energy efficient motors in next five years.

(h) : CIL and its subsidiaries have planned to procure about 1,072 No. of E-Vehicles in next five years.

**Question No. 1397 answered on 28.7.2021**

**Coal based Industries**

1397. SHRIMATI GOMATI SAI :

Will the Minister of Coal be pleased to state:

(a) the number of coal based industries lying closed at present due to shortage of coal in Raigarh district of Chattisgarh;

(b) the amount of loss of revenue caused due to the said closure of industries;

(c) whether the said industries are proposed to be reopened; and

(d) if so, the details thereof?

ANSWER: MINISTER OF PARLIAMENTARY AFFAIRS, COAL AND MINES (SHRI PRALHAD JOSHI)

(a) to (d): Coal supply is regularly made by Mahanadi Coalfields Limited (MCL) to 8 and by South Eastern Coalfields Limited (SECL) to 41 coal based industries at Raigarh district through Fuel Supply Agreement (FSA). MCL and SECL have not reported any of these industries linked with them of closing down due to shortage of coal. As on 22.07.2021, SECL and MCL are carrying coal stock of about 16.28 MT and 17.21 MT respectively and as such, there is no shortage of coal.

### RAJYA SABHA UNSTARRED QUESTION

#### Question No. 2255 answered on 9.8.2021

##### Use of Coal dust

2255. Shri Deepak Prakash:

Will the Minister of Coal be pleased to state:

(a) whether the Government will issue guidelines to formulate any policy with reference to the use of coal dust; and

(b) if so, the details thereof, if not reasons therefor?

ANSWER: MINISTER OF COAL, MINES AND PARLIAMENTARY AFFAIRS (SHRI PRALHAD JOSHI)

(a) & (b). Government is not issuing guidelines to formulate any policy with reference to the use of coal dust, as scientific methodology for use of coal dust in Indian conditions is not available.

#### Question No. 2244 answered on 9.8.2021

##### Environmental Clearances to Coal Mines

2244. Shri Dhiraj Prasad Sahu

Will the Minister of Coal be pleased to state :

(a) Whether it is a fact that the Ministry of Environment, Forest and Climate Change, has not given environmental clearance to hundreds of years old Kabribad reorganised mines which comes under CCL Giridih Project (former regional office) under Central Coalfields Limited, an auxiliary unit of Coal India Limited while the process for Terms of Reference has been completed; and

(b) If so, the details thereof and the reasons therefor?

ANSWER: MINISTER OF COAL, MINES AND PARLIAMENTARY AFFAIRS (SHRI PRALHAD JOSHI)

(a) & (b): Process for obtaining Environment Clearance has been started and Terms of Reference recently issued by Ministry of Environment, Forest & Climate Change on 27.04.2021 to Kabribad OCP. Additional documents required for Public Hearing and Environment Clearance are under preparation.

#### Question No. 1451 answered on 2.8.2021

##### Renaming the Clean Environment Cess

1451. Shri Prasanna Acharya:

Will the Minister of Coal be pleased to state:

(a) whether it is a fact that many coal bearing states including Odisha have requested for renaming the Clean Environment Cess on coal as Environment and Rehabilitation Cess and for earmarking sixty percent of the cess for coal bearing States;

(b) whether the Goods and Service Tax Council and the Central Government have agreed to this proposal; and

(c) If so, the details thereof, if not, the reasons thereof?

ANSWER: MINISTER OF COAL, MINES AND PARLIAMENTARY AFFAIRS (SHRI PRALHAD JOSHI)

(a) to (c): Ministry of Coal does not administer any such cess. However, as per information received from Ministry of Finance, Clean Environment Cess has been abolished since 01.07.2017, with the advent of GST. In the GST regime, a GST Compensation Cess at the rate of Rs.400 per tonne has been levied on coal under the Goods and Services Tax (Compensation to States) Act, 2017. This cess has also been imposed on certain other items. The cess is used to compensate any revenue losses occurred to the States, for five years, on account of GST implementation. There is no such reference to change the name of GST compensation cess on coal.

#### Question No. 1450 answered on 2.8.2021

##### Tuberculosis in mining areas

1450 Shri Prasanna Acharya:

Will the Minister of COAL be pleased to state:

(a) whether Government is aware that tuberculosis (TB) disease is widely prevalent in mining areas, particularly in areas surrounding coal mines, if so, the details thereof; and

(b) the blue print in the mining sector to achieve the target, in view of the Prime Minister's call for eradication of TB from India by 2025?

ANSWER: MINISTER OF PARLIAMENTARY AFFAIRS, COAL AND MINES (SHRI PRALHAD JOSHI)

(a): In Coal India Limited (CIL), 372 tuberculosis cases have been detected in 2021 which is only 0.14% of total manpower. Over the years, the cases of tuberculosis in CIL have declined owing to medical intervention and awareness.

In Singareni Collieries Company (SCCL), total no of T.B. cases detected are 22 cases in 2021. The incidence rate is 0.0088 percentage.

(b): At CIL, the activities for eradication of T.B. are carried out in line with the national strategic plan. The activities planned are in five broad categories i.e. 1.Information, Education and Communication 2.Training 3.Inclusion of Eradication of Tuberculosis by 2024: Detect, Treat, Prevent, and Build 4. Social Protection and 5. Sharing of Information.

This is besides provision of regular healthcare facilities through the company's various hospitals and dispensaries owned by the company for contractor workers and employees and 342 empaneled private hospitals throughout the country for company's employees and their entitled family members.

SCCL is providing all facilities for eradication of T.B. by the year 2025. The details are as under:

Providing screening and treatment facilities at all Area Hospitals.

Lab facilities, X-Ray facilities available at all Area Hospitals and CT Scan facilities at Main Hospital Kothagudem, Area Hospital Ramagundam-I, and Ramakrishnapur.



Contact tracing done through counseling.

Publicity campaigns on Tuberculosis.

SCCL is also providing treatment to the patients of project affected areas.

#### Question No. 1442 answered on 2.8.2021

#### Auctioning of Coal Mines

1442. Smt. Phulo Devi Netam: Shri Rajmani Patel:

Shri Shaktisinh Gohil:

Shri G.C. Chandrashekhar:

Will the Minister of COAL be pleased to state:

(a) the reasons Government failed to auction nearly 70 mines out of 112 mines from 2015 to 2020;

(b) whether the newly listed 41 mines include mines on the older list which were not auctioned; and

(c) whether Government is aware that 21 mines out of the newly listed mines for auction fall under the 'No-Go' areas classified in 2011, and the reasons for proceeding forward despite such classification?

ANSWER: MINISTER OF PARLIAMENTARY AFFAIRS, COAL AND MINES (SHRI PRALHAD JOSHI)

(a): Auction of coal mines is a continuous process. Success of auction process depends on the response received from bidders. Following policy measures have been undertaken for providing more flexibility to the prospective bidders:

(i) Amendments have been made in the Coal Mines (Special Provisions) Act, 2015 [CMSP Act] and the Mines and Minerals (Development and Regulation) Act, 1957 [MMDR Act] through Mineral Laws Amendment Act, 2020 enacted on 13.03.2020 to ensure wider participation and competition in auction of coal mines. The amendments in the Acts would enable the following:

Allocation of coal blocks for composite prospecting license-cum-mining lease which will help in increasing of the inventory of coal/lignite blocks for allocation.

Repetitive and redundant provision requiring previous approval of Central government even in cases where the allocation or reservation of coal/lignite block has been made by the Central Govt. itself has been done away with.

Provided flexibility to the Central Govt. in deciding the end use of Schedule II and III coal mines under the CMSP Act.

Companies which do not possess any prior coal mining experience in India can now participate in auction of coal blocks.

(ii) Methodology for auction of coal and lignite mines / blocks for sale of coal / lignite on revenue sharing basis was issued on 28.05.2020.

(b): Ministry of Coal had launched the auction of 41 coal mines for commercial mining on 18.06.2020 under CMSP Act and MMDR Act. However, during the course of the auction process, 6 mines were withdrawn as per the consultation with Chhattisgarh and Maharashtra State Government, and 3 new mines were added taking the total mines available for auction to 38. These 38 mines put up for auction in 11th Tranche under CMSP Act and 1st Tranche under MMDR Act, also included few CMSP mines, which were put up in earlier conducted tranches of auction.

(c): As per present practice, the Ministry of Environment, Forest and Climate Change (MOEFCC), through Forest Survey of India (FSI) and the Ministry of Coal had jointly undertaken an exercise to determine the conservation value of a number of coal blocks and with the help of Decision Support System (DSS) software the coal blocks were categorised under High Conservation Value, Medium Conservation Value and low Conservation Value. Irrespective of the conservation value of a coal block, each proposal seeking diversion of forest land for coal mining is processed and considered by Ministry of Environment, Forest and Climate Change on its merits on case-to-case basis.

#### Environmental Clearance accorded to Mining Projects

(Source: MOEF&CC Website)

Project Details	Date of EC Receipt	Date of EC Granted
<b>State: Jharkhand (Category: Non-Coal Mining)</b>		
Project No: J-11015/104/2011-LA.II(M), Project Name: Expansion of Noamundi Iron Ore Mine of M/s Tata Steel Limited from 10 MTPA to 19 MTPA (ROM) with total excavation of 27 MTPA (ML area 1160.06 ha) along with increase of Iron ore beneficiation plant ca, District: nil, Tehsil: nil, Company: M/s. TATA STEEL LIMITED KHONDBOND IRON AND MN MINES, Project Type: Expansion	30.1.2021	6.9.2021
Project No: EC/SEIAA/2021-22/2376/2021, Project Name: Karso Stone Mine, District: Palamu, Tehsil: Champur, Company: M/s. MAHABIR.	2.8.2021	14.8.2021
Project No: EC/SEIAA/2021-22/2379/2021, Project Name: Telari Stone Deposit, District: Palamu, Tehsil: Chhatarpur, Company: M/s. SRI SANJAY SINGH.	2.8.2021	14.8.2021
Project No: EC/SEIAA/2021-22/2377/2021, Project Name: Kolha Golgo Stone Deposit, District: Giridih, Tehsil: Bagodar, Company: M/s. MAA SERAWALI STONE MINERALS.	2.8.2021	14.8.2021
Project No: EC/SEIAA/2021-22/2394/2021, Project Name: MUSNA STONE MINE OF M/s. MAA KALI STONE, District: Dumka, Tehsil: Gopikandar, Company: M/s. MUSNA STONE MINE OF M/s. MAA KALI STONE.	31.7.2021	14.8.2021
Project No: EC/SEIAA/2021-22/2392/2021, Project Name: NARAYANI STONE & MORUM MINES AND CRUSHER OF SHRI UMAKANT PRASAD JAISWAL, District: Palamu, Tehsil: Bishrampur, Company: M/s. NARAYANI STONE & MORUM MINE AND CRUSHER.	29.7.2021	14.8.2021
Project No: EC/SEIAA/2021-22/2385/2021, Project Name: NASIM ANSARI STONE MINES OF MD. NASIM ANSARI, District: Dhanbad, Tehsil: Nirsu-Cum-Chirkunda, Company: M/s. NASIM ANSARI STONE MINES.	28.7.2021	14.8.2021
Project No: EC/SEIAA/2021-22/2387/2021, Project Name: DHAWADANGA STONE MINE OF M/s. SHIV SHAKTI STONE WORKS, District: Pakur, Tehsil: Maheshpur, Company: M/s. DHAWADANGA STONE MINE OF M/s. SHIV SHAKTI STONE WORKS.	28.7.2021	14.8.2021
Project No: EC/SEIAA/2021-22/2384/2021, Project Name: RAMBANI STONE MINE OF M/s. R.S.S. STONE WORKS, District: Dumka, Tehsil: Gopikandar, Company: M/s. RAMBANI STONE MINE OF M/s. R.S.S. STONE WORKS.	28.7.2021	14.8.2021
Project No: EC/SEIAA/2021-22/2386/2021, Project Name: LAKHIPAHARI STONE MINE OF MR. MUKHLESHUR ALAM, District: Pakur, Tehsil: Pakur, Company: M/s. LAKHIPAHARI STONE MINE OF MUKHLESHUR ALAM.	28.7.2021	14.8.2021
Project No: EC/SEIAA/2021-22/2371/2021, Project Name: BABA STONE AND MORUM MINES SHRI UMAKANT PRASAD JAISWAL, District: Palamu, Tehsil: Bishrampur, Company: M/s. BABA STONE AND MORUM MINES OF SHRI UMAKANT PRASAD JAISWAL.	28.7.2021	14.8.2021
Project No: EC/SEIAA/2021-22/2374/2021, Project Name: MUSNA STONE MINE OF M/s. RAKSHA KALI STONE, District: Dumka, Tehsil: Gopikandar, Company: M/s. USNA STONE MINE OF M/s. RAKSHA KALI STONE.	28.7.2021	14.8.2021

Project No: EC/SEIAA/2021-22/2380/2021, Project Name: GANESHPUR STONE DEPOSIT OF M/s. FRIENDS STONE MINES, District: Pakur, Tehsil: Hiranpur, Company: M/s. GANESHPUR STONE DEPOSIT OF M/s. FRIENDS STONE MINES.	28.7.2021	14.8.2021
Project No: EC/SEIAA/2020-21/2364/2020, Project Name: Kulbona Stone Deposit, District: Nirsia-Cum-Chirkunda, Tehsil: Nirsia-Cum-Chirkunda, Company: M/s. MAA BINDHYAWASINI MINERALS.	2.7.2021	14.8.2021
Project No: EC/SEIAA/2020-21/2363/2020, Project Name: Chauldhua Stone Deposit, District: Dhanbad, Tehsil: Baliapur, Company: M/s. CHAULDHUA STONE DEPOSIT.	2.7.2021	14.8.2021
Project No: IA-J-11015/31/2017-IA-II(M), Project Name: Amtipani Chirodih Bauxite Mine (Area- 130.01 ha) with Production Capacity 4.5 Lac TPA (ROM), District: Bokaro, Tehsil: Nawadih, Company: M/s. MINERAL & MINERAL LTD, Project Type: New	3.5.2019	13.8.2021
Project No: EC/SEIAA/2021-22/2359/2021, Project Name: M/s. MAN MOHAN GROVER, MOUZA - SALPATRA, THANA - BALIAPUR NO.-199, DISTRICT - DHANBAD, STATE - JHARKHAND, District: Dhanbad, Tehsil: Baliapur, Company: M/s. MAN MOHAN GROVER, MOUZA- SALPATRA.	18.6.2021	15.7.2021
Project No: EC/SEIAA/2021-22/2349/2021, Project Name: RAMESHWAR MAHTO STONE MINES, District: Dhanbad, Tehsil: Baliapur, Company: M/s. RAMESHWAR MAHTO STONE MINE.	17.6.2021	15.7.2021
Project No: EC/SEIAA/2021-22/2336/2021, Project Name: Karma Stone Deposit Project, District: Giridih, Tehsil: Birni, Company: M/s. KARMA STONE MINING.	16.6.2021	14.7.2021
Project No: , Project Name: , District: , Tehsil: , Company: M/s. ,		
<b>State: Rajasthan (Category: Non-Coal Mining)</b>		
Project No: J-11015/42/2019-IA-II(M), Project Name: Maliakhera Limestone Mine (ML No. 04/2003, Area- 315.409 Ha.) from 3.2 Million TPA (Limestone) to 6.3 Million TPA of Total Excavation (Limestone- 5.6 Million TPA, Interburden (clay)/Scree, District: Nil, Tehsil: Nil, Company: M/s. JK CEMENT LTD KANPUR, Project Type: Expansion	30.4.2021	19.8.2021
Project No: IA/RJ/MIN/98520/2019, Project Name: Expansion of Karunda Limestone mine (M.L. No. 03/2003, Area 240.86 ha.) from 2.0 Million TPA Limestone to total excavation of 3.8 Million TPA (Cement grade Limestone: 3.448 Million TPA, Subgrade Limes, District: nil, Tehsil: nil, Company: M/s. JK CEMENT LTD KANPUR, Project Type: Expansion	30.4.2021	19.8.2021

<b>State: Karnataka (Category: Non-Coal Mining)</b>		
Project No: IA-J-11015/28/2018-IA-II(M), Project Name: Devadari Iron Ore Mine, District: Bellary, Tehsil: Sandur, Company: M/s. KIOCL LIMITED, Project Type: New	28.11.2019	13.8.2021
Project No: J-11015/26/2020-IA-II(M), Project Name: Sedam Limestone Mine (ML Area: 995.97 ha) with Limestone Capacity 5.2 Million TPA, Soil 0.062 Million TPA and Waste 0.98 Million TPA; (Total Excavation 6.242 Million TPA) Crusher 1500 TPH (13ha outside ML for infrastructure), District: Kalaburagi, Tehsil: Sedam, Company: M/s. DALMIA CEMENT BHARAT LTD, Project Type: New	27.3.2021	6.8.2021
<b>State: Orissa (Category: Non-Coal Mining)</b>		
Project No: J-11015/63/2018-IA-II(M), Project Name: Expansion of the Katamati Iron Mine from 8.0 MTPA to 13.5 MTPA (ROM) with Total Excavation of 15.0 MTPA along with Mineral Beneficiation Plant of 4.0 MTPA in ML Area of 403.3238 ha Located at Deojhar, District: nil, Tehsil: nil, Company: M/s. ATA STEEL LIMITED KHONDBOND IRON AND MN MINES, Project Type: Expansion	4.6.2021	5.8.2021
Project No: J-11015/1156/2007-IA-II(M), Project Name: Nuagoan Iron ore mine, District: Keonjhar, Tehsil: nil, Company: M/s. JSW STEEL LTD, Project Type: Expansion	4.6.2021	5.8.2021
<b>State: Sikkim (Category: Non-Coal Mining)</b>		
Project No: J-11015/418/2008-IA-II(M), Project Name: Extension of Amendment in EC of 5.1 Sq. Mile Mining Lease (1321.45 ha) of Bolani Ores Mines, SAIL for change in excavation and despatch pattern of fines from Fines Dumps/Fresh Fines for dispatch of dump fines / Fresh fines on road, keeping total production within approved EC Capacity, District: nil, Tehsil: nil, Company: M/s. Raw Materials Division (RMD), Steel Authority of India Limited (SAIL), Project Type: Change of Product Mix under para 7(ii)	23.6.2021	5.8.2021
<b>State: Maharashtra (Category: Non-Coal Mining)</b>		
Project No: IA-J-11015/22/2019-IA-II(M), Project Name: Persoda limestone mine, District: Chandrapur, Tehsil: Korpana, Company: M/s. RCCPL PRIVATE LTD, Project Type: New	1.12.2020	5.8.2021

## ENVIS Query Form

- Name :
- Designation :
- Organisation and Address :
- E-mail :
- Literature will be used for :
- Date :
- Signature :

I would like to search your database in the following areas: (tick appropriate subjects)

Subject	Subject	Subject	Subject
1. Sand Mining	7. Ergonomics	13. Wastewater Treatment	19. Solid Waste Management
2. Fly Ash	8. Land Use	14. Water Pollution	20. Impact Assessment
3. Ecorestoration	9. Policy and Planning	15. Air Pollution	21. Health and Toxicology
4. Mine Fires	10. Bioprocessing of Fuel	16. Land Reclamation	22. Mine Closure
5. Land Subsidence	11. Hydrogeology	17. Environmental Management	23. Remote Sensing and GIS
6. Noise and Vibration	12. Acid Mine Drainage	18. Socio Economic Environment	

Please mail to the attention of **Prof. Anshumali**, Coordinator & **Dr. Sheeja Jagadevan**, Co-coordinator  
 IIT(ISM) ENVIS Centre, Dept. of Env'tl. Science & Engg., Indian Institute of Technology (ISM), Dhanbad- 826004 (Jharkhand).  
**Phone:** (0326) 2296624; **FAX:** (0326) 2296624, 2296603, 2296613 **e-mail:** ism-env@envis.nic.in, envis@iitism.ac.in  
 Website: www.ismenvis.nic.in



## Various Activities of Dept. of ESE, IIT(ISM) ENVIS Centre and other Organisations



MCL, DM Kandhamal signed MoU for upgradation of infrastructure in 19 Govt. schools on July 5, 2021.



Shri Pralhad Joshi Union Minister of Coal, Mines, and Parliamentary Affairs of India, attended the 46th Meeting of the Standing Committee on safety in coal mines on July 6, 2021.



One Day workshop on Framework for GRBMP 2.0 organized by NMCG, Ministry of Jal Shakti and cGanga, IIT Kanpur on July 07, 2021.



Shri Danve Raosaheb Dadarao took over as the Minister of State in the Ministry of Coal and Ministry of Mines on July 8, 2021. In addition to Coal and Mines, he has also been assigned the portfolio of Minister of State in the Ministry of Railways



Chairman and Managing Director, Northern Coalfields Limited Shri Prabhakar Kumar Sinha on July 10, 2021 visited Jayant mine



A COVID awareness program on "My health, My responsibility" under the aegis of Swayamsiddha Ladies Club, NTPC Coal Mining Headquarters, Ranchi was conducted on 11.7.2021.



The Ministry of Coal, Govt. of India, a day-long workshop on "Way ahead for Jharia and Raniganj Master Plan" at Central Coalfields Limited, a Jharkhand-based subsidiary of Coal India Ltd. on July 14, 2021.



Shri Raosaheb Patil Danve, Hon'ble Union Minister of State for Coal, Mines and Railways, on 16.07.2021 virtually inaugurated the Medical Oxygen Generating Plant and CT Scan Equipment in NLC India Hospital, Neyveli.



Coal India Limited Chairman Shri Pramod Agrawal chaired the 57th meeting of CIL's Safety Board at CIL Headquarters in Kolkata on July 19, 2021.



Chairman, Coal India Limited laid the foundation stone of a railway corridor in the Jhanjra area of Eastern Coalfields Ltd. on 21.7.2021.



Shri. Pramod Agrawal, Chairman, Coal India Ltd. chaired a review meeting of Bharat Coking Coal Ltd. at Dhanbad on July 22, 2021.



New Delhi: Northern Coalfields Limited organized a seminar on Managers as mentors on July 26, 2021 at CETI. The concept of Mentor and Mentees was outlined in the seminar to nurture a healthy organizational climate.



Coal India Ltd. organised a Coal India 2022 Workshop on "People development, Tech-based Healthcare & Digital solutions for Mining" in Kolkata on July 31, 2021.



Chairman cum Managing Director of SECL on 03.08.2021 launched the Fast and Modern ERP System, which has been successfully implemented on 03.08.2021 at SECL HQ and its various areas.



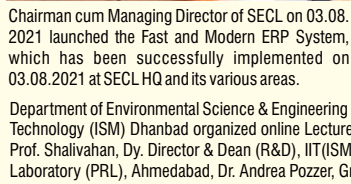
Western Coalfields Limited of Coal India Limited has offered jobs to 75 Project Affected Persons (PAPS), whose lands were acquired by WCL for mining and other purposes on 03 August, 2021.



CIL Hq had organised a "Collage Competition" on the theme "Go Green, Drink Clean" as a part of "Azadi Ka Amrit Mahotsav" on August 5, 2021.



Coal India Ltd. organised a one-day training program on "Gender Sensitization and POSH" - Prevention, Prohibition and Redressal Act, 2013, commonly referred to as the "POSH Act" on Aug. 10.08.2021



Department of Environmental Science & Engineering in association with Centre for Water Resource Management (CWRM) and IIT(ISM) ENVIS Centre, Indian Institute of Technology (ISM) Dhanbad organized online Lecture/Training on "Chemistry-Climate Modeling" on 16.8.2021. The lecture/training was inaugurated by Chief Guest Prof. Shalivahan, Dy. Director & Dean (R&D), IIT(ISM) Dhanbad. The Key Resource Persons for the lecture/training were Dr. Narendra Ojha, Reader, Physical Research Laboratory (PRL), Ahmedabad, Dr. Andrea Pozzer, Group Leader, Max Planck Institute for Chemistry (MPIC), Germany and Dr. Tabish U. Ansari, Assistant Professor of Earth and Energy, Campus Fryslan, Univ. of Groningen, Netherlands. The training session on the Box Model was conducted by Ms. Meghna Soni, Senior Research Fellow, (PRL), Ahmedabad while Mr. Jaydeep Singh, Senior Research Fellow, (ARIES), Nainital conducted Modeling session on Weather Research and Forecasting (WRF). The vote of thanks was given by Prof. Anshumali, HOD/ESE, IIT(ISM) Dhanbad.



Northern Coalfields Limited officials visits IIT-BHU, Varanasi a public technical and research university located in Varanasi for discussion on clean coal technologies, energy-efficient operation, and strengthening Industry-academia collaboration in a multidimensional approach on 23.8.2021.



Prof. Shalivahan, Dy. Director & Dean (R&D), IIT(ISM) (Chief Guest)



Dr. Andrea Pozzer, Group Leader, Max Planck Institute for Chemistry (MPIC), Germany (Speaker)



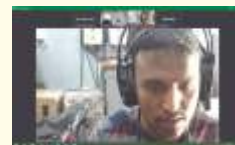
Prof. Anshumali, HOD/ESE, IIT(ISM) (Coordinator)



Dr. Tabish U. Ansari, Assistant Professor of Earth and Energy, Campus Fryslan, Univ. of Groningen, Netherlands (Speaker)



Dr. Narendra Ojha, Reader, Physical Research Laboratory (PRL), Ahmedabad (Speaker)



Mr. Jaydeep Singh, Senior Research Fellow, Aryabhata Research Institute of Observational Sciences (ARIES), Nainital, Uttarakhand (Training Session on WRF)



## Various Activities of Dept. of ESE, IIT(ISM) ENVIS Centre and other Organisations

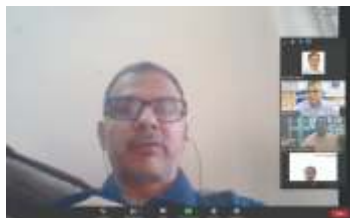


Coal India Limited organised two days workshop on future thrust areas for preventive/predictive vigilance during 26-27 Aug., 2021 at Coal Bhawan, Rajarhat Kolkata.



**Prof. Anshumali**, Head, Dept. of Environmental Science & Engineering, IIT(ISM) Dhanbad, has appointed as the Member of State Level Expert Appraisal Committee (SEAC), Bihar. [Published in the Gazette of India, S.O. 3271 (E) [12.8.2021], Registered. NO. D. L.-33004/99 Part - II, Section - 3, Sub - Section (ii)].

Four days online training program on "Low Cost Treatment Method for Fluoride and Arsenic Contaminated Groundwater" organized by Key Resource Centre (Ministry of Jal Shakti, Govt. of India) at Dept. of Environmental Science and Engg., Indian Institute of Technology (ISM), Dhanbad from 21-24 Sept., 2021. The Training Programme was held in two batches: **Batch 1** for officials from Sanitation Dept. AP SMMU Assam, WSSO WB & DWSS Punjab during Sept. 21-22, 2021. Prof. Shalivahan, Dy. Director & Dean (R&D), IIT (ISM), Dhanbad was the Chief Guest and inaugurated the event. **Batch 2** for officials from DWSD Jharkhand, PHED Bihar, WSSO Tripura, WSSD Maharashtra during Sept. 23-24, 2021. Prof. Gurdeep Singh, Emeritus Fellow was the Chief Guest and inaugurated the event. The Welcome address was delivered by Prof. Anshumali, HOD, Dept. of ESE, IIT (ISM). Prof. B K Mishra was the Nodal Officer (KRC) & Associate Prof., Dept. of ESE of the online Training Program. Prof. Tinesh Pathania, Asst. Prof. Dept. of ESE delivered vote of thanks on the occasion of the online training programme.



Address by Chief-Guest Prof. Shalivahan, Dy. Director & Dean (R&D), IIT (ISM) (on 21.9.2021 for Batch-1)



Swamysiddha Ladies Club, NTPC Coal Mining Head Quarters organised a four days' Workshop on Personality Development for children from 26-29 Aug., 2021 in virtual mode. On concluding day of the workshop, to showcase the learning from the workshop, participants from projects of coal mining region presented skit, speeches, dance, singing and group performances.



**SAMBALPUR:** Mr. M Nagaraju, IAS, Additional Secretary to GOI, Ministry of Coal visits Talcher, appreciates Mahanadi Coalfields Limited (MCL) on 13.9.2021 said that MCL would be the top-performing company in the coal sector by the end of the current financial year 2021-22.



A high-level Australian delegation led by His Excellency Barry O'Farrell, High Commissioner of Australia to India, visited Navratna CPSE NALCO's Corporate Office at Bhubaneswar on 31.8.2021. During the visit, the delegation interacted with Shri Sidhar Patra, CMD, NALCO, and the members of NALCO's management team.

IIT(ISM) ENVIS Centre at the Department of Environmental Science and Engineering, Indian Institute of Technology (ISM) Dhanbad celebrated **World Ozone Day** on 16<sup>th</sup> September, 2021. On this occasion, the Centre organized two Online Talk Sessions on this vital environmental issue by faculty experts and an Online Quiz Competition was held for School Children of STD-IX to STD-XII.



Address by Prof. Anshumali, Head of Dept. of ESE, IIT(ISM) & Coordinator, IIT(ISM) ENVIS Centre



Shri Vivek Kumar Dewangan, IAS, Additional Secretary, Ministry of Power, Government of India and Independent Director of NTPC Ltd visited NTPC Coal Mining Headquarters at Ranchi and reviewed the activities of coal mining projects of NTPC on 11.09.2021.



Welcome Address by Prof. Sheeja Jagadevan, Assistant Prof., Dept. of ESE, IIT(ISM), & Co-coordinator, IIT(ISM) ENVIS Centre



Prof. Madumita Patel, Assistant Prof., Dept. of ESE, IIT(ISM), delivered a talk on "Effect of Ozone depletion on Ecosystem"



Prof. Saifi Izhar, Assistant Prof., Dept. of ESE, IIT(ISM), delivered a talk on "Air Pollution"



Address by Chief Guest Prof. Gurdeep Singh, Emeritus Fellow, Dept. of ESE, IIT (ISM) (on 23.9.2021 for Batch 2)



Opening Remarks by Prof. B.K. Mishra, Nodal Officer (KRC) and Associate Prof., Dept. of ESE



**From:**  
**IIT (ISM) ENVIS Centre**  
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 Indian Institute of Technology  
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