



सत्यमेव जयते

SANKET

Statistical Analysis & Numbers:
Key Evaluation of Trends in Coal Mine Accidents

2016-2022



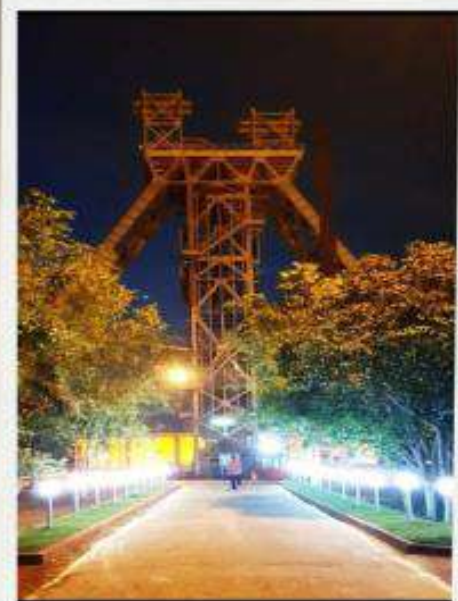
भारत सरकार
श्रम एवं रोजगार मंत्रालय
खान सुरक्षा महानिदेशालय

Government of India
Ministry of Labour & Employment
Directorate General of Mines Safety


www.dgms.gov.in


@DGMS1902


@DGMSINDIA





सत्यमेव जयते

भारत सरकार

Government of India

श्रम एवं रोजगार मंत्रालय

Ministry of Labour & Employment

खान सुरक्षा महानिदेशालय

Directorate General of Mines Safety



SANKET

Statistical Analysis & Numbers:
Key Evaluation of Trends in Coal Mine Accidents

This page is intentionally left blank.

PREFACE

Directorate General of Mines Safety (DGMS) administers the Mines Act, 1952 throughout the country. The publication **SANKET: Statistical Analysis & Numbers: Key Evaluation of Trends in Coal Mine Accidents 2016 – 2022** disseminates information regarding accidents in coal mines and brief description of findings of enquiry conducted by DGMS in respect of each and every fatal accident that occurred during the reference year. An updated list of all fatal accidents involving 4 or more fatalities and the recommendations made thereunder and a list of Court of Inquiries held for different accidents in coal mines since 2001 are also included in the publication.

Chapter 1 covers the introduction of DGMS and its role in mitigating risks associated with mining operations. Analysis of coal mine accidents during last 10 years (2013 to 2022) is covered in chapter 2. Yearly details of coal mine accidents are covered in Chapter 3 to Chapter 9. The list of all fatal accidents involving 4 or more fatalities is included in Chapter 10. The list of Court of inquiries is provided in Chapter 10.

Hindi version of the publication will follow soon.

हिंदी संस्करण जल्द ही प्रकाशित किया जायेगा |

February, 2024

Dhanbad

This page is intentionally left blank.



MESSAGE



Directorate General of Mines Safety (DGMS) administers the Mines Act, 1952 throughout the country. The Directorate General of Mines Safety (DGMS) is a regulatory body in India overseeing safety in the mining industry. Operating under the Ministry of Labour and Employment, DGMS formulates and enforces safety standards, conducts inspections, and promotes a culture of safety to ensure the well-being of workers in mines across the country.

I am delighted to introduce "SANKET: Statistical Analysis & Numbers—Key Evaluation of Trends in Coal Mine Accidents," a pivotal publication shedding light on accident statistics over the past seven years from 2016 to 2022 in Coal Mines. As the Director General, I am proud to present this crucial resource that underscores our commitment to ensuring the safety and well-being of our mining community.

"SANKET" serves as a strategic tool, offering insights into accident patterns and risk factors within the coal mining sector. It reflects the DGMS's unwavering dedication to fostering a proactive safety culture, ensuring that our policies and interventions are grounded in data-driven decision-making. This publication not only encapsulates our commitment to transparency but also stands as a testament to the collaborative efforts between the DGMS and stakeholders in our collective pursuit of a safer working environment.

I extend my heartfelt appreciation to the diligent teams at the DGMS and all contributors involved in compiling this data. May "SANKET" be a catalyst for informed discussions and actions that propel us towards a future where accidents in coal mines are minimized, reflecting our shared commitment to safety and the mission of ZERO harm.

It is expected that this publication will be quite useful to all person connected with the mining industry, professionals and research scholars. Any suggestion for improvement of the publication is most welcome.

February, 2024

Dhanbad

(Prabhat Kumar)

Director General

This page is intentionally left blank.



संदेश



मुझे यह जानकर अत्यंत प्रसन्नता हो रही है कि खान सुरक्षा महानिदेशालय के अंतर्गत सांख्यिकी विभाग द्वारा "SANKET: Statistical Analysis & Numbers—Key Evaluation of Trends in Coal Mine Accidents," (2016-2022) नाम से वार्षिक रिपोर्ट का प्रकाशन हो रहा है।

खनन कार्य सदा से ही चुनौतीपूर्ण एवं जोखिम भरा रहा है। खनन कार्यस्थल को बेहतर एवं सुरक्षित वातावरण प्रदान करने हेतु खान सुरक्षा महानिदेशालय पर देशभर में खान अधिनियम 1952 को प्रवर्तित करने की जिम्मेवारी है। यह महानिदेशालय कोयला खान विनियम 1957 के तहत विविध सांविधिक विवरणी एवं सूचनाएँ प्राप्त करते हैं। "संकेत: शीर्षक नामक वर्ष 2016 से 2022 के लिए यह प्रकाशन ऐसी ही विवरणी एवं सूचनाओं पर आधारित है जो खान अधिनियम 1952 की अधिकारिता के अन्तर्गत आने वाले भारत के सभी कोयला खानों को समाविष्ट करता है।

यह प्रकाशन खास तौर पर कोयला खदानों में हुए दुर्घटनाओं के रुझान पर प्रकाश डालता है। इस प्रकाशन में चार या उससे अधिक मृतकों की सूची तथा वर्ष 1901 से कोयला के खानों में घटित विभिन्न दुर्घटनाओं के लिए गठित जॉच – न्यायालयों की अद्ययतन सूची को भी शामिल किया गया है।

मुझे आशा है कि यह प्रकाशन कोयला खनन उद्योग के परोक्ष या अपरोक्ष रूप से जुड़े सभी व्यक्तियों के लिए लाभकारी होगा।

पाठकों से सुझाव प्राप्त हो तो उसका स्वागत किया जायेगा।

फ़रवरी, 2024
धनबाद।

(ज्योति प्रसाद आर्य)
उपमहानिदेशक (सांख्यिकी)

This page is intentionally left blank

DIRECTORATE GENERAL OF MINES SAFETY

Shri Prabhat Kumar
Director General

OFFICERS AND STAFF OF STATISTICS DIVISION ASSOCIATED WITH THE PUBLICATION

Shri J.P.Arya, Deputy Director General

Smt Gunjan Vaish, Joint Director

Shri P.C.Bhaskar, Joint Director

Shri Ashish Kumar, Deputy Director

Senior Statistical Officers

Shri Brajeshwar Kumar

Shri Parvez Ansari

Shri R.N.Tiu

Smt M S Jojo

Smt P Dhama

Data Processing Assistant

Shri Sadashiv Prasad

Jr. Statistical Officer

Shri Kranti Kumar

Shri Dhananjay Kumar

Shri B.K. Verma

Shri A K Gupta

Shri Sandeep Kumar

Shri Mandeep Singh

Dealing Assistants

Shri Basant Yadav

Shri Zaki Akbar

Shri Ranjeet Prasad

This page is intentionally left blank.

Contents

1. INTRODUCTION	1
2. DECADAL ANALYSIS (2013 TO 2022)	5
3. ACCIDENT ANALYSIS IN COAL MINES: 2016.....	23
4. ACCIDENT ANALYSIS IN COAL MINES: 2017.....	70
5. ACCIDENT ANALYSIS IN COAL MINES: 2018.....	108
6. ACCIDENT ANALYSIS IN COAL MINES: 2019.....	145
7. ACCIDENT ANALYSIS IN COAL MINES: 2020.....	184
8. ACCIDENT ANALYSIS IN COAL MINES: 2021.....	222
9. ACCIDENT ANALYSIS IN COAL MINES: 2022.....	259
10. MAJOR ACCIDENT SINCE 1901	285
11. COURT OF INQUIRY	293
12. MISCELLANEOUS	297

This page is intentionally left blank

1. INTRODUCTION

Mining has been a hazardous occupation. The history of mine accidents is a tragic and sobering reminder of the inherent risks associated with mining operations. Mining accidents continue to occur due to the complex nature of mining operations and the ever-present risks associated with them. Throughout the centuries, mining accidents have claimed the lives of countless miners and left lasting impacts on communities. Despite advancements in mine safety, challenges persist. Factors such as human error, inadequate safety protocols, inadequate training, and unforeseen geological conditions can still lead to accidents. Additionally, the mining industry's expansion into remote and challenging environments presents new risks and safety challenges that need to be addressed.

Safety in Mining

Safety in mines is of paramount importance and holds a significant place in the mining industry. The primary objective of ensuring safety in mines is to safeguard the lives of miners. Mining operations can be inherently dangerous due to various factors such as unstable rock formations, underground gases, the presence of flammable materials, and heavy machinery. The hazardous nature of mining operations necessitates strict adherence to safety protocols and practices to protect the well-being of miners and prevent accidents.

The development of new technologies and safety practices has played a vital role in mitigating risks associated with mining operations. The introduction of safety lamps, ventilation systems, and safety regulations significantly improved working conditions and reduced the occurrence of accidents. Implementing rigorous safety measures, including proper training, the use of personal protective equipment (PPE), and regular inspections, reduces the risk of accidents, injuries, and fatalities. While significant strides have been made to improve safety standards and reduce accidents, the mining industry continues to face inherent risks. Through ongoing efforts, technological advancements, and a collective commitment to safety, the goal remains to achieve Zero Hazard Potential and protect the well-being of miners.

Directorate General of Mines Safety (DGMS)

Entry 55 of the Union List in the Seventh Schedule of the Constitution of India grants exclusive legislative authority to the central government over matters related to mines and mineral development. This includes the power to enact laws, formulate policies, and make regulations concerning mines safety. Under this provision, the central government has established the Directorate General of Mines Safety (DGMS) as the primary regulatory authority responsible for ensuring mines safety across the country.

The DGMS operates under the Ministry of Labour and Employment and is tasked with formulating policies, setting safety standards, and conducting inspections to ensure compliance with mines safety regulations. It plays a pivotal role in promoting a safe and healthy working environment in mines by enforcing statutory provisions, issuing guidelines, and providing technical expertise.

The DGMS is responsible for the implementation and enforcement of the Mines Act, 1952, which focuses on the safety, health, and welfare of workers employed in mines. It conducts regular inspections of mines to assess safety conditions, identify potential hazards, and ensure that proper safety measures are in place. The DGMS also conducts investigations into mine accidents and takes appropriate action to prevent future occurrences.

With the consistent efforts of (i) legislative measures and Actions taken after inspections like Pointing out contraventions, Withdrawal of permission, Issue of improvement notices, Prohibition of employment, Informal stoppages, Prosecution in the court of law, and (ii) proactive measures/ promotional initiatives a significant improvement in the safety status of Indian mines has been achieved. For coal mines, a consistent decline is observed in the 10-yearly average number of accidents per year since the 1950s and the 10-yearly average number of fatalities since the 1970s. The same trend continued for the last 10- yearly period 2011-2020. For non-coal mines, the average numbers of accidents and fatalities have remained more or less at the same level during the period from 1971-1980 to 1991-2000, while the last ten years' averages during the period 2001-2010 to 2011-2020 have slightly decreased in the number of accidents and fatalities.

In addition to inspections and investigations, the DGMS plays a proactive role in creating awareness about mines safety through training programs, seminars, and workshops. It provides guidance to mine operators and workers on adopting best practices, using modern equipment, and implementing safety protocols to minimize risks and prevent accidents.

Furthermore, the DGMS actively engages with industry stakeholders, trade unions, and other relevant organizations to gather inputs, address concerns, and promote a collaborative approach towards improving mines safety. It regularly reviews and updates safety standards, taking into account technological advancements, industry practices, and international benchmarks.

Through its efforts, the DGMS plays a crucial role in protecting the lives and well-being of workers in the mining industry. It strives to create a culture of safety, raise awareness about occupational hazards, and ensure that mines operate in compliance with prescribed safety norms.

Directorate General of Mines Safety, DGMS in short, is the Regulatory Agency under the Ministry of labour and employment, Government of India in matters pertaining to occupational safety, health and welfare of persons employed in mines (Coal, Metalliferous and oil-mines). The organization has its headquarters at Dhanbad (Jharkhand) and is headed by Director General of Mines Safety.

FIELD ORGANIZATION OF DGMS

Sl. No.	Zone	Region
1	Eastern Zone, Sitarampur, West Bengal	1. Sitarampur Region No.I 2. Sitarampur Region No.II

2	Central Zone, Dhanbad, Jharkhand	3. Sitarampur Region No.III 4. Guwahati 1. Dhanbad Region No. I 2. Dhanbad Region No. II 3. Dhanbad Region No. III 4. Koderma
3	South Eastern Zone, Ranchi	1. Ranchi 2. Bhubaneswar 3. Chaibasa 4. Raigarh
4	North Western Zone, Udaipur, Rajasthan	1. Ahmedabad 2. Udaipur 3. Surat
5	Northern Zone, Ghaziabad, Uttar Pradesh	1. Ghaziabad 2. Ajmer 3. Gwalior 4. Varanasi
6	Southern Central Zone, Hyderabad, Telangana	1. Hyderabad Region No. I 2. Hyderabad Region No. II Sub Region: Nellore 3. Goa
7	Southern Zone, Bengaluru, Karnataka	1. Bengaluru 2. Bellary 3. Chennai
8	Western Zone, Nagpur, Maharashtra	1. Nagpur Region No. I Sub Region: Parasia 2. Nagpur Region No. II 3. Jabalpur 4. Bilaspur

SCOPE OF THE PUBLICATION

The Publication is mainly compiled based on the Notices of Accidents submitted to the Directorate General of Mines Safety as required under the provisions of Coal Mines Regulations, 1957. This is supplemented by the report of the enquiry conducted by the Officers of Directorate General of Mines Safety (DGMS). The officers of the Directorate General of Mines Safety (DGMS) investigate into the causes and circumstances leading to each and every fatal accident occurred in these mines.

Accidents in the mines are categorized as Fatal Accident, Serious Accident, Dangerous Occurrences and Minor Accidents. Fatal accidents are those in which at least one death is involved. However, serious injury is defined as any injury which involves the permanent loss of many part or section of the body or use of any part or section of a body, or the permanent loss or incapacity or the fracture of any bone or one or more joints or bones or any phalanges of hand or foot.

Cases in which neither any life is lost nor any person is seriously injured, but could have been occurred had the person been present at the spot are covered in the category of 'Dangerous Occurrences'.

The publication covers the analysis of the fatal accidents and fatalities, serious accidents and injuries occurred and Dangerous Occurrences due to mining activity, for last ten years in different places of the coal mines. Based on the places, Mining activity is categorized in three categories viz. Below Ground, Opencast and Above Ground. Cause of these accidents over different point of time, places, company wise accidents have also been covered. Cause of accidents in the mines is broadly categorized in mainly nine categories followed by different subcategories may be seen at Miscellaneous Statement 1.

The Publication also includes State-wise, District-wise, DGMS Zone wise, Region wise and Company wise analysis of accidents, Cause and Had Paras of the Fatal Accidents, a list of all fatal accidents involving four or more deaths and a list of court of enquiry held for different accidents in coal mines since 1901 .

2. DECADAL ANALYSIS (2013 TO 2022)

Fatal Accidents

- The highest number of fatal accidents occurred in 2013 (77 accidents), with a corresponding total of 82 fatalities.
- The year 2016 stands out with a significant increase in both fatal accidents and fatalities.
- The number of fatal accidents generally decreased over the years, with a noticeable decline in recent years (2018-2022).
- There was a significant reduction in both fatal accidents and fatalities in 2022 compared to previous years.
- The number of fatalities per fatal accident to assess the severity of the accidents is:

Table 2.1

Year	Fatal Accident	Fatalities	Fatalities per Fatal Accident
2013	77	82	1.06
2014	59	62	1.05
2015	54	55	1.02
2016	67	94	1.40
2017	56	61	1.09
2018	49	62	1.27
2019	51	56	1.10
2020	48	53	1.10
2021	43	51	1.19
2022	24	28	1.17

- The average number of fatalities per fatal accident, a measure of accident severity, ranged from 1.02 to 1.40 over the analysed period. This suggests that the severity of accidents remained relatively consistent, although there was a notable increase in 2016.
- Overall, there's a downward trend in the number of fatal accidents and fatalities over the analysed period.
- The reduction in fatal accidents and fatalities suggests improved safety practices and regulations in coal mines. The trend emphasizes the need to continue implementing effective safety measures to further reduce accidents and fatalities. Despite the decreasing trend, it's crucial to maintain consistent efforts in safety management to prevent complacency and potential future spikes in accidents.

Summary Statistics:

Total Years: 10

Total Fatal Accidents: 528

Mean Fatal Accidents per Year: 52.8

Total Fatalities: 604

Mean Fatalities per Year: 60.4

Serious Accidents

- The highest number of serious accidents as well as seriously injured persons occurred in 2013 with 456 serious accidents and 468 seriously injured persons.
- There's a general declining trend in both serious accidents and seriously injured cases
- 2020 had the lowest number of serious accidents and seriously injured cases.
- The decreasing trend in serious accidents and seriously injured cases suggests the effectiveness of safety measures over time. The lower numbers in recent years are promising, but attention should still be given to identify underlying causes for the fluctuations.
- The number of seriously injured persons per serious accident to assess the severity of the accidents is:

Table 2.2

Year	Serious Accident	Seriously Injured	Seriously Injured per Serious Accident
2013	456	468	1.03
2014	379	394	1.04
2015	302	316	1.05
2016	269	279	1.04
2017	266	272	1.02
2018	265	279	1.05
2019	193	204	1.06
2020	117	138	1.18
2021	186	193	1.04
2022	181	190	1.05

- The metric of seriously injured cases per serious accident varies between 1.02 and 1.18 over the years. Most of the years have the metric close to the mean value of 1.05.
- The metric indicates that, on average, there's approximately 1 seriously injured case for every serious accident. Years with higher values of this metric, such as 2020, may require specific attention to reduce the severity of injuries per accident.
- The analysis of serious accidents and seriously injured cases in coal mines reveals an overall decreasing trend, indicating progress in safety management efforts. The strong correlation between these variables underscores the importance of comprehensive safety strategies to prevent serious accidents and protect the well-being of mine workers. Additionally, the metric of seriously injured cases per serious accident provides valuable insight into the severity of incidents.

Summary Statistics:

Total Years: 10

Total Serious Accidents: 2614

Mean Serious Accidents per Year: 261.4

Total Seriously Injured Cases: 2733

Mean Seriously Injured Cases per Year: 273.3

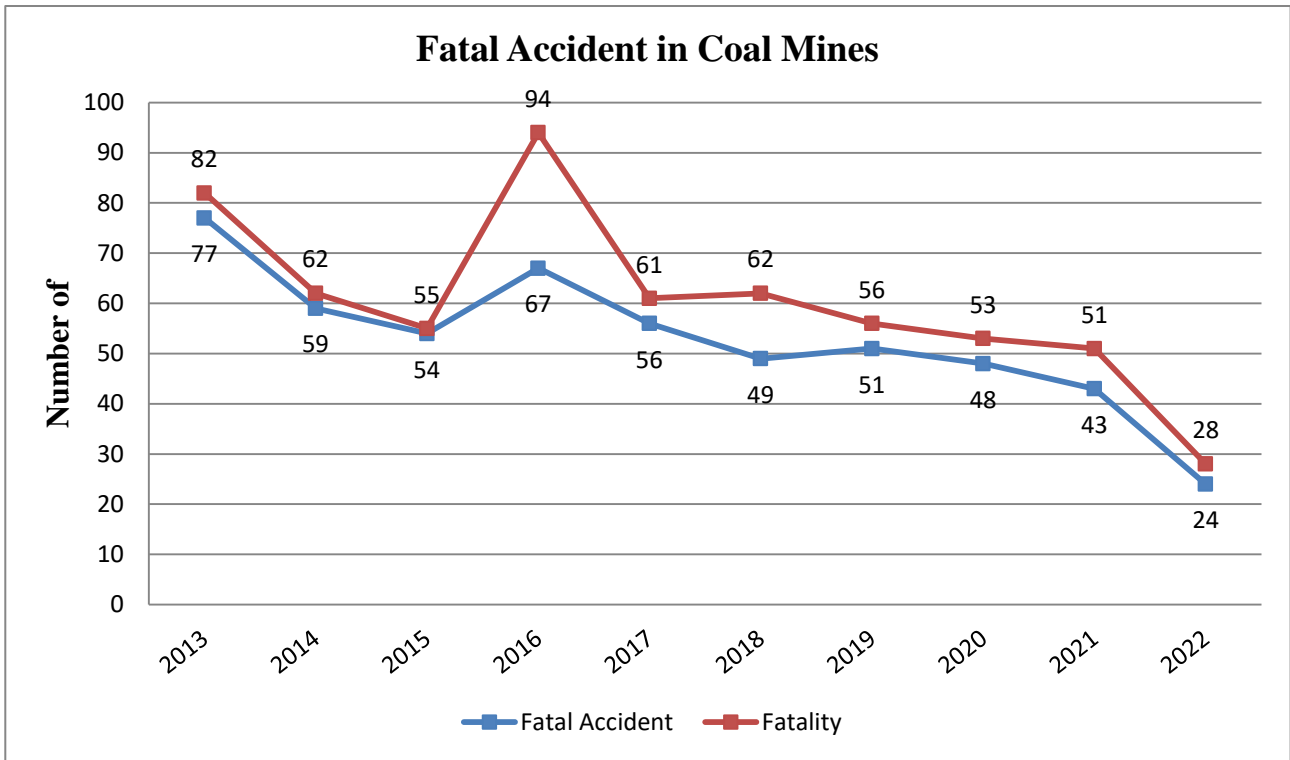


Figure 2.1

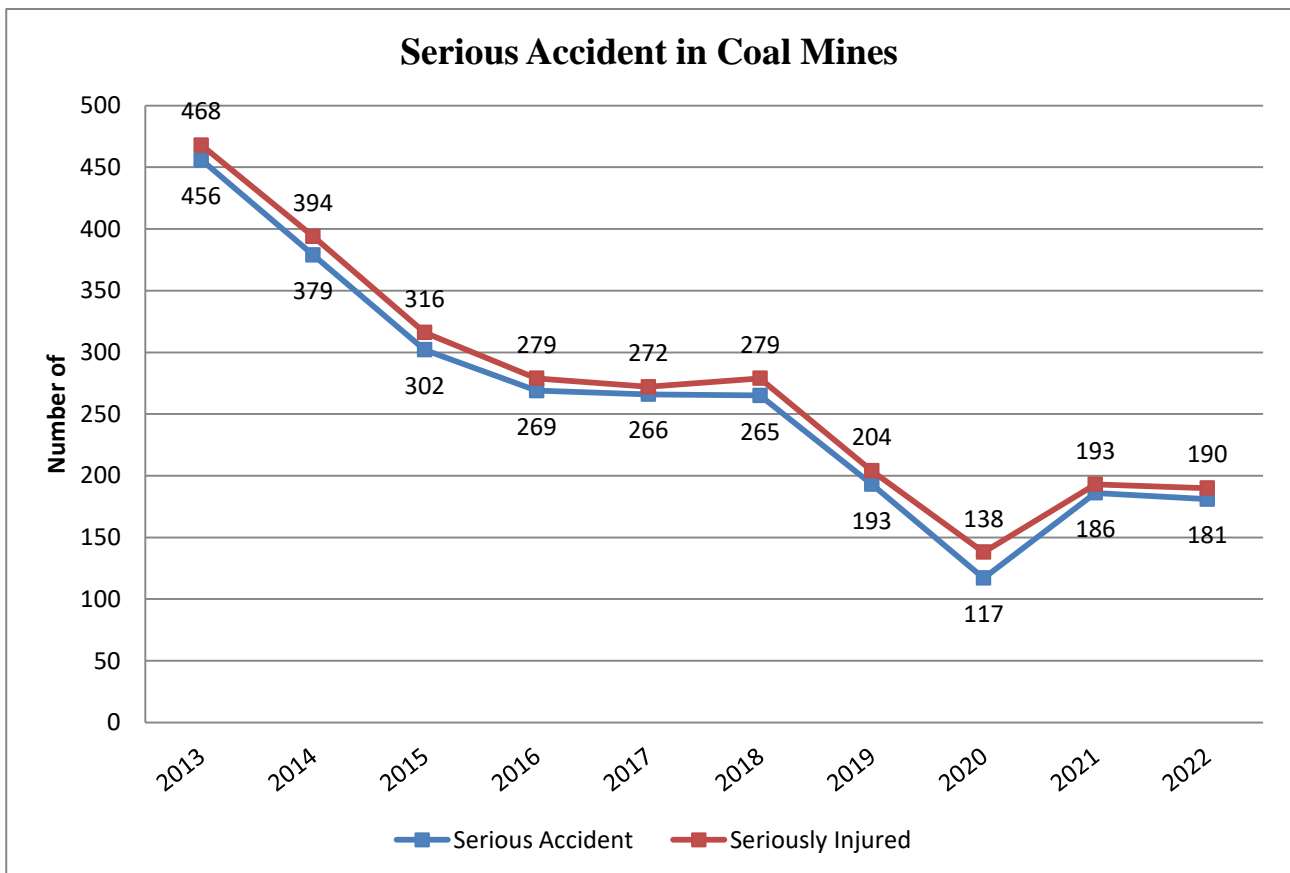


Figure 2.2

Place Wise and Cause Wise Fatal Accident

- Opencast accidents have consistently been the highest in numbers among the three locations.
- Below Ground accidents fluctuate but generally remain second-highest in numbers.
- Above Ground accidents are the lowest in frequency.
- Opencast mining appears to have a higher frequency of accidents, potentially due to the nature of the mining process.
- Below Ground accidents can pose significant risks, warranting continuous safety measures.
- Total Fatal Accidents by Location

Table 2.3

Place	Total Fatal Accident	Percentage
Below Ground	175	33%
Opencast	262	50%
Above Ground	91	17%

- The analysis of accidents by location within coal mines from 2013 to 2022 highlights that opencast mining experiences the highest number of accidents, followed by Below Ground and Above Ground. Strengthening safety measures in opencast mining and maintaining vigilance in Below Ground mining are essential for overall mine safety.

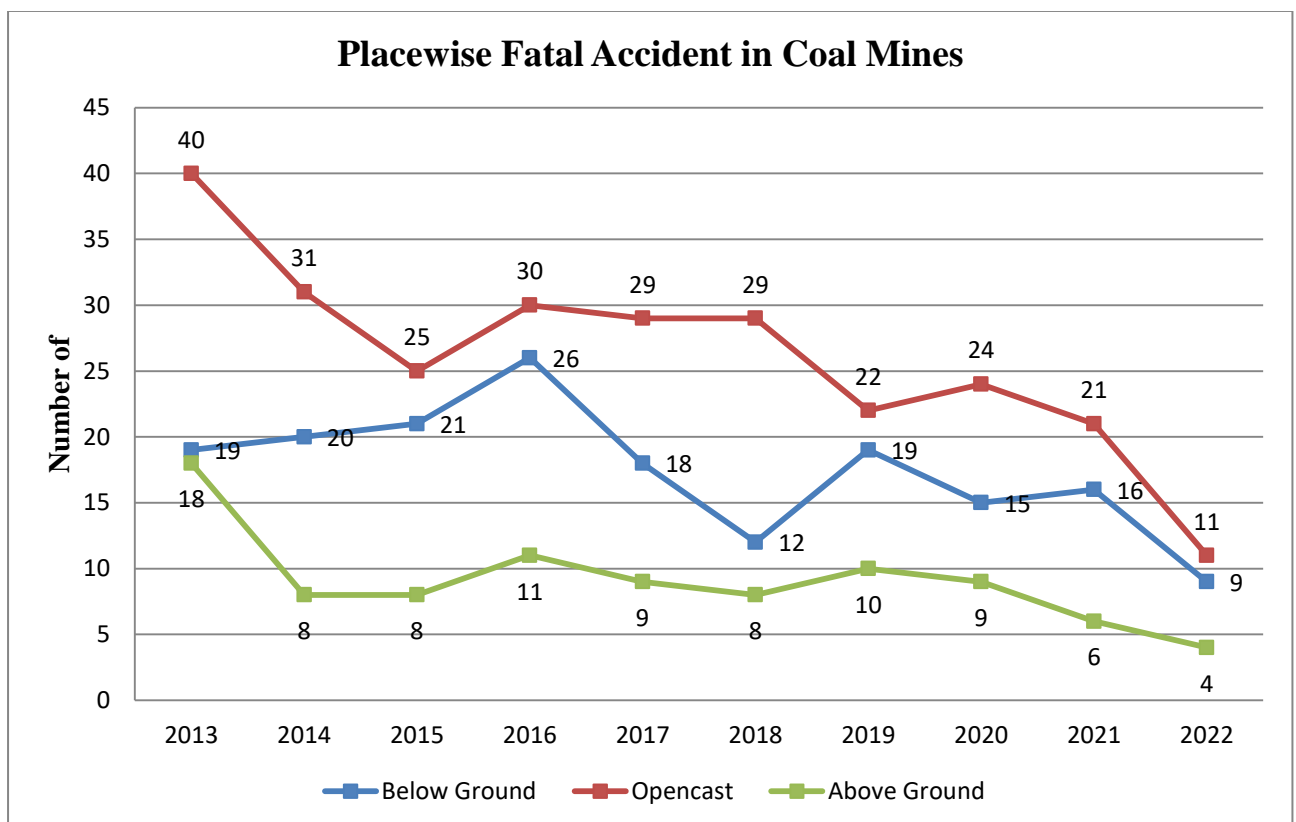


Figure 2.3

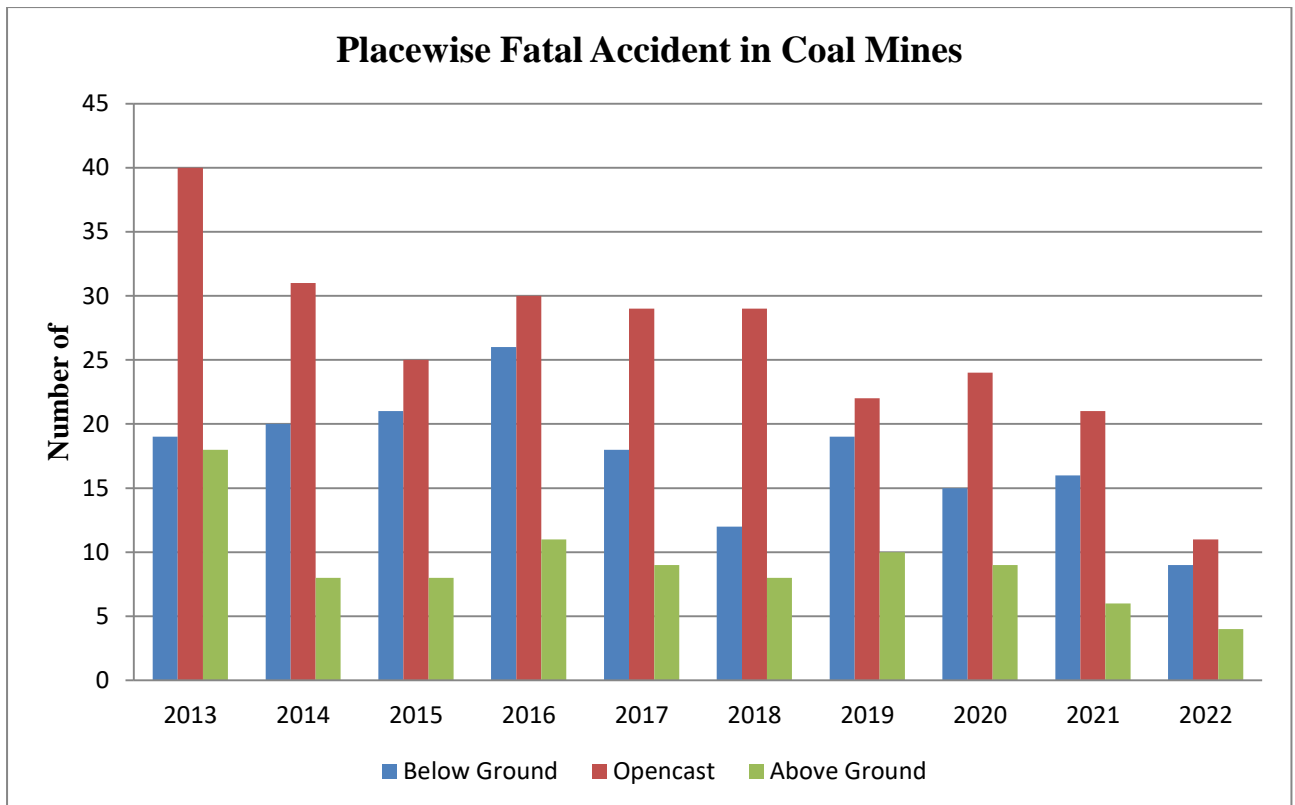


Figure 2.4

- "Transportation Machinery (Non- Winding)" caused the highest number of fatal accidents.
- "Ground Movement" and "Machinery other than Transportation Machinery" also contributed significantly to fatal accidents. The number of fatal accidents due to "Transportation Machinery (Winding)" has been relatively low.
- Accidents caused by "Explosives," "Electricity," "Gas, Dust & Other Combustible Material," "Fall (Other than Falls of Ground)," and "Other Causes" vary across the years.

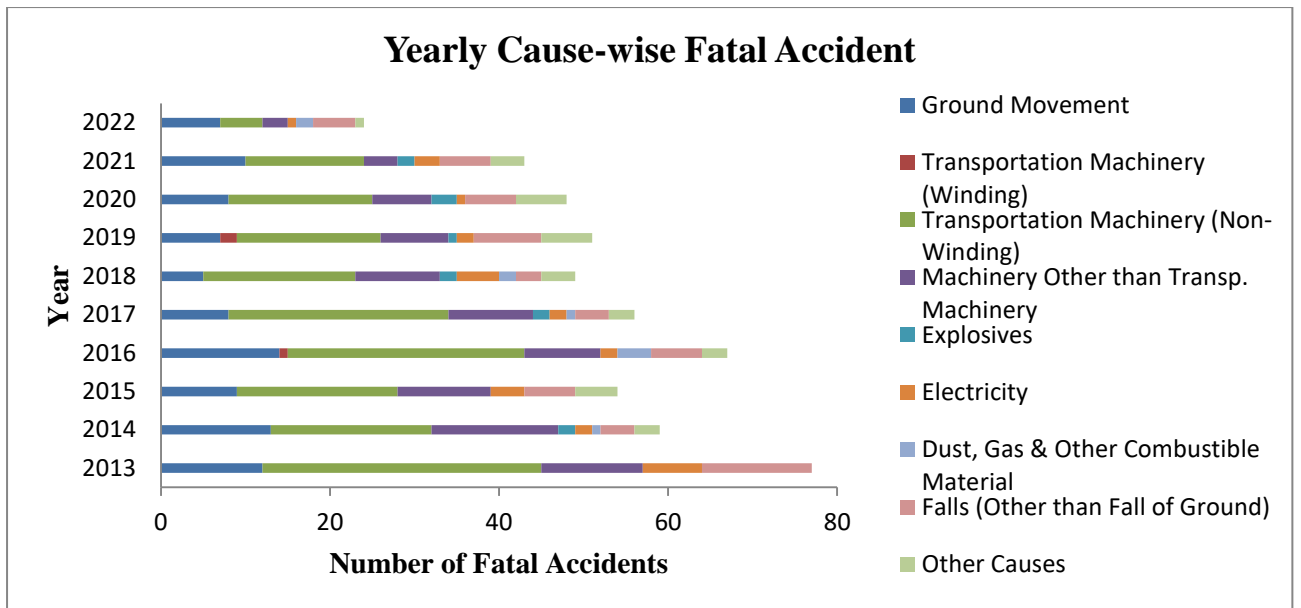


Figure 2.5

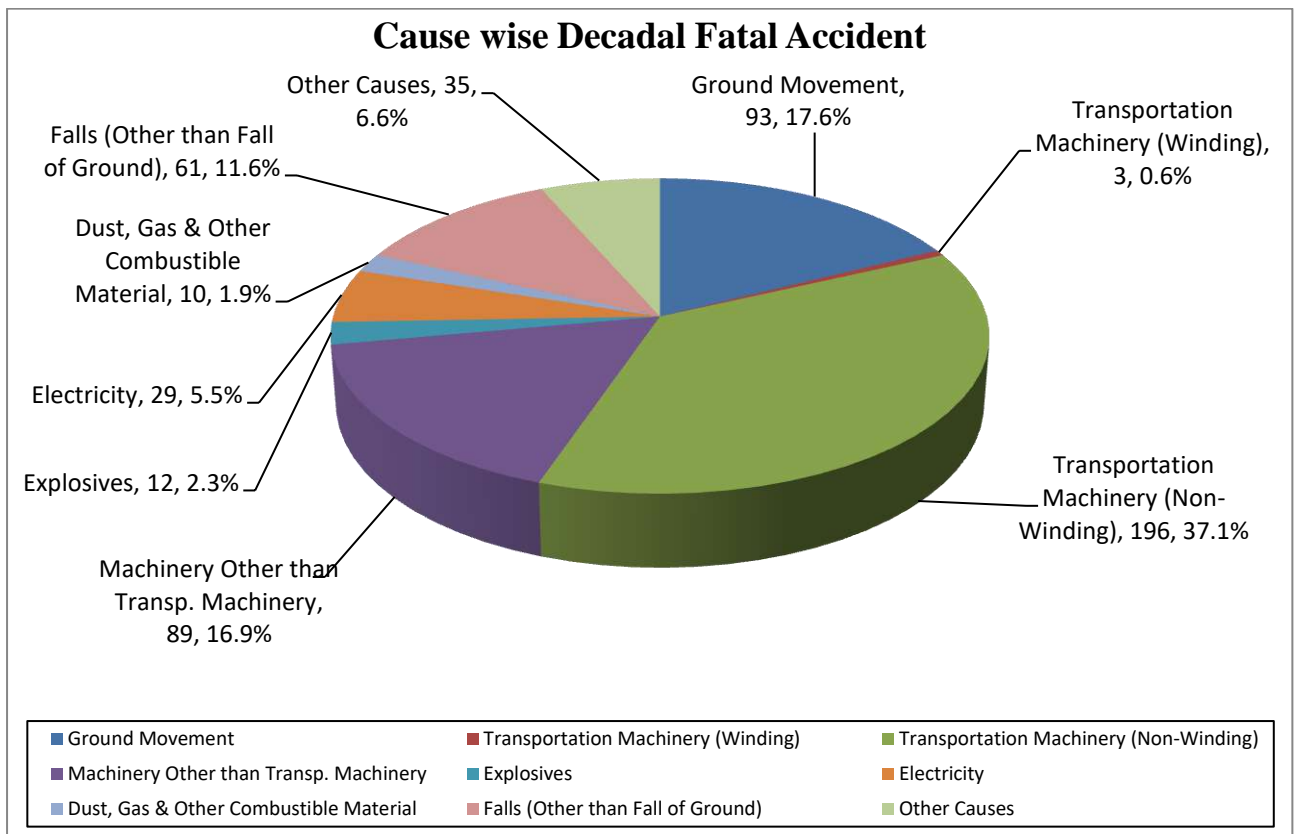


Figure 2.6

Place Wise and Cause Wise Serious Accident

- "Below Ground" consistently experiences the highest number of serious accidents. "Opencast" and "Above Ground" locations have comparatively lower serious accident numbers.
- There is a noticeable decline in serious accidents after 2013 with few fluctuations in subsequent years.
- Total Serious Accidents by location:

Table 2.4

Place	Total Fatal Accident	Percentage
Below Ground	1710	65%
Opencast	436	17%
Above Ground	468	18%

- The exploratory analysis of serious accidents in coal mines based on different locations from 2013 to 2022 provides insights into the distribution, trends, and fluctuations in accidents. Identifying location-specific patterns and trends can guide safety interventions to improve worker safety and reduce serious accidents.

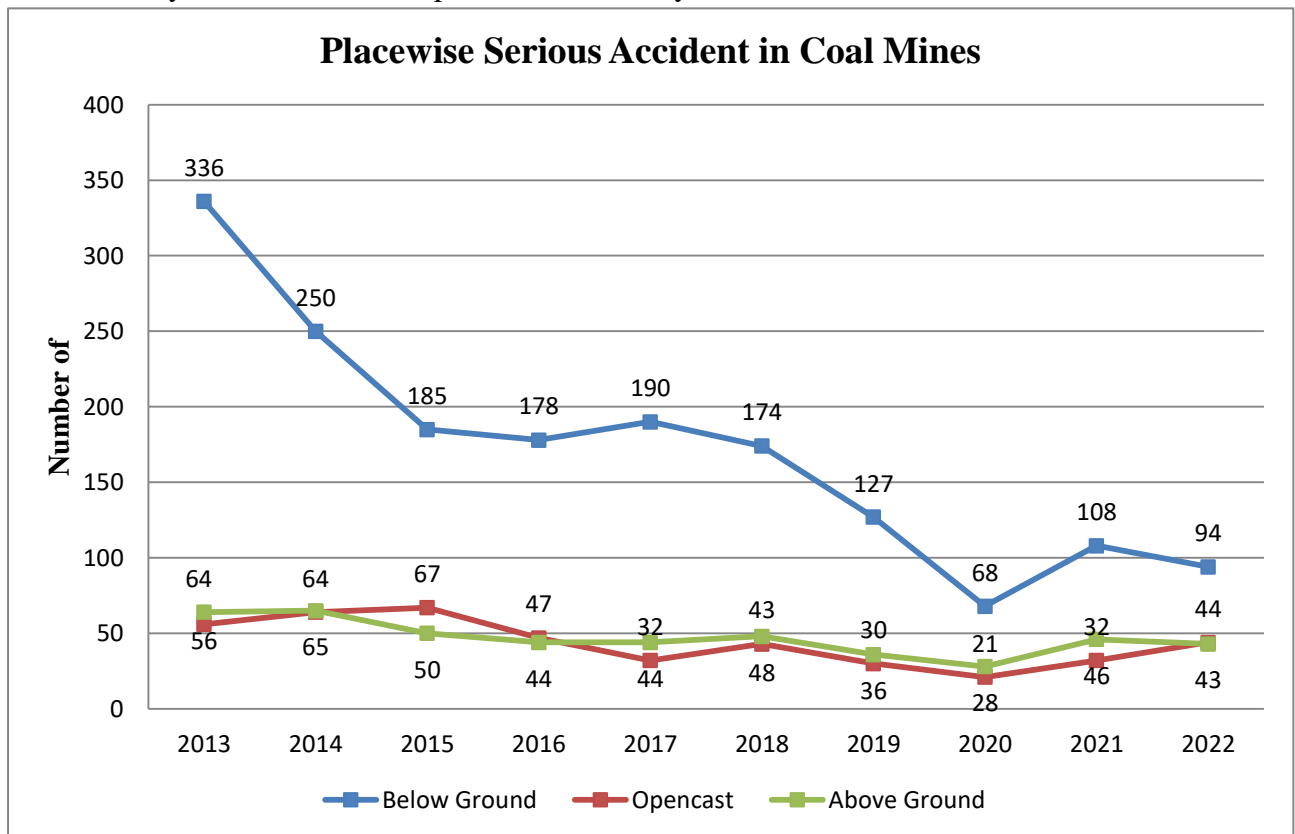


Figure 2.7

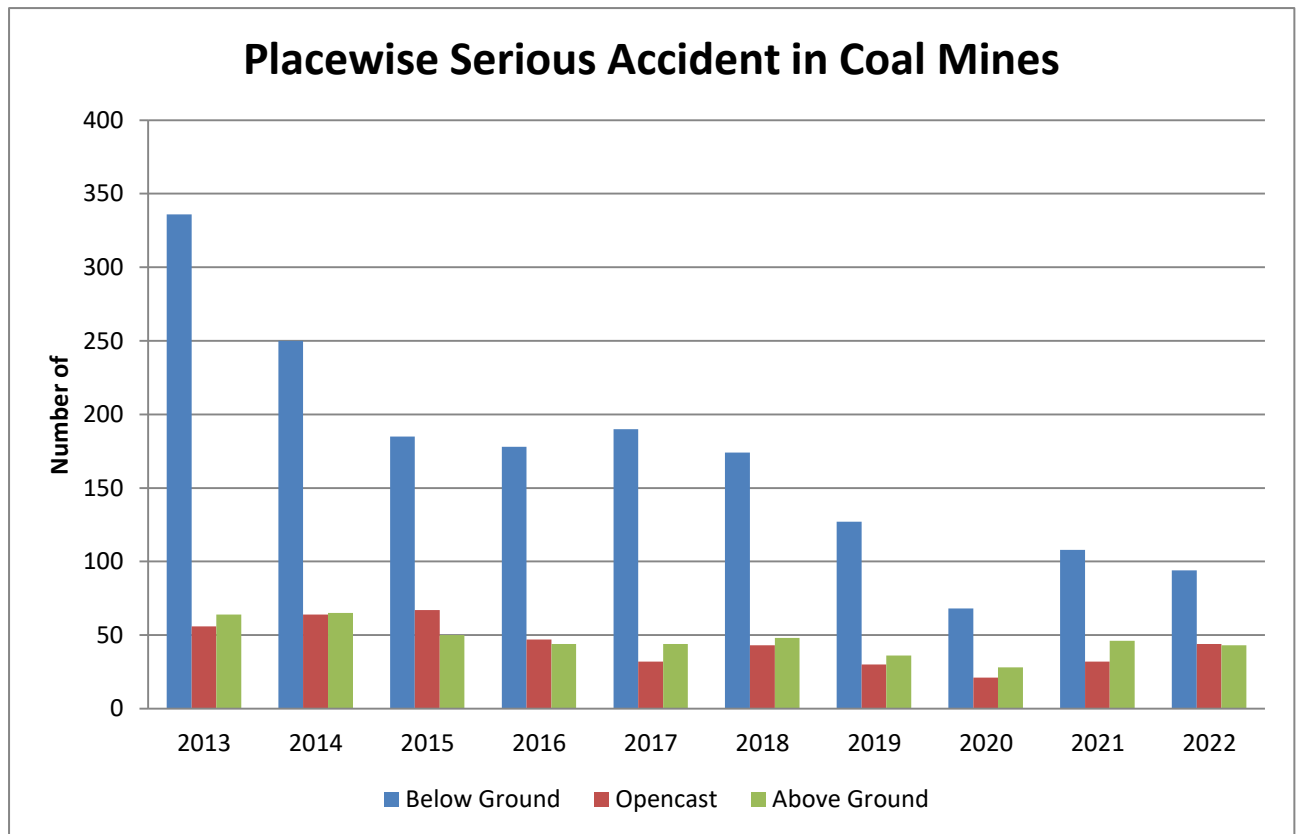


Figure 2.8

- “Fall (Other than Falls of Ground)” is consistently the leading cause of serious accidents, accounting for a significant portion of total accidents.
- "Transportation Machinery (Non-Winding)", "Other Causes" and “Ground Movement” are also notable contributors to serious accidents.
- The number of fatal accidents due to "Explosives", "Electricity”, “Gas, Dust & Other Combustible Material" and “Transport Machinery (Winding)” has been relatively low.

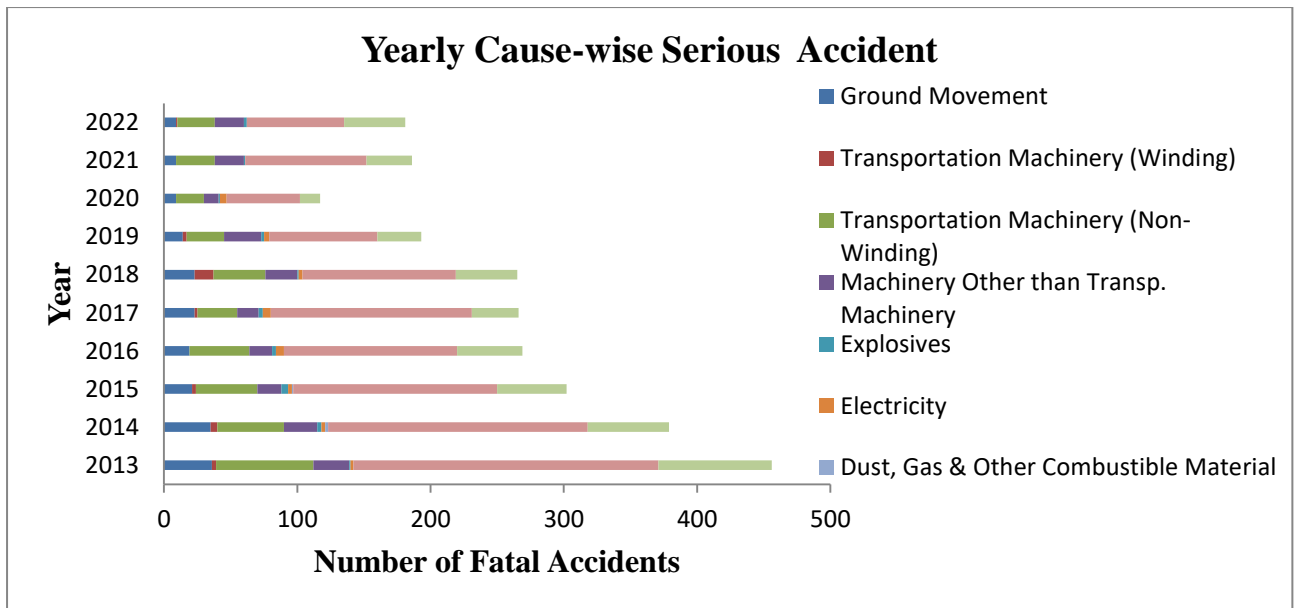


Figure 2.9

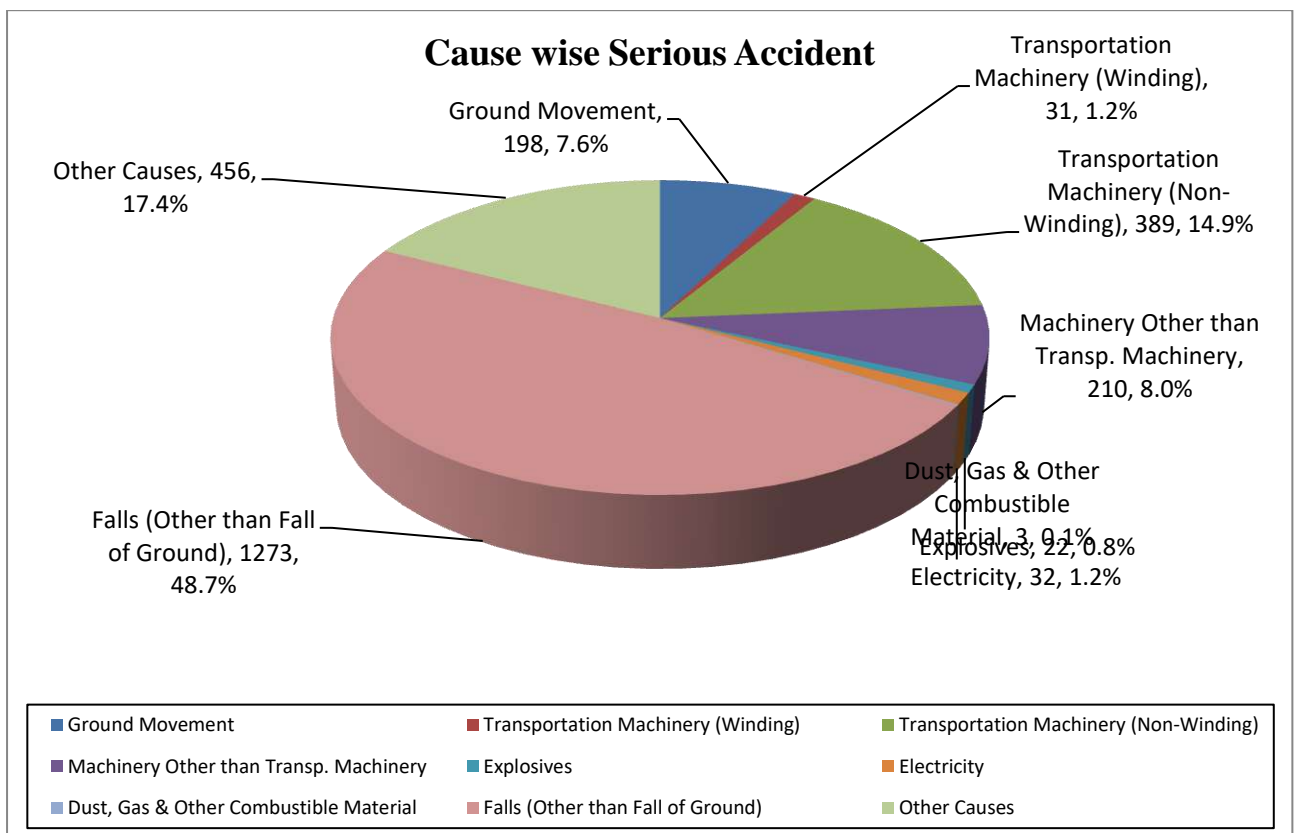


Figure 2.10

Zone Wise and Region Wise Accident

- Western Zone witnessed maximum fatal accident. Bilaspur Region within its jurisdiction witnessed maximum fatal accident.
- South Central Zone witnessed maximum serious accident. Hyderabad Region 1 within its jurisdiction witnessed maximum serious accident. However, Hyderabad Region 2 within its jurisdiction also witnessed significantly higher number of serious accident as compared to other zones and regions. The higher number serious accident in these regions is due to significantly higher number of serious accident in Singareni Collieries Company Limited.
- The codes used for DGMS zonal and regional office within the respective zonal office in donut chart below is outlined in the table below

Table 2.5

Zone Name	Zone Code	Region Name	Region Code
Central Zone	CZ	Dhanbad Region 1	DR1
		Dhanbad Region 2	DR2
		Dhanbad Region 3	DR3
		Koderma Region	KDR
Eastern Zone	EZ	Sitarampur Region 1	SR1
		Sitarampur Region 2	SR2
		Sitarampur Region 3	SR3
North Western Zone	NWZ	Ahmedabad Region	ABR
		Surat Region	SUR
		Udaipur Region	UDR
Northern Zone	NZ	Ajmer Region	AJR
		Ghaziabad Region	GZR
		Varanasi Region	VNR
South Central Zone	SCZ	Hyderabad Region 1	HR1
		Hyderabad Region 2	HR2
South Eastern Zone	SEZ	Bhubaneshwar Region	BBR
		Chaibasa Region	CHR
		Raigarh Region	RGR
		Ranchi Region	RNR
Southern Zone	SZ	Chennai Region	CNR
Western Zone	WZ	Bilaspur Region	BPR
		Jabalpur Region	JBR
		Nagpur Region 1	NG1
		Nagpur Region 2	NG2

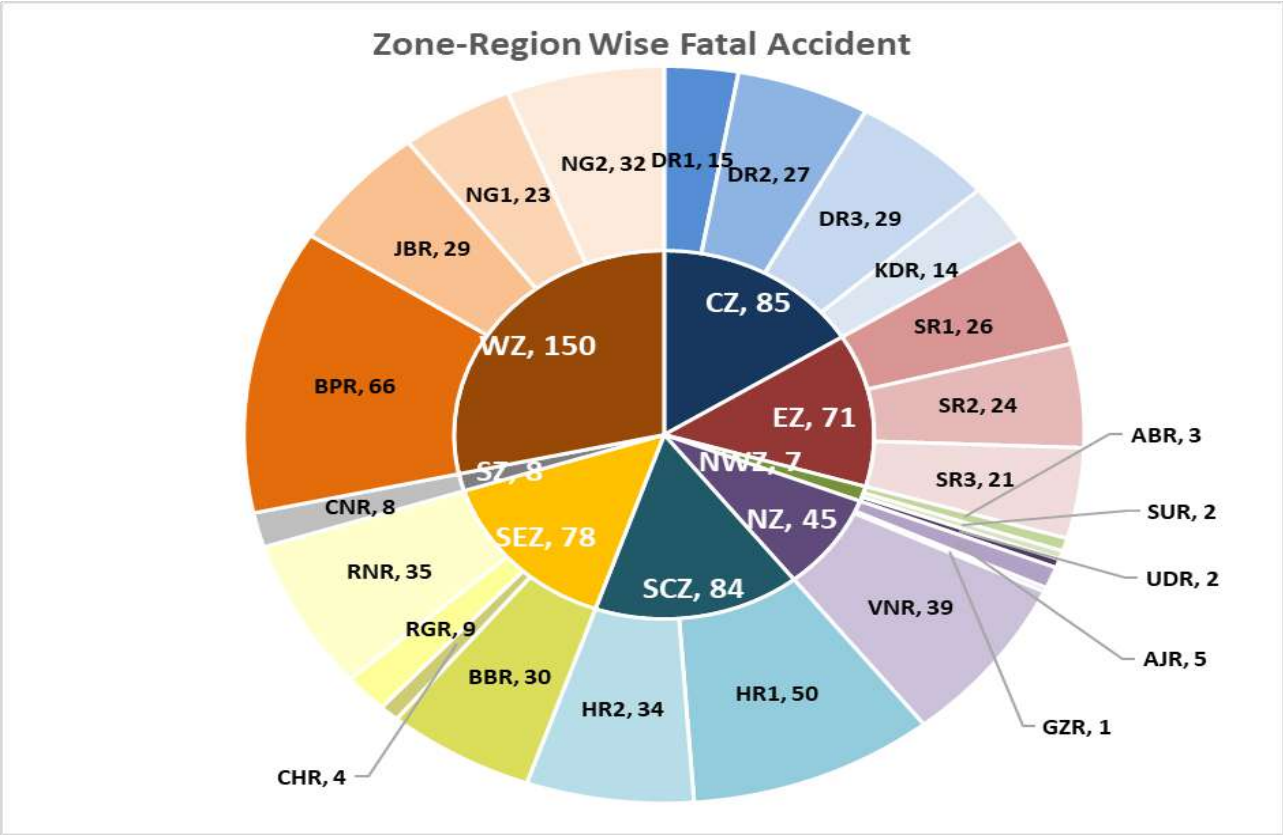


Figure 2.11

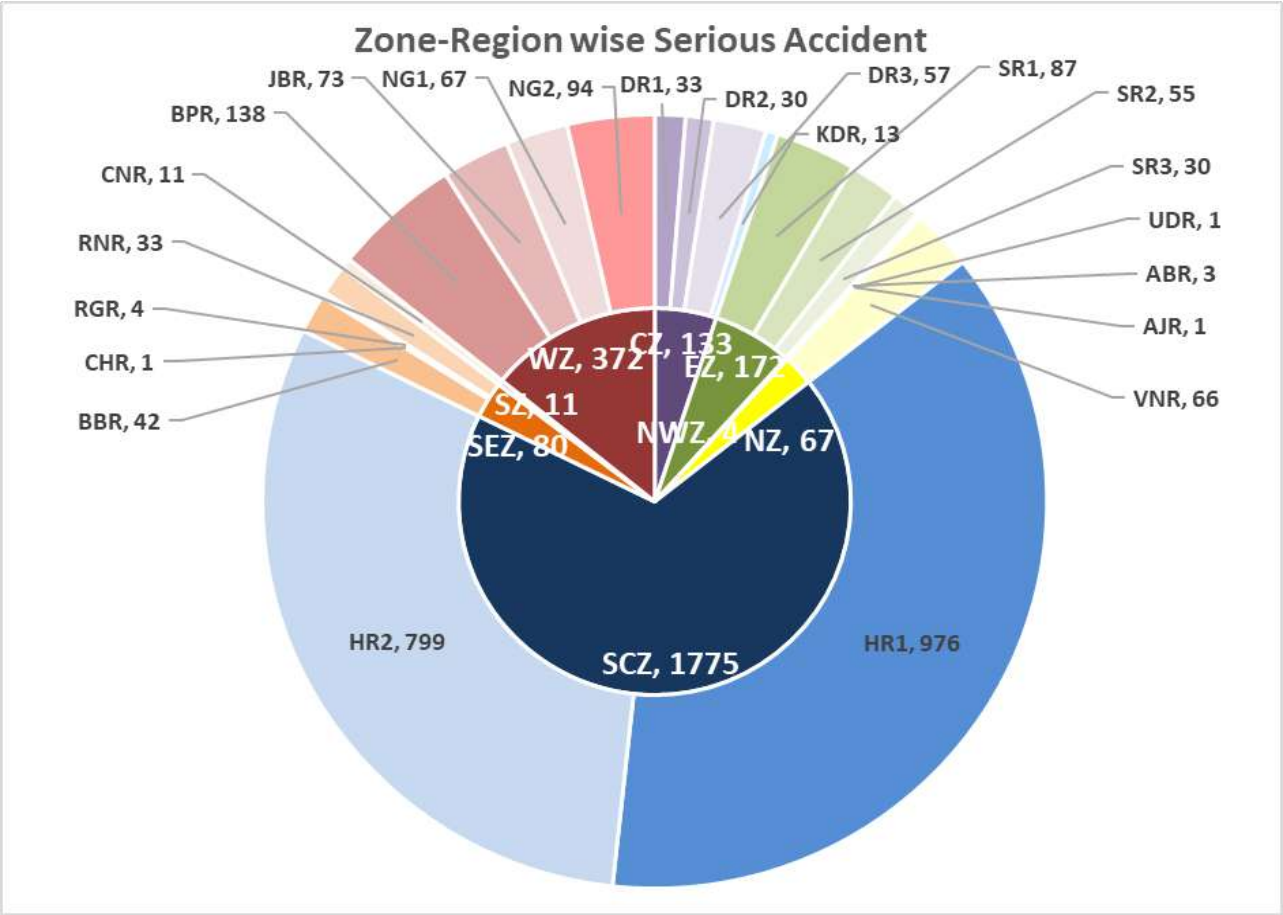


Figure 2.12

Table 2.6 :Cause wise trend in dangerous occurrences in coal mines

Sl. No	Cause	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
1	Over winding of cages, skip or bucket	1	2	0	1	0	0	0	0	0	1
2	Spontaneous heating of coal in underground	4	2	0	2	3	0	1	1	2	1
3	Spontaneous heating of coal on surface	3	0	7	0	0	0	0	0	0	0
4	Spontaneous heating of coal in opencast	2	0	0	0	1	1	0	1	0	0
5	Outbreak of fire underground from spontaneous heating	1	0	0	0	0	0	0	0	0	0
6	Outbreak of fire underground from causes other than spontaneous heating	0	0	0	0	0	1	0	0	1	0
7	Outbreak of fire in quarry from causes other than spontaneous heating	1	0	1	1	0	0	0	0	0	3
8	Outbreak of fire on surface from causes other than spontaneous heating	2	2	2	2	4	8	2	2	5	2
9	Premature collapse of workings or failure of pillars	1	0	1	2	0	1	0	0	0	2
10	Influx of noxious gases	2	0	0	1	1	0	0	0	1	1
11	Breakage of winding rope	1	0	0	0	0	0	0	0	0	0
12	Breakdown of winding engine, crank shaft, bearing etc.	1	1	0	0	0	0	2	0	0	0
13	Ignition or occurrence of inflammable gas	0	1	0	1	1	2	0	1	0	0
14	Breakage, fracture or failure of essential parts of machinery or apparatus whereby safety of persons was endangered	0	1	6	0	0	1	2	1	0	4
15	Irruption of water	1	4	1	0	2	0	0	1	1	2
16	Subsidences	0	0	0	0	4	0	0	0	0	1
17	Explosives	0	1	0	0	2	1	0	2	0	2
18	Others	27	41	13	9	8	9	1	11	5	14
Total		47	55	31	19	26	24	8	20	15	33

Table 2.7 :Trend in number of accidents in coal mines, resultant casualties/seriously injured persons

Year	No. of fatal accidents	Number of persons Killed	Number of persons Seriously injured into fatal accidents	No. of serious accidents	Number of persons seriously injured
1997	143	165	22	677	703
1998	128	146	18	523	542
1999	127	138	21	595	629
2000	117	144	28	661	679
2001	105	141	14	667	706
2002	81	97	15	629	650
2003	83	113	12	563	578
2004	87	96	14	962	977
2005	96	117	19	1106	1119
2006	78	137	15	861	876
2007	76	78	11	923	940
2008	80	93	16	686	693
2009	83	93	14	636	646
2010	97	118	23	480	488
2011	65	67	10	533	546
2012	79	83	6	536	542
2013	77	82	11	456	457
2014	59	62	3	379	391
2015	54	55	9	302	307
2016	67	94	7	269	272
2017	56	61	0	266	272
2018	49	62	11	265	268
2019	51	56	6	193	198
2020	48	53	18	117	120
2021	43	51	2	186	191
2022	24	28	3	181	187

Table 2.8 :Trend in accidents - place wise in coal mines

Year	Total no. of fatal accidents	No. of fatalities Belowground	No. of fataliti es Opencast	No. of fatalities Aboveground	Overall	Total no. of serious accident s	No. of persons seriously injured Belowground	No. of persons seriously injured Opencast	No. of persons seriously injured Aboveground	Overall
1997	143	114	29	22	165	677	477	85	163	725
1998	128	97	24	25	146	523	380	73	107	560
1999	127	84	31	23	138	595	446	85	119	650
2000	117	75	51	18	144	661	477	115	115	707
2001	105	102	26	13	141	667	504	77	139	720
2002	81	61	22	14	97	629	464	98	103	665
2003	83	72	24	17	113	563	398	90	102	590
2004	87	57	33	6	96	962	778	87	126	991
2005	96	70	29	18	117	1106	867	101	170	1138
2006	78	102	25	10	137	861	665	99	127	891
2007	76	25	37	16	78	923	735	88	128	951
2008	80	39	35	19	93	686	536	76	97	709
2009	83	46	32	15	93	636	506	54	100	660
2010	97	60	42	16	118	480	370	69	72	511
2011	65	24	30	13	67	533	397	78	81	556
2012	79	28	38	17	83	536	382	65	101	548
2013	77	24	40	18	82	456	341	59	68	468
2014	59	21	33	8	62	379	263	66	65	394
2015	54	21	26	8	55	302	190	73	53	316
2016	67	29	52	13	94	269	181	49	49	279
2017	56	21	29	11	61	266	195	32	45	272
2018	49	19	32	11	62	265	178	46	55	279
2019	51	21	25	10	56	193	129	34	41	204
2020	48	16	28	9	53	117	75	34	29	138
2021	43	21	23	7	51	186	111	34	48	193
2022	24	12	12	4	28	181	100	47	43	190

Table 2.9 : CAUSEWISE TREND OF FATAL ACCIDENTS IN COAL MINES

Cause/Year	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
1. GROUND MOVEMENT										
Fall of Roof	8 (13)	10 (11)	4 (4)	8 (11)	3 (5)	3 (8)	2 (3)	4 (4)	6 (10)	4 (5)
Fall of Sides	2 (2)	2 (2)	5 (5)	5 (5)	5 (5)	2 (4)	4 (4)	4 (4)	3 (4)	3 (6)
Other Ground Movement	2 (2)	1 (2)	0 (0)	1 (23)	0 (0)	0 (0)	1 (4)	0 (0)	1 (1)	0 (0)
2. TRANSPORTATION MACHINERY										
(WINDING IN SHAFT)	0 (0)	0 (0)	0 (0)	1 (1)	0 (0)	0 (0)	2 (2)	0 (0)	0 (0)	0 (0)
3. TRANSPORTATION MACHINERY										
(OTHER THAN WINDING IN SHAFT)										
Rope Haulage	3 (3)	1 (1)	3 (3)	5 (5)	5 (5)	2 (2)	1 (1)	1 (1)	1 (1)	1 (1)
Wheeled Trackless Transp	29 (29)	17 (18)	16 (17)	20 (21)	19 (19)	15 (16)	12 (12)	15 (16)	11 (14)	4 (4)
Other Transp. Machinery	1 (1)	1 (1)	0 (0)	3 (3)	2 (2)	1 (1)	4 (4)	1 (1)	2 (2)	0 (0)
4. MACHINERY OTHER THAN										
TRANSPORTATION MACHINERY	12 (12)	15 (15)	11 (11)	9 (9)	10 (12)	10 (13)	8 (8)	7 (7)	4 (4)	3 (3)
5. EXPLOSIVES	0 (0)	2 (2)	0 (0)	0 (0)	2 (2)	2 (2)	1 (1)	3 (6)	2 (2)	0 (0)
6. ELECTRICITY	7 (7)	2 (2)	4 (4)	2 (2)	2 (2)	5 (5)	2 (2)	1 (1)	3 (3)	1 (1)
7. GAS, DUST & OTHER										
COMBUSTIBLE MATERIAL	0 (0)	1 (1)	0 (0)	4 (5)	1 (1)	2 (4)	0 (0)	0 (0)	0 (0)	2 (2)
8. FALL (OTHER THAN FALLS OF										
GROUND)										
Fall of person	8 (8)	2 (2)	4 (4)	4 (4)	2 (2)	3 (3)	5 (5)	5 (5)	4 (4)	3 (3)
Fall of Object	3 (3)	2 (2)	2 (2)	2 (2)	2 (2)	0 (0)	3 (3)	1 (1)	2 (2)	2 (2)
Other falls	2 (2)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
9. OTHER CAUSES										
Irruption of Water	0 (0)	0 (0)	1 (1)	0 (0)	1 (2)	1 (1)	0 (0)	1 (2)	0 (0)	0 (0)
Flying Pieces	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
Miscellaneous	0 (0)	3 (3)	4 (4)	3 (3)	2 (2)	3 (3)	6 (7)	5 (5)	4 (4)	1 (1)
T O T A L	77 (82)	59 (62)	54 (55)	67 (94)	56 (61)	49 (62)	51 (56)	48 (53)	43 (51)	24 (28)
BELOW GROUND	19 (24)	20 (21)	21 (21)	26 (29)	18 (21)	12 (19)	19 (21)	15 (16)	16 (21)	9 (12)
OPENCAST	40 (40)	31 (33)	25 (26)	30 (52)	29 (29)	29 (32)	22 (25)	24 (28)	21 (23)	11 (12)
ABOVE GROUND	18 (18)	8 (8)	8 (8)	11 (13)	9 (11)	8 (11)	10 (10)	9 (9)	6 (7)	4 (4)

NOTE : Figures within parentheses denote the number of persons killed

TABLE 2.10 : CAUSEWISE TREND OF SERIOUS ACCIDENTS IN COAL MINES

Cause/Year	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
1.GROUND MOVEMENT										
Fall of Roof	17 (21)	18 (20)	9 (11)	11 (14)	7 (8)	9 (10)	5 (5)	5 (6)	2 (3)	3 (4)
Fall of Sides	19 (20)	17 (18)	11 (11)	8 (8)	16 (17)	14 (16)	9 (10)	2 (5)	7 (8)	6 (8)
Other Ground Movement	0 (1)	0 (0)	1 (1)	0 (0)	0 (0)	0 (0)	0 (0)	2 (2)	0 (0)	0 (0)
2.TRANSPORTATION MACHINERY										
(WINDING IN SHAFT)	3 (3)	5 (5)	3 (3)	0 (0)	2 (2)	14 (14)	3 (4)	0 (0)	0 (0)	1 (1)
3.TRANSPORTATION MACHINERY										
(OTHER THAN WINDING IN SHAFT)										
Rope Haulage	42 (42)	33 (42)	28 (28)	26 (26)	20 (20)	20 (20)	18 (18)	14 (14)	17 (17)	12 (12)
Wheeled Trackless Transp	22 (24)	15 (16)	14 (20)	12 (14)	8 (8)	13 (14)	6 (7)	6 (15)	9 (10)	13 (15)
Other Transp. Machinery	9 (9)	2 (2)	4 (4)	7 (9)	2 (2)	6 (6)	4 (4)	1 (1)	3 (3)	3 (3)
4. MACHINERY OTHER THAN TRANSPORTATION MACHINERY	27 (27)	25 (26)	18 (18)	17 (17)	16 (16)	24 (31)	28 (28)	11 (11)	22 (23)	22 (22)
5. EXPLOSIVES	1 (1)	3 (3)	5 (8)	3 (3)	3 (6)	1 (1)	2 (5)	1 (7)	1 (1)	2 (4)
6. ELECTRICITY	2 (6)	3 (3)	3 (5)	6 (6)	6 (6)	3 (5)	4 (4)	5 (6)	0 (0)	0 (0)
7. GAS, DUST & OTHER COMBUSTIBLE MATERIAL	0 (0)	2 (2)	1 (1)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
8. FALL (OTHER THAN FALLS OF GROUND)										
Fall of person	135 (135)	129 (130)	105 (106)	87 (87)	86 (86)	74 (75)	52 (53)	42 (43)	61 (61)	53 (54)
Fall of Object	88 (88)	59 (59)	46 (46)	43 (43)	63 (64)	40 (40)	27 (27)	13 (13)	22 (23)	18 (19)
Other falls	6 (6)	7 (7)	2 (2)	0 (0)	2 (2)	1 (1)	2 (2)	0 (0)	8 (9)	2 (2)
9. OTHER CAUSES										
Irruption of Water	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (5)	0 (0)	0 (0)	0 (0)
Flying Pieces	0 (0)	0 (0)	1 (1)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (1)
Miscellaneous	85 (85)	61 (61)	51 (51)	49 (52)	35 (35)	46 (46)	32 (32)	15 (15)	34 (35)	45 (45)
T O T A L	456 (468)	379 (394)	302 (316)	269 (279)	266 (272)	265 (279)	193 (204)	117 (138)	186 (193)	181 (190)
BELOW GROUND	336 (341)	250 (263)	185 (190)	178 (181)	190 (195)	174 (178)	127 (129)	68 (75)	108 (111)	94 (100)
OPENCAST	56 (59)	64 (66)	67 (73)	47 (49)	32 (32)	43 (46)	30 (34)	21 (34)	32 (34)	44 (47)
ABOVE GROUND	64 (68)	65 (65)	50 (53)	44 (49)	44 (45)	48 (55)	36 (41)	28 (29)	46 (48)	43 (43)

NOTE : Figures within parentheses denote the number of persons seriously injured. This also includes serious injury out of fatal accidents.

Table 2.11 : Safety Measures taken to ensure safety in coal mines

Year	No. of Inspections	No. of Enquiries	Improvement Notices under Section 22 (1) or 22A (1)	Prohibitory Orders under Section 22 (1A) or 22 (3)
2013	4038	890	106	38
2014	4664	1035	127	46
2015	6047	1280	103	42
2016	4634	1165	58	29
2017	4259	1169	79	48
2018	3253	937	42	32
2019	2753	856	33	15
2020	1073	635	37	37
2021	1696	636	71	14
2022	3685	677	105	43



3. ACCIDENT ANALYSIS IN COAL MINES: 2016

- The number of fatal accidents in coal mines in the year 2016 stands at 67 with 94 fatalities and 7 seriously injured in these fatal accidents. The number of fatal accidents has increased as compared to previous year 2015.
- The number of serious accidents in the year 2016 stands at 269 with 272 seriously injured persons. The number of serious accidents has decreased as compared to previous year 2015.
- Among the broad categories of causes, most number of fatal accident occurred due to “Transportation Machinery (non-winding)”. Details can be seen in the tables. However, most number of serious accidents occurred due to “Falls (other than fall of ground)”. Details can be seen in the tables.
- Maximum number of fatal accidents occurred in Eastern Coalfields Limited whereas maximum number of serious accidents occurred in Singareni Collieries Company Limited. Details can be seen in the tables.
- Maximum number of fatal accidents occurred in the mines under the Central Zone of this Directorate and maximum number of serious accidents occurred in the mines under South Central Zone of this Directorate.
- Major Accident (Disaster):
 - ☐ Date of Accident: 29 December 2016; Mine Name: Rajmahal OCP; Mine Owner: Eastern Coal Fields Limited; Number of Persons Killed: 23; Number of Persons Seriously Injured: 0
 - ☐ Cause of the Accident: While contractual workers and machineries were deployed to form benches in dumped overburden, in-situ overburden and coal in an opencast mine containing known geological disturbances; cracks developed due to dead weight of dumped overburden, deep hole blasting and repeated plying of HEMMs, resulting into violent failure of in-situ overburden and coal benches, followed by instant sliding of dump in an area of 720m x 366m burying 23 workers along with 18 HEMMs.
 - ☐ What could have averted this accident: Had,
 1. no work against the geological disturbances been done by continuous removal of in-situ OB and coal by regular conduct of deep hole blasting and thereby not disturbing the stability of the strata and OB dump,
 2. OB dump been totally removed by de-capping from top downwards in consultation with a scientific agency for formation of proper benches in OB dump without causing destabilization prior to removing in-situ OB and coal by repeated blasting,

3. no men or machineries been deployed at OB dump when the situation was alarming with the imminent visible cracks on haul roads of OB dump and along the edges of OB benches,
4. special care been taken while working in the vicinity of the geologically disturbed area to prevent danger to the work person(s),
5. sides in OB and coal been kept sloped to prevent danger from fall of sides,
6. slope of waste dump been maintained at a safe natural angle of repose not exceeding 37.5 degree and kept benched in such a way that no bench exceeded 30 m in height and the general slope not exceeding 1 vertical to 1.5 horizontal,
7. observations of the unqualified site supervisors been heeded to,
8. intimation to DGMS been given in Form-I as required under the statute when the premature collapse of benches occurred on 09.08.2016 & 23.12.2016,
9. intimation to DGMS been given in Form-I about the dangerous occurrences of significant cracks which were noticed in the OB dumps, in-situ OB benches above coal benches during the last one month period prior to the occurrence of the accident as required under the statute and
10. mining operations at contractual patch been conducted in accordance with the Act, Rules, Regulations, bye-laws, permissions and orders made thereunder,

☐ Recommendations:

1. In pit dumping in OCPs over coal bearing areas shall be avoided at all cost.
2. Geologically disturbed areas shall be mined only with scientific guidance.
3. Continuous monitoring of strata behaviour shall be done with available technology.
4. In big mining projects any deviation while execution of actual plan shall be taken up with due regards to safety.
5. DGMS, technical circular on “Design, control and monitoring of Pit and Dump Slopes in opencast mines” issued vide No. 02 of 2001 and No. 2 of 2010 shall be followed.
6. It is preferable that all inspections in open cast mines made by the DGMS officers shall be of a type called General Inspection.

Statement 3.1
Casualty/serious injury rates in coal mines for different companies in 2016

Sl.	Mineral/State/ District	Number of Accidents		No. of Persons Killed						No. of Persons Seriously Injured					
		----- Fatal	Serious	Below Ground	Opencast		Above Ground		Total	Below Ground	Opencast		Above Ground		Total
					-----	-----	-----	-----			-----	-----	-----	-----	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1.	Coal														
	Chhattisgarh														
	Bilaspur	0	2	0	0	0	0	0	0	2	0	0	0	0	2
	Raigarh	2	1	0	2	0	0	0	2	1	0	0	0	0	1
	Surguja	0	2	0	0	0	0	0	0	1	0	0	1	0	2
	Korea	1	4	1	0	0	0	0	1	3	1	0	0	0	4
	Korba	2	4	1	1	0	0	0	2	0	3	0	1	0	4
	TOTAL : CHHATTISGARH	5	13	2	3	0	0	0	5	7	4	0	2	0	13
	Gujarat														
	Bhavanagar	0	1	0	0	0	0	0	0	0	0	0	3	0	3
	TOTAL : GUJARAT	0	1	0	0	0	0	0	0	0	0	0	3	0	3
	Jharkhand														
	Dhanbad	13	7	1	8	0	5	0	14	3	2	0	2	0	7
	Godda	2	0	0	24	0	0	0	24	0	0	0	0	0	0
	Hazaribagh	2	5	0	1	0	1	0	2	2	1	0	2	0	5
	Bokaro	2	3	0	2	0	0	0	2	1	1	0	1	0	3
	Chatra	1	0	0	1	0	0	0	1	0	0	0	0	0	0
	Ramgarh	2	0	0	1	0	1	0	2	0	0	0	2	0	2
	TOTAL : JHARKHAND	22	15	1	37	0	7	0	45	6	4	0	7	0	17

<hr/>															
Madhya Pradesh															
Betul	1	0	1	0	0	0	0	1	0	0	0	0	0	0	0
Chhindwara	1	5	1	0	0	0	0	1	5	0	0	0	0	0	5
Shahdol	2	5	1	1	0	0	0	2	4	1	0	0	0	0	5
Umaria	3	2	4	0	0	0	0	4	3	0	0	0	0	0	3
Anuppur	0	3	0	0	0	0	0	0	1	0	0	2	0	0	3
Singrauli	4	9	0	4	0	0	0	4	0	8	0	1	0	0	9
<hr/>															
TOTAL : MADHYA PRADESH	11	24	7	5	0	0	0	12	13	9	0	3	0	0	25
<hr/>															
Maharashtra															
Chandrapur	2	5	1	1	0	0	0	2	1	1	0	3	0	0	5
Nagpur	1	4	0	0	0	1	0	1	4	0	0	0	0	0	4
Yavatmal	1	5	0	1	0	0	0	1	2	2	0	1	0	0	5
<hr/>															
TOTAL : MAHARASHTRA	4	14	1	2	0	1	0	4	7	3	0	4	0	0	14
<hr/>															
Orissa															
Angul	2	0	1	1	0	0	0	2	0	0	0	0	0	0	0
Jharsuguda	0	4	0	0	0	0	0	0	2	2	0	0	0	0	4
<hr/>															
TOTAL : ORISSA	2	4	1	1	0	0	0	2	2	2	0	0	0	0	4
<hr/>															
Telangana															
Adilabad	6	92	8	0	0	0	0	8	76	8	0	9	0	0	93
Karimnagar	1	47	1	0	0	0	0	1	31	8	0	9	0	0	48
Khammam	2	15	0	1	0	1	0	2	3	7	0	5	0	0	15
Warangal	1	23	1	0	0	0	0	1	17	0	0	6	0	0	23
<hr/>															
TOTAL : TELANGANA	10	177	10	1	0	1	0	12	127	23	0	29	0	0	179
<hr/>															
Uttar Pradesh															
Sonebhadra	1	0	0	1	0	0	0	1	0	2	0	0	0	0	2
<hr/>															
TOTAL : UTTAR PRADESH	1	0	0	1	0	0	0	1	0	2	0	0	0	0	2

West Bengal														
Burdwan	10	20	7	0	0	4	0	11	19	1	0	1	0	21
TOTAL : WEST BENGAL	10	20	7	0	0	4	0	11	19	1	0	1	0	21
ALL INDIA : COAL	65	268	29	50	0	13	0	92	181	48	0	49	0	278
2. Lignite														
Cuddalore	2	1	0	2	0	0	0	2	0	1	0	0	0	1
TOTAL : TAMIL NADU	2	1	0	2	0	0	0	2	0	1	0	0	0	1
ALL INDIA : LIGNITE	2	1	0	2	0	0	0	2	0	1	0	0	0	1
ALL INDIA : ALL COAL	67	269	29	52	0	13	0	94	181	49	0	49	0	279

Note 1 : M:Male, F:Female

Note 2 : Fatal as well as serious accidents are considered in computing the figures of number of persons seriously injured in this statement.

Statement 3.2
Casualty/serious injury rates in coal mines for different companies in 2016

Company	Number of Accidents		Number of Persons Killed						Number of Persons Seriously Injured					
			Below Ground	Opencast		Above Ground		Total	Below Ground	Opencast		Above Ground		Total
	Fatal	Serious		Male	Male	Female	Male			Female	Male	Male	Female	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
BCCL	11	6	1	7	0	4	0	12	2	2	0	2	0	6
CCL	6	7	0	5	0	1	0	6	3	1	0	3	0	7
ECL	12	19	7	24	0	4	0	35	18	1	0	1	0	20
MCL	2	4	1	1	0	0	0	2	2	2	0	0	0	4
NCL	4	9	0	4	0	0	0	4	0	10	0	1	0	11
SECL	10	23	7	4	0	0	0	11	15	5	0	4	0	24
WCL	6	17	3	2	0	1	0	6	10	3	0	4	0	17
TOTAL : CIL	51	85	19	47	0	10	0	76	50	24	0	15	0	89
GMDC	0	1	0	0	0	0	0	0	0	0	0	3	0	3
IISCO	1	1	0	1	0	0	0	1	1	0	0	0	0	1
NLC	2	1	0	2	0	0	0	2	0	1	0	0	0	1
SCCL	10	177	10	1	0	1	0	12	127	23	0	29	0	179
TISCO	2	1	0	0	0	2	0	2	1	0	0	2	0	3
ELCALTD	0	1	0	0	0	0	0	0	0	1	0	0	0	1
SASAN	1	0	0	1	0	0	0	1	0	0	0	0	0	0
JPA	0	2	0	0	0	0	0	0	2	0	0	0	0	2
TOTAL : NON-CIL	16	184	10	5	0	3	0	18	131	25	0	34	0	190
TOTAL : ALL INDIA	67	269	29	52	0	13	0	94	181	49	0	49	0	279

STATEMENT NO. 3.3

Number of accidents and casualties/seriously injured persons in coal mines by place and detailed cause in 2016

CAUSE OF ACCIDENT	BELOW GROUND					OPENCAST					ABOVE GROUND					TOTAL				
	Fatal Accident			S/Accident		Fatal Accident			S/Accident		Fatal Accident			S/Accident		Fatal Accident			S/Accident	
	ACC	KILL	INJ	ACC	INJ	ACC	KILL	INJ	ACC	INJ	ACC	KILL	INJ	ACC	INJ	ACC	KILL	INJ	ACC	INJ
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
Fall of Roof	8	11	3	11	11	0	0	0	0	0	0	0	0	0	0	8	11	3	11	11
Fall of Sides (Other than Overhangs)	4	4	0	8	8	0	0	0	0	0	0	0	0	0	0	4	4	0	8	8
Fall of Overhangs	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0
Landslide	0	0	0	0	0	1	23	0	0	0	0	0	0	0	0	1	23	0	0	0
TOTAL : GROUND MOVEMENT	13	16	3	19	19	1	23	0	0	0	0	0	0	0	0	14	39	3	19	19
Falls of Persons from Cages, Skip etc.	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0
TOTAL : TRANSPORTATION MACHINERY (WINDING)	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0
Aerial Ropeway	0	0	0	0	0	0	0	0	0	0	1	1	2	0	0	1	1	2	0	0
Rope Haulage	4	4	0	25	25	0	0	0	1	1	1	1	0	0	0	5	5	0	26	26
Other Rail Transportation	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
Conveyors	1	1	0	3	3	0	0	0	1	1	1	1	0	2	2	2	2	0	6	6
Dumpers	0	0	0	0	0	8	8	2	4	4	1	1	0	2	2	9	9	2	6	6
Wheeled Trackless(Truck,Tanker,etc.)	1	1	0	4	4	9	9	0	0	0	1	2	0	2	2	11	12	0	6	6
TOTAL : TRANSPORTATION MACHINERY (NON-WINDING)	6	6	0	33	33	17	17	2	6	6	5	6	2	6	6	28	29	4	45	45
Drilling Machines	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
Loading Machines	4	4	0	1	1	2	2	0	0	0	0	0	0	0	0	6	6	0	1	1
Other Heavy Earth Moving Machinery	0	0	0	0	0	3	3	0	8	8	0	0	0	0	0	3	3	0	8	8
Other Non-Transportation Machinery	0	0	0	6	6	0	0	0	1	1	0	0	0	0	0	0	0	0	7	7
TOTAL : MACHINERY OTHER THAN TRANSP. MACHINERY	4	4	0	8	8	5	5	0	9	9	0	0	0	0	0	9	9	0	17	17
Deep Hole Blasting Projectiles	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1	1
Misfires/Sockets(While Drilling into)	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2

TOTAL : EXPLOSIVES	0	0	0	2	2	0	0	0	1	1	0	0	0	0	0	0	0	0	3	3
Overhead Lines	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	2	2	0	0	0
Switch Gears, Gate End Boxes, Pommel, etc.	0	0	0	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3
Power Cables Other Than Trailing Cables	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1	1
Other Electrical Accidents	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2
TOTAL : ELECTRICITY	0	0	0	5	5	0	0	0	1	1	2	2	0	0	0	2	2	0	6	6
Occurrence of Gas	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0
Explosion/Ignition of Gas/Dust etc.	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0
Other Combustible Material	0	0	0	0	0	0	0	0	0	0	1	2	0	0	0	1	2	0	0	0
Other Accidents due to Dust/Gas/Fire	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1	1	0	0	0
TOTAL : DUST, GAS & OTHER COMBUSTIBLE MATERIAL	2	2	0	0	0	1	1	0	0	0	1	2	0	0	0	4	5	0	0	0
Fall of Person from Height/into Depth	0	0	0	55	55	2	2	0	14	14	2	2	0	16	16	4	4	0	85	85
Fall of Persons on the Same Level	0	0	0	0	0	0	0	0	1	1	0	0	0	1	1	0	0	0	2	2
Fall of Objects incl. Rolling Objects	0	0	0	32	32	1	1	0	3	3	1	1	0	8	8	2	2	0	43	43
TOTAL : FALLS (OTHER THAN FALL OF GROUND)	0	0	0	87	87	3	3	0	18	18	3	3	0	25	25	6	6	0	130	130
Drowning in Water	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	2	2	0	0	0
Unclassified	0	0	0	24	24	1	1	0	12	12	0	0	0	13	16	1	1	0	49	52
TOTAL : OTHER CAUSES	0	0	0	24	24	3	3	0	12	12	0	0	0	13	16	3	3	0	49	52
ALL INDIA : ALL COAL	26	29	3	178	178	30	52	2	47	47	11	13	2	44	47	67	94	7	269	272

STATEMENT 3.4**Number of fatal accidents in coal mines by major cause and responsibility during the year 2016**

Responsibility / Major Cause Group	1	2	3	4	5	6	7	8	9	Total
Misadventure	0	0	0	0	0	0	1	1	0	2
Management	4	0	2	2	0	0	1	1	2	12
Management & Sub. Sup. Staff(SSS)	8	0	4	1	0	2	1	0	1	17
Management, SSS & Shotfirer	0	0	0	0	0	0	1	0	0	1
Management, SSS & Deceased	0	0	3	0	0	0	0	0	0	3
Management & Coworker	0	0	2	0	0	0	0	0	0	2
Management, Coworker & Deceased	0	0	1	0	0	0	0	0	0	1
Management, Co-worker & Others	0	0	1	0	0	0	0	0	0	1
Management & Deceased	0	0	0	0	0	0	0	1	0	1
Management & Contractor's Worker	0	0	1	0	0	0	0	0	0	1
Subordinate Supervisory Staff(SSS)	2	0	0	0	0	0	0	2	0	4
Sub. Sup. Staff & Coworker	0	0	0	1	0	0	0	0	0	1
Sub.Sup.Staff, Coworker & Deceased	0	0	1	0	0	0	0	0	0	1
Sub. Sup. Staff & Deceased	0	0	0	0	0	0	0	1	0	1
Coworker	0	1	2	2	0	0	0	0	0	5
Coworker & Deceased	0	0	4	2	0	0	0	0	0	6
Deceased	0	0	6	1	0	0	0	0	0	7
Others	0	0	1	0	0	0	0	0	0	1
Total	14	1	28	9	0	2	4	6	3	67

STATEMENT NO. 3.5

Cause wise number of fatal accidents in Coal Mines for different companies in 2016

Cause/Company	BCCL	CCL	ECL	MCL	NCL	NEC	SECL	WCL	CIL	SCCL	IISCO	NLC	TISCO	OTHERS	TOTAL
Fall of Roof	0	0	1	0	0	0	4	0	5	3	0	0	0	0	8
Killed-S/Injured :	0-0	0-0	1-1	0-0	0-0	0-0	5-1	0-0	6-2	5-1	0-0	0-0	0-0	0-0	11-3
Fall of Sides	1	0	1	1	0	0	1	0	4	1	0	0	0	0	5
Killed-S/Injured :	1-0	0-0	1-0	1-0	0-0	0-0	1-0	0-0	4-0	1-0	0-0	0-0	0-0	0-0	5-0
Rope Haulage	0	0	2	0	0	0	0	0	2	2	0	0	1	0	5
Killed-S/Injured :	0-0	0-0	2-0	0-0	0-0	0-0	0-0	0-0	2-0	2-0	0-0	0-0	1-0	0-0	5-0
Dumpers	2	1	1	0	4	0	0	0	8	1	0	0	0	0	9
Killed-S/Injured :	2-0	1-0	1-0	0-0	4-2	0-0	0-0	0-0	8-2	1-0	0-0	0-0	0-0	0-0	9-2
Trucks	2	3	1	0	0	0	4	1	11	0	0	0	0	0	11
Killed-S/Injured :	3-0	3-0	1-0	0-0	0-0	0-0	4-0	1-0	12-0	0-0	0-0	0-0	0-0	0-0	12-0
Other Machinery	1	1	3	1	0	0	1	3	10	1	0	0	1	1	13
Killed-S/Injured :	1-0	1-0	3-0	1-0	0-0	0-0	1-0	3-0	10-0	1-0	0-0	0-0	1-2	1-0	13-2
Explosives	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Killed-S/Injured :	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0
Fall of Persons	3	0	0	0	0	0	0	0	3	1	0	0	0	0	4
Killed-S/Injured :	3-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	3-0	1-0	0-0	0-0	0-0	0-0	4-0
Fall of Objects	0	1	0	0	0	0	0	1	2	0	0	0	0	0	2
Killed-S/Injured :	0-0	1-0	0-0	0-0	0-0	0-0	0-0	1-0	2-0	0-0	0-0	0-0	0-0	0-0	2-0
Other causes	2	0	3	0	0	0	0	1	6	1	1	2	0	0	10
Killed-S/Injured :	2-0	0-0	26-0	0-0	0-0	0-0	0-0	1-0	29-0	1-0	1-0	2-0	0-0	0-0	33-0
Belowground	1	0	7	1	0	0	6	3	18	8	0	0	0	0	26
Killed-S/Injured :	1-0	0-0	7-1	1-0	0-0	0-0	7-1	3-0	19-2	10-1	0-0	0-0	0-0	0-0	29-3
Opencast	7	5	2	1	4	0	4	2	25	1	1	2	0	1	30
Killed-S/Injured :	7-0	5-0	24-0	1-0	4-2	0-0	4-0	2-0	47-2	1-0	1-0	2-0	0-0	1-0	52-2
Aboveground	3	1	3	0	0	0	0	1	8	1	0	0	2	0	11
Killed-S/Injured :	4-0	1-0	4-0	0-0	0-0	0-0	0-0	1-0	10-0	1-0	0-0	0-0	2-2	0-0	13-2
TOTAL	11	6	12	2	4	0	10	6	51	10	1	2	2	1	67
Killed-S/Injured :	12-0	6-0	35-1	2-0	4-2	0-0	11-1	6-0	76-4	12-1	1-0	2-0	2-2	1-0	94-7

STATEMENT NO. 3.6
Causewise number of serious accidents in Coal Mines for different companies in 2016

Cause/Company	BCCL	CCL	ECL	MCL	NCL	NEC	SECL	WCL	CIL	SCCL	IISCO	NLC	TISCO	OTHERS	TOTAL
Fall of Roof	0	0	4	0	0	0	4	1	9	0	0	0	0	2	11
S/Injured :	0	0	4	0	0	0	4	1	9	0	0	0	0	2	11
Fall of Sides	0	0	1	0	0	0	1	4	6	2	0	0	0	0	8
S/Injured :	0	0	1	0	0	0	1	4	6	2	0	0	0	0	8
Rope Haulage	0	0	2	0	0	0	1	1	4	22	0	0	0	0	26
S/Injured :	0	0	2	0	0	0	1	1	4	22	0	0	0	0	26
Dumpers	1	0	0	0	4	0	0	1	6	0	0	0	0	0	6
S/Injured :	1	0	0	0	4	0	0	1	6	0	0	0	0	0	6
Trucks	0	0	1	1	0	0	2	0	4	2	0	0	0	0	6
S/Injured :	0	0	1	1	0	0	2	0	4	2	0	0	0	0	6
Other Machinery	1	1	2	1	0	0	3	5	13	10	0	0	1	0	24
S/Injured :	1	1	2	1	0	0	3	5	13	10	0	0	1	0	24
Explosives	0	0	1	0	0	0	0	2	3	0	0	0	0	0	3
S/Injured :	0	0	1	0	0	0	0	2	3	0	0	0	0	0	3
Fall of Persons	3	4	4	2	3	0	6	3	25	60	1	0	0	1	87
S/Injured :	3	4	4	2	3	0	6	3	25	60	1	0	0	1	87
Fall of Objects	1	0	2	0	1	0	4	0	8	35	0	0	0	0	43
S/Injured :	1	0	2	0	1	0	4	0	8	35	0	0	0	0	43
Other causes	0	2	2	0	1	0	2	0	7	46	0	1	0	1	55
S/Injured :	0	2	2	0	1	0	2	0	7	46	0	1	0	3	58
Belowground	2	3	17	2	0	0	14	10	48	126	1	0	1	2	178
S/Injured :	2	3	17	2	0	0	14	10	48	126	1	0	1	2	178
Opencast	2	1	1	2	8	0	5	3	22	23	0	1	0	1	47
S/Injured :	2	1	1	2	8	0	5	3	22	23	0	1	0	1	47
Aboveground	2	3	1	0	1	0	4	4	15	28	0	0	0	1	44
S/Injured :	2	3	1	0	1	0	4	4	15	29	0	0	0	3	47
TOTAL	6	7	19	4	9	0	23	17	85	177	1	1	1	4	269
S/Injured :	6	7	19	4	9	0	23	17	85	178	1	1	1	6	272

STATEMENT NO. 3.7**Region wise/zone wise number of accidents and resultant casualties/seriously injured persons in coal mines in 2016**

Region/Zone	Fatal Accidents			Serious Accidents	
	No. of Accidents	Fatalities	S/Injured	No. of Accidents	S/Injured
Dhanbad I	3	3	0	3	3
Dhanbad II	5	5	0	0	0
Dhanbad III	5	6	0	5	5
Koderma	2	2	0	2	2
Central Zone	15	16	0	10	10
Sitarampur I	4	4	0	12	12
Sitarampur II	5	6	1	6	6
Sitarampur III	3	25	0	2	2
Eastern Zone	12	35	1	20	20
Ahmedabad	0	0	0	1	3
North-Western Zone	0	0	0	1	3
Varanasi	5	5	2	9	9
Northern Zone	5	5	2	9	9
Hyderabad I	4	4	0	85	86
Hyderabad II	6	8	1	92	92
South-Central Zone	10	12	1	177	178
Bhubaneswar	2	2	0	4	4
Raigarh	2	2	0	0	0
Ranchi	5	5	2	5	5
South-Eastern Zone	9	9	2	9	9
Chennai	2	2	0	1	1
Southern Zone	2	2	0	1	1
Bilaspur	2	2	0	13	13
Jabalpur	6	7	1	10	10
Nagpur I	3	3	0	9	9
Nagpur II	3	3	0	10	10
Western Zone	14	15	1	42	42
ALL INDIA	67	94	7	269	272

STATEMENT NO. 3.8

Summary of Findings of Fatal Accidents during the year 2016

Code : 0100 Ground Movement

Code : 0111 Fall of Roof
(11 Deaths)

1. Date - 27.03.16 Mine - BANGWAR U/G PROJECT
 Time - 11.20 Owner - South Eastern Coalfields Ltd.
 Dist. - Shahdol, State - Madhya Pradesh
 Person(s) Killed :
 1. Mohammad Kasim, Support Mistry, Male, 54
 Years

While a crew of seven support personnel were erecting steel chock at goaf edge of a split gallery in depillaring panel in a belowground coal mine, a piece of sand stone measuring 1.4m (length) x 1.0m (width) x 0.20m-0.40m (thick) parted off from a height of 4.1m and fell on one of them, inflicting serious bodily injuries, which proved fatal instantaneously and others escaped unhurt.

Had,

i) the support personnel been not deployed for work under the roof of a split gallery, which was not kept adequately supported by full column grouted roof bolts in rows at a maximum interval of 1.2m between bolts in the same row and 1.2m between rows of bolts and also with cogs at interval of not exceeding 2.4m as the galley was wider than 4.8m, as required by condition No.4(a) and 5(c) respectively, of the Systematic support rules of the depillaring panel modified vide Directorate's letter No. JA/010491/Permission/ 95/2015/536 dated 11.02.2016, under Regulation 108 of the Coal Mines Regulations, 1957;

ii) effective compliance with the provisions of the Systematic support rules of depillaring panel modified vide Directorate's letter no. JA/010491/Permission/95/2015/536 dated 11.02.2016, been ensured and the mine was not worked in contravention thereof as required by Regulation 108(5) of the Coal Mines Regulations, 1957; this accident could have been averted.

2. Date - 09.04.16 Mine - PIPARIA COLLIERY
 Time - 19.30 Owner - South Eastern Coalfields Ltd.
 Dist. - Umaria, State - Madhya Pradesh
 Person(s) Killed :
 1. Mukesh Tripathi, Overman, Male, 36 Years
 2. Dayaram, Cableman, Male, 54 Years

While a dresser was dressing the side of a gallery after blasting in the presence of a supervisor and two other support personnel in a belowground coal mine, a chunk of sandstone measuring about 4.8m x 4.5m x 0.2m to 0.4m thick parted from the roof from a height of about 3.9m and fell upon them, inflicting serious injuries to dresser and supervisor who succumbed to injuries instantly and other two received serious bodily injury and reportable injury respectively.

Had,

the work persons been engaged under adequately supported roof and thus the safety of persons working thereat not been negligently endangered as required in accordance with Systematic Support Rules framed under Regulation 108 of Coal Mines Regulations, 1957 read with Regulation 41, Regulation 41A, Regulation 42, Regulation 43 and Regulation 190 of Coal Mines Regulations, 1957,

the heightening of the gallery been done with due precautions after obtaining the permission and thus the safety of persons working thereat not been negligently endangered as required under Regulation 99(5)(c) of Coal Mines Regulations, 1957 read with Section 18 of Mines act, 1952 and Regulation 41, Regulation 41A and Regulation 190 of Coal Mines Regulations, 1957, this accident could have been averted.

3.	Date - 13.04.16	Mine - SHANTIKHANI
	Time - 13.35	Owner - Singareni Collieries Company Ltd.
		Dist. - Adilabad, State - Telangana
		Person(s) Killed :
		1. Palasani H.Rao, Timber man, Male, 59 Years
		2. Ramavath Kistaiah, Support man, Male, 55 Years
		3. Galipalli Posham, Mason, Male, 55 Years

While a group of four persons went at a junction for drinking water in a development district of salarjung seam in an underground coal mine, all of a sudden a mass of resin bolted coarse grained sandstone roof measuring about 15m to 16.5m (length) x 4.1m to 9.2m (width) x 0.5m to 3.5m (height above roof level) fell from height of about 3.5m on three persons, completely burying them; who died instantaneously and another one escaped unhurt.

Had,

the junction of 52 level/1Dip been kept supported by 5m long flexi bolts as required under Regulation 108 of the coal mines regulations, 1957 read with systematic support rule framed & implemented by the manager vide letter no. MMR/AGT/SK.Gr/D/002/16/221, dated 30.3.2016;

the acute angle of the rhombus shaped pillar been maintained and immediate roof been monitored for any bed separation as recommended by Central Institute of Mining & Fuel Research, Dhanbad at Condition No. 11.1 & 12.0(4) vide project No. CNP/4322/20156-2016, March, 2016 under regulation 99(6) of the Coal Mines Regulations, 1957 read with Section 18(1) & 18(4) of the Mines Act, 1952 and had the development in the area by rhombus shaped pillar not been made without obtaining permission under Regulation 99(6) of the Coal Mines Regulations, 1957; this accident could have been averted.

4.	Date - 19.04.16	Mine - CHURCHA
	Time - 11.40	Owner - South Eastern Coalfields Ltd.
		Dist. - Korea, State - Chhattisgarh
		Person(s) Killed :
		1. Jaimangal, Cat-V, Male, 55 Years

While a dresser, after withdrawing a 'J' hook attached to a grouted roof bolt in bye side of a level gallery was returning towards junction, in a depillaring panel of an underground coal mine, a stone measuring about 1.25m (long) x 1.20m (width) x

0.06m(thick), parted from the unsupported portion of roof and fell over him from a height of about 3.0m, inflicting serious injuries, to which he succumbed after seven days in hospital during treatment.

Had,

i) the roof of the gallery been made and kept secure by proper dressing and supporting prior to withdrawal of 'J' hook attached to a grouted roof bolt as required under Regulation 102(1) of the Coal Mines Regulations, 1957, and

ii) the places in the gallery exceeding 4.8m in width been kept supported as per the Systematic support rules framed under Regulation 108(2) enclosed with permission issued vide letter no. BSP/3060 dated 03.06.2015 under Regulation 100(1) of the Coal Mines Regulations, 1957, this accident could have been averted.

5.	Date - 04.09.16	Mine - RAVINDRA KHANI NO.5
	Time - 1.45	Owner - Singareni Collieries Company Ltd.
		Dist. - Adilabad, State - Telangana
		Person(s) Killed :
		1. Badri Janardhan, Supportman, Male, 54 Years

While a group of five persons were erecting cog in an underground depillaring panel of a coal mine after withdrawing supports from goaf edge, all of a sudden a mass of resin bolted coarse grained sandstone roof measuring about 13.2m (length) x 1.6m to 4.4m (width) x 0.35m to 1.5m (height) fell from height of about 1.60m on two persons, completely burying them; one person died instantaneously, another rescued with serious injuries after about 4 hrs and three persons escaped unhurt.

Had,

the persons not been engaged below the inadequately supported roof and withdrawal of supports ensured in proper manner by the sub-ordinate supervisory officials as required under regulation Nos. 42(2), 43(1) (d), 44(3) (a) and 110 of the coal mines regulations, 1957; this accident could have been averted.

6.	Date - 22.09.16	Mine - RAVINDRA KHANI NO.7
	Time - 18.30	Owner - Singareni Collieries Company Ltd.
		Dist. - Adilabad, State - Telangana
		Person(s) Killed :
		1. Yate Mallaiah, Timberman, Male, 50 Years

While a group of three persons (roof bolting crew) drilling holes for erecting barricade in an underground coal mine of stowing panel, a mass of coal roof measuring about 3.0m (length) x 2.0m (width) x 0.15m thick in size, parted from a height of about 2.8m, inflicting serious bodily injury to one of them to which he died on the way to hospital and another received minor injuries.

Had,

the barricading work been done below adequately supported roof and sides as per the requirement of Systematic Support Rules framed under Regulation 108 of Coal Mines Regulations, 1957 r.w. Perm.Lr.No. HR2(SCZ)/RK7/10026/perm-61(14)/2014/4303 dated 04/12/2014, this accident could have been averted.

7. Date - 16.11.16 Mine - SRIPUR SEAM INCLINE
Time - 12.15 Owner - Eastern Coalfields Ltd.
Dist. - Burdwan, State - West Bengal
Person(s) Killed :
1. Manilal Tadu, Dreesser, Male, 47 Years

While a person was dressing the roof of a junction in a development district of an underground coal mine, a mass of shalley sand stone roof, measuring about 3.6m x 2.3m x 0.3m to 1.0m(thick) fell from a height of about 2.2m inflicting fatal injuries to him and serious bodily injuries to another person standing nearby.

Had,

the freshly exposed roof of the junction been supported as per Systematic Support Rules before deployment of the persons beneath it as required Regulation 108(1) of Coal Mines Regulation-1957 read with Systematic Support Rules, this accident could have been averted.

8. Date - 28.11.16 Mine - PALI
Time - 19.45 Owner - South Eastern Coalfields Ltd.
Dist. - Umaria, State - Madhya Pradesh
Person(s) Killed :
1. B.Pratap Singh, Mining sirdar, Male, 57 Years

While a Sirdar and Shot-firer were inspecting the face after blasting in a depillaring district of a belowground coal mine, the roof measuring about 12m in length x 1-4.0m in width x 0-3.0m in thickness fell down from a height of 3.7m, due to extension of fall from the goaf into the gallery, resulting in fatal injuries to Sirdar, whereas the Shot-firer escaped unhurt.

Had,

the pillar been extracted in the manner as specified in condition Nos. 4.1 and 4.2 of the permission letter No. 2772 dated 22.08.2016 granted under Regulation 100(1) of the Coal Mines Regulations 1957, thereby negligently not omitting to ensure safety of persons as required under Regulation 42(1), 41(1) read with Regulation 190 of Coal Mines Regulations, 1957; this accident could have been averted.

Code : 0112 Fall of Sides (Other than Overhangs)
(4 Deaths)

9. Date - 06.02.16 Mine - SHANTIKHANI
Time - 14.20 Owner - Singareni Collieries Company Ltd.
Dist. - Adilabad, State - Telangana
Person(s) Killed :
1. Jakkam Shanker, Gen. Mazdoor, Male, 51 Years

While a group of four supporting persons were supporting the roof of a tunnel in an underground coal mine, suddenly a piece of stone measuring about 1.12m (length) x 0.80 (width) x 0.16 (thick) fell from the side of tunnel face at a height of about 2.80m on head of one person inflicting serious injuries; which proved fatal while on the way to hospital, others escape unhurt.

Had,

the side of the face been dressed properly and kept secure thus not negligently omitting to do what was necessary for the life and safety of persons employed in supporting operations by contravening provisions of Regulations 43(1)(d), 44(3)(a), 102(1) & 190 of the Coal Mines Regulations 1957; this accident could have been averted.

10. Date - 22.03.16
Time - 20.30

Mine - BASTACOLA
Owner - Bharat Coking Coal Ltd.
Dist. - Dhanbad, State - Jharkhand
Person(s) Killed :

1. Om Prakash Kewat, Overman, Male, 42 Years

While supervising a depillaring district of an underground coal mine, the statutory competent person himself entered inside the goaf area and stood near the rib of split pillar, when suddenly a mass of coal roof measuring about 1.20m (length) x 1.10m (wide) x 0.20m (thick), fell down from the side of rib at a height of about 2.50m inflicting serious bodily injuries to him which proved fatal after about an hour and half at the hospital.

Had,

the statutory competent person himself would not have entered inside the goaf area and stood near the goaf edge rib of split pillar thus not negligently do anything endangering his own life in contravention of Regulation 190 of the Coal Mines Regulations, 1957, and

the diagonal line of extraction while extracting pillars in the depillaring been maintained to avoid formation of 'V' in the line of extraction, as required under Condition No.2.1 of DGMS permission letter No.R-2/P-09-10/100(1)/1543 dated 15.07.2010, subsequently modified thereof vide letter No. R-2/010244/P-08-2015/58 dated 18.01.2016 granted under Regulation 100(1) of the Coal Mines Regulations, 1957, and

the goaf edges within the depillaring panel been kept supported by providing skin to skin support as required under condition No. 1.0(a) of the 'Systematic Support Rules' approved under Regulation 108(5) of the Coal Mines Regulations, 1957, annexed with the permission letter No. R-2/P-09-10/100(1)/1543 dated 15.07.2010 subsequently modified vide permission letter No. R-2/010244/P-08-2015/58 dated 18.01.2016 granted under Regulation 100(1) of the Coal Mines Regulations, 1957, this accident could have been averted.

11. Date - 24.08.16
Time - 11.00

Mine - MADHUSUDANPUR 7 PIT & INCLINE
Owner - Eastern Coalfields Ltd.
Dist. - Burdwan, State - West Bengal
Person(s) Killed :

1. Kartik Hazam, Driller, Male, 56 Years

While a driller & two explosive carriers were standing near unsupported sides of a pillar in a depillaring by caving panel, a piece of coal measuring about 2.0m in length x 1.9m in width x 0.4m thick parted from the side of a pillar and fell from a height of about 1.8m, inflicting serious bodily injuries to the driller & a

explosive carrier in which the driller succumbed to injuries after 27 days 14 hours in a hospital.

Had,

i) the pillar sides been examined & made and kept secured as required under regulation 44(3)(a), regulation 113(3)(b) read with regulation 102(1) of the coal mines regulations, 1957;

ii) the pillar sides been properly secured by stitching with steel wire ropes at interval not exceeding 1.0m with suitable laggings kept tight against the sides of the pillar as per condition no. 5(b)(i) of the Systematic support rules framed under regulation 108(1)(bb) & approved vide this directorate letter no. S29020/34/RN-1(EZ)/010750/2035, dated 29.07.2016 read with regulation 102(1) of the coal mines regulations, 1957; this accident could have been averted.

12. Date - 26.11.16	Mine - VINDHYA PROJECT
Time - 13.00	Owner - South Eastern Coalfields Ltd.
	Dist. - Umaria, State - Madhya Pradesh
	Person(s) Killed :
	1. Shiv Kumar Sahu, Driller, Male, 50 Years

While a driller along with two other persons was walking in the gallery of a belowground coal mine, a piece of coal measuring about 1.95m (long) x 1m to 1.3m (wide) x 0.25m to 0.4m (thick) parted from the side and hit the driller due to which, he fell down on the floor of the gallery and received internal injuries to which he succumbed in about an hour.

Had,

the side of the working place been kept supported as per SSR under Regulation 108 of the Coal Mines Regulations 1957 read with Regulations 44(3)(a) and 43(1)(e) of the Coal Mines Regulations 1957, this accident could have been averted.

Code : 0113 Fall of Overhangs
(1 Death)

13. Date - 19.10.16	Mine - NANDIRA
Time - 9.05	Owner - Mahanadi Coalfields Ltd.
	Dist. - Angul, State - Orissa
	Person(s) Killed :
	1. Ramesh C.Sahoo, Driller, Male, 48 Years

While a person was walking along an old developed level gallery where the height was around 5.0 m, a piece of coal measuring about 1.0m x 0.75m x 0.15m (thickness) parted suddenly from the side from a height of 2.75 m and fell on him inflicting serious bodily injuries to which he succumbed after about one hour.

Had, the sides of the gallery within two pillars distance from the diagonal line of extraction been properly made and kept secure and supported to prevent premature fall, as per the enforced SSR thus not negligently omitting to do anything for the safety of persons employed as contained under the provisions of Regulations 108(5) & 102(1) of the Coal Mines Regulations, 1957 read with permission granted vide

letter No. 010696/BDH/CO-4/P-100(1)&104(2)/2016/1557 dated 16.05.2016 under Regulation 100(1) and 104(2) of the Coal Mines Regulations, 1957, the accident could have been averted.

Code : 0118 Landslide
(23 Deaths)

14. Date - 29.12.16 Mine - RAJMAHAL OCP
Time - 19.00 Owner - Eastern Coalfields Ltd.
Dist. - Godda, State - Jharkhand
Person(s) Killed :
1. Javed Akhtar, Excavator optr., Male, 20 Years
2. Rajenndra Yadav, Excavator optr., Male, 28 Years
3. Brijesh Yadav, Excavator optr., Male, 23 Years
4. Sanjay Kr.Sahi, Tipper driver, Male, 36 Years
5. Mohd. Noorul, Tipper driver, Male, 26 Years
6. Jay Prakash Rai, Tipper driver, Male, 38 Years
7. Nageshwar Paswan, Tipper driver, Male, 29 Years
8. Ajeet Patel, Excavator Optr., Male, 27 Years
9. Shakil Khan, Tipper optr., Male, 27 Years
10. Vikash Patel, Tipper optr., Male, 29 Years
11. Sunil Bhengra, Tipper optr., Male, 29 Years
12. Kuleshwar Kumar, Dozer optr., Male, 20 Years
13. Julfkar Mohammad, Tipper optr., Male, 25 Years
14. Jameer Mohammad, Tipper optr., Male, 28 Years
15. Raj Kamal Goswami, Tipper optr., Male, 25 Years
16. Sanjeet Vishawakarma, Tipper optr., Male, 25 Years
17. Laddu Prasad, Excavator optr., Male, 30 Years
18. Lallu Khan, Supervisor, Male, 36 Years
19. S.M.Shyam Patel, Supervisor, Male, 39 Years
20. Gagan Singh, Supervisor, Male, 27 Years
21. Parwej Alam, Tipper driver, Male, 28 Years
22. Bhim Ram, Tipper driver, Male, 26 Years
23. Hari Kishore Yadav, Excavator optr., Male, 26 Years

While contractual workers and machineries were deployed to form benches in dumped overburden, in-situ overburden and coal in an opencast mine containing known geological disturbances; cracks developed due to dead weight of dumped overburden, deep hole blasting and repeated plying of HEMMs, resulting into violent failure of in-situ overburden and coal benches, followed by instant sliding of dump in an area of 720m x 366m burying 23 workers along with 18 HEMMs.

Had,

1. no work against the geological disturbances been done by continuous removal of in-situ OB and coal by regular conduct of deep hole blasting and thereby not disturbing the stability of the strata and OB dump,

2. OB dump been totally removed by de-capping from top downwards in consultation with a scientific agency for formation of proper benches in OB dump without causing destabilization prior to removing in-situ OB and coal by repeated blasting,

3. no men or machineries been deployed at OB dump when the situation was alarming with the imminent visible cracks on haul roads of OB dump and along the edges of OB benches,
4. special care been taken while working in the vicinity of the geologically disturbed area to prevent danger to the work person(s),
5. sides in OB and coal been kept sloped to prevent danger from fall of sides,
6. slop of waste dump been maintained at a safe natural angle of repose not exceeding 37.5 degree and kept benched in such a way that no bench exceeded 30m in height and the general slope not exceeding 1 vertical to 1.5 horizontal,
7. observations of the unqualified site supervisors been heeded to,
8. intimation to DGMS been given in Form-I as required under the statute when the premature collapse of benches occurred on 09.08.2016 & 23.12.2016,
9. intimation to DGMS been given in Form-I about the dangerous occurrences of significant cracks which were noticed in the OB dumps, in-situ OB benches above coal benches during the last one month period prior to the occurrence of the accident as required under the statute and
10. mining operations at contractual patch been conducted in accordance with the Act, Rules, Regulations, bye-laws, permissions and orders made thereunder, this accident could have been averted.

Code : 0200 Transportation Machinery(Winding)

Code : 0223 Falls of Persons from Cages, Skip etc.
(1 Death)

15. Date - 18.08.16 Mine - KUNUSTORIA
Time - 14.00 Owner - Eastern Coalfields Ltd.
Dist. - Burdwan, State - West Bengal
Person(s) Killed :
1. Sukumar Bouri, General Mazdoor, Male, 33
Years

While a person was engaging the tub catcher installed inside the cage, the cage started lowering suddenly to which he lost the balance and fell down inside the shaft resulting into immediate fatality.

Had,

proper precaution been taken by positioning the drop lock handle inside the cage before signalling for start-up of winding engine, thereby not negligently or wilfully omitted to do anything to endanger life of the persons employed therein, by contravening the provisions of regulation 52(j) and 190 of the coal mines regulations, 1957; this accident could have been averted.

Code : 0300 Transportation Machinery (Non-Winding)

Code : 0331 Aerial Ropeway
 (1 Death)

16. Date - 23.09.16 Mine - WEST BOKARO O/C (QUARRY A & B)
 Time - 11.35 Owner - Tata Iron & Steel Co. Ltd.
 Dist. - Ramgarh, State - Jharkhand
 Person(s) Killed :
 1. Gurudayal Sao, Contractor, Male, 43 Years

While dismantling a ropeway tower in segments from top downwards, the Tower toppled from its foundation and three contractor's workers who were at the top of the tower with full body harness, all fell to the ground along with the tower resulting serious bodily injury to all of them. Out of the three, one person succumbed to his injuries while undergoing treatment at hospital.

Had,

i) The tower been anchored by a crane at the top portion as per clause no.4.3 of SOP for tower dismantling document no.WBD/LOG/4.1-1/BCR/033 and Form No.EHSMSM/446/4013.

ii) The stability of tower been insured by properly providing 4nos.supports at the base as per clause no.1.2 of SOP for tower dismantling document no.WBD/LOG/4.1-1/BCR/033 and Form No.EHSMSM/446/4013, the accident could have been averted.

Code : 0332 Rope Haulage
 (5 Deaths)

17. Date - 24.02.16 Mine - MANDARBONI
 Time - 19.50 Owner - Eastern Coalfields Ltd.
 Dist. - Burdwan, State - West Bengal
 Person(s) Killed :
 1. Rambalak Gope, Surface Trammer, Male, 47
Years

While an empty tub was being pushed at the pit top by a surface trammer in an underground coal mine, the surface trammer fell in to the pit along with the empty tub, sustaining serious head injuries, which proved fatal on the way to hospital.

Had,

i) the person not pushed an empty tub into the shaft instead of cage, thereby negligently not endangering his life by contravening the provision of Regulation 38(1)(a) of the Coal Mines Regulations, 1957;

ii) the operation of the shaft gates been ensured as per code of practice, thereby negligently not omitting to ensure safety of persons employed therein, by

contravening the provisions of Regulation 38(1)(a) of the Coal Mines Regulation 1957; this accident could have been averted.

18. Date - 27.02.16 Mine - RAVINDRA KHANI NO.6
Time - 5.50 Owner - Singareni Collieries Company Ltd.
Dist. - Adilabad, State - Telangana
Person(s) Killed :
1. Malam Narsaiah, General Mazdoor, Male, 56
Years

While a worker tried to ride on the ascending set of tubs in the haulage roadway of a depillaring panel of a coal mine, his leg slipped and he was run-over by the ascending set of tubs and received serious bodily injuries to which he succumbed on the way to hospital.

Had,

he not done the set riding and adhered the direction issued by the manager in this regard as required under Regulations 38(1)(a) read with the Reg.89(3) of the Coal Mines Regulations, 1957; this accident could have been averted.

19. Date - 24.07.16 Mine - AMRITNAGAR
Time - 19.30 Owner - Eastern Coalfields Ltd.
Dist. - Burdwan, State - West Bengal
Person(s) Killed :
1. K.Chandra Nahak, Tyndal, Male, 55 Years

While a tub was carrying haulage wire rope along the endless haulage roadway in an underground mine, a tyndal of the transportation gang fell down on the track line while crossing it and was run over by the from north wheel of the same tub, thus sustaining serious leg injuries, which proved fatal in the hospital after seven hours.

Had,

i) the proper precautions been taken, while crossing the running endless haulage rope, thereby not negligently or wilfully omitted to do anything to endanger his own life, by contravening the provisions of regulation 190 of the coal mines regulations, 1957;

ii) the safe operating procedure of one way traffic system along the endless haulage roadway been followed prominently, thereby not negligently or wilfully omitted to do anything to endanger life of persons employed therein, by contravening the provisions of regulation 53(6) and 190 of the coal mines regulations, 1957;

iii) the effective supervision been ensured at workplace to ensure safety of persons employed therein, thereby not negligently or wilfully omitted to do anything to endanger there life, by contravening the provisions of regulation 39(a) and 190 of the coal mines regulations, 1957; this accident could have been averted.

20. Date - 08.09.16 Mine - JAMADOBA
Time - 22.00 Owner - Tata Iron & Steel Co. Ltd.

Dist. - Dhanbad, State - Jharkhand

Person(s) Killed :

1. Rahul Kumar, Tipper Helper, Male, 18 Years

While a contractor worker engaged in operating chute for loading coal from surface coal bunker on to tipper of an underground coal mine, he unauthorizedly went to discharge drum of running conveyor at the top of the bunker resulting caught in between the discharge drum and right side of plummer block inflicting fatal injuries to him.

Had,

i) the entry of un-authorised person to discharge drum of conveyor on top of surface coal bunker been restricted thus not negligently endangered life in contravention of regulation 190 of the coal mines regulation 1957,

ii) the competent persons been appointed for operation of chute and the work of tipper loading from the surface coal bunker been carried out under the supervision of competent supervisor as required under regulation 36(1) of the coal mines regulation 1957,

iii) the running belt at the discharge drum of the conveyor been kept substantially fenced or guarded as required under regulation 92(4) of the coal mines regulation 1957 read with cond. 7(a) of the permission letter no. Dir(Mech).CZ/010/Perm/BC/155 dated 05.04.2010, this accident could have not been averted.

21. Date - 17.10.16
Time - 21.30

Mine - KAKATIYA KHANI NO.5 INCLINE

Owner - Singareni Collieries Company Ltd.

Dist. - Warangal, State - Telangana

Person(s) Killed :

1. B.Venkatesh, Mgmt. Trainee, Male, 26 Years

While a set of loaded tubs was lowered uncontrolled along an Endless Haulage track, without giving any warning, a person walking along that roadway was hit by it to which he succumbed instantaneously.

Had,

i) the set of loaded tubs in Endless haulage track was not allowed to move uncontrolled by applying approved type of Clip and Sprags & adequate warning was given before lowering of the set of tubs as stipulated in Regulation 89(2)(c) & (a) and

ii) the person was not inattentive while travelling in haulage roadway, thus not negligently endangered his own safety, as required under Regulations 190 of the Coal Mines Regulations, 1957, this accident could have been averted.

Code : 0334 Conveyors
(2 Deaths)

22. Date - 18.04.16
Time - 5.30

Mine - SILEWARA

Owner - Western Coalfields Ltd.

Dist. - Nagpur, State - Maharashtra

Person(s) Killed :

1. S.Ahamed Nijauddin, Explosive Carrier,
Male, 56 Years

While an explosive carrier working as chute operator of surface conveyor belt of sand stowing bunker in an underground coal mine was cleaning spillage at the tail-end drum, he slipped and caught in between the tail-end drum and bottom belt of the running conveyor belt inflicting serious bodily injury to him, to which he succumbed 12 hrs later in a hospital.

Had,

i) the cleaning of the sand spillage on the tail-end drum of the belt conveyor in motion not been done where there was a risk of injury, as required under Regulation 184(3) of CMR 1957;

ii) the cleaning of the sand spillage on the tail-end drum of the belt conveyor in motion not been done as per the prescribed safe operational procedure thus not negligently endangered his own life in the mine and not omitted to ensure his own safety in the mine as required under the provision of Regulation 190 read with Regulation 38 of the CMR 1957;

iii) the travelling space between the belt conveyor and one side of the roadway, been free from obstruction and not less than one meter wide as required under Regulation 92 (1)(a) of CMR 1957;

iv) the tail-end drum of the belt conveyor including the path-way all along the side of belt conveyor been adequately fenced by suitable guards of substantial construction to prevent danger as required under Regulation 184(2) of CMR 1957; and

v) a person, without having sufficient experience of operation of chutes of sand-bunker and cleaning of spillage of at the conveyor belt, not been employed as chute operator and cleaner without adequate supervision and guidance of an experienced person as required under regulation 115(9) of CMR 1957, this accident could have been averted.

23. Date - 21.10.16
Time - 11.30

Mine - JAMUNIA UG MINE
Owner - Western Coalfields Ltd.
Dist. - Chhindwara, State - Madhya Pradesh
Person(s) Killed :
1. P.Ram Langiwar, Cont.Worker, Male, 52
Years

While a contractual worker was adjusting tension of the conveyor belt by rotating tensioning bolt wrongly fitted at the tail-end drum of belt conveyor installed in an incline, he slipped and fell down on to the running belt and got caught in between belt and the tail-end drum resulting in serious bodily injury, to which he succumbed instantly on the spot.

Had,

i) the contractual worker without having any knowledge or experience of installation, operation or maintenance of belt conveyor, not been allowed to adjust tension of the conveyor at the tail-end drum of the belt conveyor while in motion, where there was a risk of injury, as required under regulation 184(3) of Coal Mines Regulations, 1957; and

ii) the belt conveyor been of adequate design, construction and strength, free from visible defects and properly installed and maintained in safe working order as required under Regulations 36(1a) (iii) and 182 of the Coal Mines Regulations, 1957; this accident could have been averted.

Code : 0335 Dumpers
(9 Deaths)

24. Date - 23.01.16 Mine - NIGAH I PROJECT
Time - 16.40 Owner - Northern Coalfields Ltd.
Dist. - Singrauli, State - Madhya Pradesh
Person(s) Killed :
1. Ch. Yaswant Rao, Supervisor, Male, 37
Years

While a 18.8 m³ carrying capacity empty tipper was on way to the overburden face after unloading OB in the waste dump-yard, it hit and run over a supervisor, who succumbed due to crush injuries almost immediately.

Had,

i) the tipper been driven carefully and defensively, thus not negligently endangering life and safety of persons employed in the mine, as called for by clause 20(3)(c) of Directorates letter No. 4426 dated 11.08.1989, granting relaxation from the provisions of Regulation 98(1) & (3) of the Coal Mines Regulations, 1957, and,

ii) None ventured in close proximity of the moving tipper, thus not negligently endangering his own life and safety, as called for by the provisions of Regulation 190 of the Coal Mines Regulations, 1957, this accident would have been averted.

25. Date - 29.02.16 Mine - AMALGAMATED KESHALPUR-WEST MUDIDIH
Time - 10.00 Owner - Bharat Coking Coal Ltd.
Dist. - Dhanbad, State - Jharkhand
Person(s) Killed :
1. Bhola Nonia, Dozer Operator, Male, 43
Years

While a worker was en-route on foot to his working place in a mechanised opencast coal mine, passing through a coal dump over crowded with men and machineries, ahead of a dumper, loaded with coal, he was hit by the dumper on his back resulting his to fell down on the ground and run over by rear right outer wheel of the dumper inflicting fatal injuries on the spot.

Had,

i) dumper operator not negligently driven the dumper in forward direction behind the person going on foot and clearly visible at some distance ahead of him and not endangered his life, as required under the provisions or Reg. 38(1) & 190 of the CMR, 1957,

ii) it been ensured that through supervision of operations being done at coal dump no. 40 was provided as required under the provisions of Reg. 36(1)(a)(ii) of the

CMR, 1957 read with condition no. 16.5 of the permission granted under Reg. 100(1) and relaxation under Reg. 98(1) & (3) of the CMR, 1957 vide this Directorate's letter no. R-1/010179/perm 23-15/2013 dated 09.11.2015 read with Section 18(4) of the Mines Act, 1952,

iii) the coal dump no. 40 where unloading of coal from mine, loading of coal for dispatch and local sale operations were being carried out been visited and examined by the ACM as required under the provisions of Reg. 42(1) & (2) of the CMR, 1957,

iv) a separate lane properly fenced off from the haul road for use of pedestrians from attendance room to opencast workings where there was heavy traffic of men and machines been provided as required as per condition no. 6.9 of the permission granted under Reg. 100(1) and relaxation under Reg. 98(1) & (3) of the CMR, 1957 vide this Directorate's letter no. R-1/010179/perm 23-15/2013 dated 09.11.2015 read with DGMS (Tech) Circular no. 6 of 2008 & recommendation no. 5.3 of the 8th safety conference and read with section 18(4) of the mines act, 1952 and

v) separate coal stock yards for dumping of coal from mine and dispatch of coal been provided as required as per condition no. 16.2 of the permission granted under Reg. 100(1) and relaxation under Reg. 98(1) & (3) of the CMR, 1957 vide this Directorate's letter no. R-1/010179/perm 23-15/2013 dated 09.11.2015 read with section 18(4) of the mines act, 1952, this accident could have been averted.

26. Date - 18.03.16
Time - 3.10

Mine - NIGAHI PROJECT
Owner - Northern Coalfields Ltd.
Dist. - Singrauli, State - Madhya Pradesh
Person(s) Killed :
1. Munilal Kushwaha, Dumper operator, Male,
52 Years

While a 120 Tonne carrying capacity dumper loaded with OB was on way to OB dump yard on near-lever & 19.80m wide haul road, it collided nose to tail with a stationary 120 Tonne dumper parked on the left side of the haul road, seriously injuring the operator and entrapping him in the damaged cabin, to which he succumbed almost instantaneously

Had ,

i) the dumper not been parked on the haul road at a place from where dumper traffic was endangered, as stipulated vide clause 5 of the code of traffic rules framed by the manager under clause 21(3)(c) of Directorate's letter No. 4426 dated 11.08.1989 granting relaxations from the provisions of Regulation 98(1) & (3) of the Coal Mines Regulations, 1957, and DGMS Circular No.(Tech) 01 of 1989, and

ii) hazard-indicator/parking lights provided on the dumper been kept switched on before parking it as to warn operators of other dumpers passing by, thus not negligently endangering the life and safety of persons employed in the mine, as called for by the provision of Regulation 190 of the Coal Mines Regulations, 1957, this accident could have been averted.

27. Date - 26.03.16
Time - 18.30

Mine - BANSRA
Owner - Eastern Coalfields Ltd.
Dist. - Burdwan, State - West Bengal

Person(s) Killed :

1. Mohan Kr.Sen,Dumper Helper, Male, 21

Years

While a tipper was negotiating a left hand curve in a railway siding of mines, a tipper helper passing behind a coal heap was hit by front left wheel of the tipper, thus sustaining serious lacerated injuries on his stomach, which proved fatal on the way to hospital within half an hour.

Had,

proper precautions been taken to avoid the contact with the tipper which was negotiating a left hand curve, thereby not negligently or wilfully omitted to do anything to endanger life, by contravening the provisions of Regulation 190 of the Coal Mines Regulations, 1957; this accident could have been averted.

28. Date - 09.04.16

Time - 1.30

Mine - AMLO

Owner - Central Coalfields Ltd.

Dist. - Bokaro, State - Jharkhand

Person(s) Killed :

1. Awadesh Upadhaya,Dumper Optr., Male, 59

Years

While a 60t dumper speedily reversed beyond the edge of dump for dumping/tipping overburden in an opencast Coal mine, its front wheels lifted into the air and when the operator tried to move the dumper against the warning of his superiors, it rolled down from about 45m high and 55m long slope of the dump and drowned in waterlogged area existing at bottom of the dump yard and the dumper operator succumbed to the injuries sustained during the roll down of dumper.

Had,

Prescribed dumping method been followed and 1.5m high x 1.5m wide berm been provided at the edge of the dump as required under condition no. 5 of code of practice prepared by the manager under Reg.98(1)&(3) of the coal mines Regulations, 1957 read with DG's Tech Cir.No.1/1989, this accident could have been averted.

29. Date - 02.06.16

Time - 19.30

Mine - KHADIA PROJECT

Owner - Northern Coalfields Ltd.

Dist. - Sonbhadra, State - Uttar Pradesh

Person(s) Killed :

1. Md.Firoz Ansari,Cont.Worker, Male, 26

Years

While crew of 3 persons was trying to remove air-lock from fuel-line of a Volvo tipper, a non-submersible 12v DC battery connected wiper motor-pump was put inside its diesel tank whose un-insulated connections resulted in a spark to ignite the fuel-air mixture in the fuel tank. The fire which billowed out from fuel-tank cap resulted in serious burn injuries to one helper and minor burn injuries to two other persons. The helper succumbed to his injuries after 10 days while undergoing treatment at hospital.

Had,

i) the non-submersible wiper motor-pump with naked/un-insulated connection not been used to pump fuel from fuel tank to the fuel-line of the tipper as to remove the air lock, thus negligently not endangering life and safety of the persons employed in repair of the tipper, as called for by the provisions of regulation 190 of coal mines regulations 1957, and,

ii) competent persons been deputed for carrying out repairs on the tipper, all concerned with the repair and maintenance of HEMM deployed in the mine been provided with written safe work procedures, and all activities being carried on by the contractors been monitored to ensure that all the requirements of statute and procedures related to safety were compiled with, thus negligently not endangering life and safety of the persons employed in repair of the tipper, as called for by the provisions of regulation 190 of coal mines regulations 1957, read with DGMS circular no. tech 1 of 2008 & no. tech.9 of 2008, this accident could have been averted.

30. Date - 10.09.16 Mine - BLOCK "B" PROJECT
Time - 7.30 Owner - Northern Coalfields Ltd.
 Dist. - Singrauli, State - Madhya Pradesh
 Person(s) Killed :
 1. R.Laxamana, Tipper, Male, 23 Years

While a loaded 18.7 m3 carrying capacity tipper was on the way to OB dump yard on a haul road having gradient of 1 in 12.5 and 13.0m wide, the operator lost control over the vehicle and swerved it right as to avoid climbing over of the berm provided on the left side of the haul road, as a result of which tipper toppled on it's right side. The tipper operator received head injuries, to which he succumbed while on the way to hospital.

Had,

the tipper been driven carefully and defensively and seat belt been worn by the driver as required by clause 18.2(b) & 18.6(a) of the directorate letter no. S29020/03/2010/VR(NZ)/Block-B/1747 dated 18.01.2012, granting relaxations from the provisions of regulation 98(1) & (3) of the coal mines regulations, 1957, read with DGMS(Tech) circular no. 09 of 02.12.2008, this accident could have been averted.

31. Date - 23.09.16 Mine - KUJAMA
Time - 1.45 Owner - Bharat Coking Coal Ltd.
 Dist. - Dhanbad, State - Jharkhand
 Person(s) Killed :
 1. Prasad Mahto, Dumper driver, Male, 40
Years

While unloading overburden at the edge of a haul road, in a non-designated internal dump area of a mechanised opencast coal mine, the dumper over ran the edge of the haul road and overturned on its slope, inflicting fatal injury to driver.

Had,

overburden not been permitted to unload in a non-designated internal dump area at the edge of a haul road, thus not negligently omitted to do anything necessary for the safety of the persons employed as required under the provisions of the Reg. 190 of the coal mines regulations, 1957, this accident could have been averted.

32. Date - 26.12.16 Mine - PRAKASHAM KHANI OPENCAST MINE
Time - 3.45 Owner - Singareni Collieries Company Ltd.
Dist. - Khammam, State - Telangana
Person(s) Killed :
1. Sakila K.Reddy, EP Operator, Male, 53
Years

While an Operator of a 100T dumper negligently collided it against rear portion of bucket of another 100T dumper, which was parked at side of a haul road; the operator colliding the dumper received severe injuries at lower half of his body due to damage of operator's cabin to which he succumbed instantaneously.

Had,

i) the operator of the running dumper not contravened Regulation 38(1) by violating Manager's order given in SOP and maintained safe distance of 30m against other vehicles, thus not negligently endangered his own life as required under Regulations 190 of the Coal Mines Regulations, 1957; and

ii) the operator of the parked dumper not parked his dumper in a haul road as ordered by the Manager in SOP, thus not violated Regulation 38(1) of the Coal Mines Regulations, 1957,

this accident could have been averted.

Code : 0339 Wheeled Trackless (Truck, Tanker, etc.)
(12 Deaths)

33. Date - 18.03.16 Mine - JHARKHAND OCP
Time - 7.30 Owner - Central Coalfields Ltd.
Dist. - Ramgarh, State - Jharkhand
Person(s) Killed :
1. Lakhan Yadav, Driver, Male, 28 Years

While a truck driver was directing the movement of the truck from behind near a coal stock of a mine, suddenly the truck operated by the Khalasi/helper moved in backward direction inflicting serious bodily injury to the driver which proved fatal on the way to hospital.

Had,

i) The Operation of the truck not been done by the Khalasi/helper,

ii) The loading of the truck been supervised,

iii) The trucks not been parked haphazardly in coal stock,

iv) The crowding of road sale trucks not been there in coal stock;

the accident could have been averted.

34. Date - 06.04.16 Mine - KOLAR PIMPRI O.C
Time - 21.30 Owner - Western Coalfields Ltd.
Dist. - Yavatmal, State - Maharashtra
Person(s) Killed :
1. Nirmal Shukla, contract worker, Male, 36
Years

While a person was standing in between his parked tipping truck and another tipping truck parked in front of his truck at the diesel filling point in an opencast mine, purportedly for checking the physical condition of his tipping truck, his truck moved forward of its own in a down gradient and hit him in his head and subsequently he was trapped in between his truck and the other truck; the person received serious injuries in his head and succumbed to the injuries after about one hour.

Had,

the person not got down from his tipping truck near the diesel filling point and engaged the parking brake of the tipping truck even if he had to get down and thereby not endangering his own life as required under Regulation 190 of the Coal Mines Regulations, 1957 read with code of practices framed for the purpose, this accident could have been averted.

35. Date - 25.04.16 Mine - JAMPALLI O/C MINE
Time - 7.30 Owner - South Eastern Coalfields Ltd.
Dist. - Raigarh, State - Chhattisgarh
Person(s) Killed :
1. Ratan Yadav, Helper, Male, 22 Years

While the nuts of rear wheel of a coal transporting truck was being tightened by the helper of the truck near coal stock yard at a place other than loading point of an opencast mine, suddenly the truck was driven negligently by the driver without taking care or confirming whether the helper moved away from the wheel, the helper was run over by the truck and sustained serious bodily injury which proved fatal on the way to hospital.

Had,

i) the truck not been driven by the driver without taking care or confirming whether the helper of same truck was moved away from rear wheel,

ii) supervision been provided for loading operation at coal stock yard in the mine including parking of buyer's truck therein,

iii) safe operating procedure been implemented and conditions of the permission issued by this directorate as required been complied with

as required under Reg.41(1)(a), 41(4), read with condition no. 20.1.2 of Annexure-'A' of permission letter no. RGR/3339 dated 16.12.2015 granted under Reg. 98(1) & (3) of the coal Mines Regulations, 1957 and Reg. 190 of the Coal Mines Regulations, 1957, this accident could have been averted.

36. Date - 01.06.16 Mine - GIDI A
Time - 2.00 Owner - Central Coalfields Ltd.
Dist. - Hazaribagh, State - Jharkhand

Person(s) Killed :

1. Chandra S.Singh, Security Guard, Male, 43

Years

While an unknown light motor vehicle run over the head of a private security guard, who was sleeping at the top overburden bench of a mine resulting in Fatal accident.

Had,

the private security guard not slept the top overburden bench; this accident could have been averted.

37. Date - 17.06.16
Time - 14.45

Mine - KANCHAN O/C
Owner - South Eastern Coalfields Ltd.
Dist. - Korba, State - Chhattisgarh
Person(s) Killed :

1. Ram Kripal, Overman, Male, 58 Years

While driving an explosive van on the service road of an opencast coal mine, the front right tyre of the explosive van ran over the boulders lying on road side at the toe of overburden dump due to uncontrolled driving and it got toppled, inflicting serious injuries to the co-person sitting in the cabin to which he succumbed almost instantly and the driver escaped unhurt.

Had,

the explosive van ban driven with due control and the safety of the co-person sitting in the explosive van not been negligently endangered as required under reg. 39 read with reg. 190 of coal mines regulations, 1957, this accident could have been averted.

38. Date - 27.08.16
Time - 13.40

Mine - GARE PALMA IV/2&8 OCM
Owner - South Eastern Coalfields Ltd.
Dist. - Raigarh, State - Chhattisgarh
Person(s) Killed :

1. Mohan Lal Lakra, Outsider, Male, 37 Years

While operator of a coal transporting truck was getting into driver's cabin of the loaded truck which was parked on coal exit road near barrier no.1, the truck was dashed side wise by another coal transporting truck trying to get ahead in queue, he was pressed between two trucks and received serious bodily injuries to which he succumbed almost instantly on the spot.

Had,

i) the running truck not been driven by the driver negligently and wilfully, violating the SOP framed for driving of trucks as per condition no. 18.1 of the permission issued vide letter no. RGR/235 dated 27.01.2014 & permission transferred vide letter no. 2450 dated 17.09.2015 under Regulation 98(1)&(3) and thus not endangered the life of co-driver, violating provision of the Regulation 190 of the Coal Mines Regulations, 1957, while overtaking the another truck ahead of it standing in the queue on coal transport exit road,

ii) the operator of the standing truck not violated the SOP, framed for driving of trucks as per condition no. 18.1 of the permission issued vide letter no. RGR/235

dated 27.01.2014 & permission transferred vide letter no. 2450 dated 17.09.2015 under Regulation 98(1)&(3) of the Coal Mines Regulations, 1957, by alighting from the truck on coal transport exit road, and

iii) the Safe Operating Procedure, framed for driving of trucks as per condition no. 18.1 of the permission issued vide letter no. RGR/235 dated 27.01.2014 & permission transferred vide letter no. 2450 dated 17.09.2015 under Regulation 98(1)&(3) of the Coal Mines Regulations, 1957, been enforced by the Assistant Manager as required under Regulation 42(1) of the Coal Mines Regulations, 1957, this accident could have been averted.

39. Date - 30.08.16	Mine - KHAS MAHAL PROJECT
Time - 12.30	Owner - Central Coalfields Ltd.
	Dist. - Bokaro, State - Jharkhand
	Person(s) Killed :
	1. Santosh Kumar, Tipper Opnr., Male, 31 Years

While an operator of an empty 17t stationary tipper was checking self starting problem by going under the chassis in an opencast coal mine, the tipper suddenly moved forward after being scraped past its cabin and bending front bumper by another moving tipper, and ran over the operator crushing him to death and stopped after hitting a tipper standing 13m away in the front.

Had,

i) Tipper operator put adequate stop blocks under the wheels and engaged the gear shift lever in reverse position and applied the parking brake, before going beneath the tipper as required under condition No. 18.7 read with permission granted vide letter no. KR/726, dated 17/05/2013 under the provision of the Reg. 98(1)&(3) of CMR, 1957;

ii) Fellow tipper operator not bypassed/jumped the queue and hit the standing tipper and caused movement in it, thus not negligently, endangering fellow operator's life as required under Reg. 190 of the coal mines regulations, 1957,

iii) the contractor made the arrangements for examination of tippers and arranged the adequate supervision as required under condition no. 20A(7) & 20A(10) read with permission granted vide letter no. KR/726, dated 17/05/2013 under provision of the reg. 98(1) & (3) of CMR, 1957,

iv) the engineer authorized for the purpose ensured the road-worthiness before permitting the tipper into the mine as required under condition no. 15.7(a) & 20A(9) read with permission granted vide letter no. KR/726, dated 17/05/2013 under provision of the reg. 98(1) & (3) of CMR, 1957 and

v) the asst. manager authorised for the purpose ensured that the area where transport of coal was being done with adequate supervision as required under condition o. 20A(1) read with permission granted vide letter no. KR/726, dated 17/05/2013 under provision of the reg. 98(1) & (3) of CMR, 1957 and with provision of the reg. 42(1) of CMR, 1957 read with authorization letter no. PO/AKKOCP/2015/345, dated 28/04/2015, this accident could have been averted.

40. Date - 30.09.16	Mine - GAZLITAND
Time - 23.15	Owner - Bharat Coking Coal Ltd.

Dist. - Dhanbad, State - Jharkhand

Person(s) Killed :

1. Sahdeo P. Yadav, dumper optr., Male, 43

Years

While a water tanker was enroute to top of a coal dump in an open cast coal mine to sprinkle water to quench fire at its toe, tanker engine got deprived of supply of fuel due to less fuel in the tank resulting in malfunctioning of steering thus driver could not control the tanker and it toppled down from a height of 11m throwing driver off the seat, received serious bodily injuries to which he succumbed on the way to hospital.

Had,

i) the water tanker driver topped up diesel in tanker to prevent air lock and malfunctioning of steering and negligently not omitted to put on seat belt thereby not endangered his own life,

ii) the top of coal dump no.5 been inspected and examined by Overman and ACM for existence of its berm and condition of sides prior to engage the water tanker driver to deal with fire by pouring water from top and

iii) water tanker driver not been deployed to pour water by water tanker from top of the dump to quench coal dump fire

as required under the provisions of Reg. 38(1)(a), 43(1)(c), (e) & (8)(a), 42(1)&(2) and 190 of the CMR, 1957, this accident could have been averted.

41. Date - 20.10.16

Time - 23.20

Mine - MURAIIDIH

Owner - Bharat Coking Coal Ltd.

Dist. - Dhanbad, State - Jharkhand

Person(s) Killed :

1. Nagina Nonia, Contract Employee, Male, 29

Years

2. Sanjeet Thakur, Contract Helper, Male, 22

Years

While checking rear right outer wheel of a contractor's tipper waiting in a queue for uploading at feeder breaker of an opencast coal mine by its helper and a driver of another tipper parked across on its right side on mild gradient, suddenly the parked tipper rolled down and hit both of them causing serious bodily injuries to which they succumbed almost instantaneously.

Had,

i) the parking brake of tipper on a mild gradient at an unloading area of feeder breaker been properly engaged as required under Regulation 38(1)(a) of the CMR, 1957 read with Safe Operating Procedure framed by the Manager,

ii) the helper not been engaged for checking wheel of a tipper at an unloading area of feeder breaker thus not negligently endangering his life as required under Regulation 190 read with Regulation 38(1)(a) of the CMR, 1957 and Safe Operating Procedure framed by the Manager and

iii) the competent supervisor been provided at feeder breaker for supervision of unloading operation and movement of tippers as required under Regulation 36(1) of

CMR, 1957 read with condition no. 18.5 of permission letter No. R-3/332 dated 11.03.2016, this accident could have been averted.

42. Date - 26.10.16 Mine - SHYAMSUNDARPUR
Time - 14.15 Owner - Eastern Coalfields Ltd.
Dist. - Burdwan, State - West Bengal
Person(s) Killed :
1. Bhagirath Mondal, Fitter Helper, Male, 38
Years

While the LHD machine was plying along its designated traverse path in a development panel of an underground coal mine, a person was hit and run over by its right side rear wheel resulting complete crushing of his head and was declared dead on spot by Doctor after about three hours of the accident.

Had,

the person not left the designated place of work and knowingly not entered to the traverse path of the LHD machine as required under Regulation 38(3)(b) of the Coal Mines Regulation, 1957, this accident could have been averted.

43. Date - 27.12.16 Mine - AMLAI OCM
Time - 16.15 Owner - South Eastern Coalfields Ltd.
Dist. - Shahdol, State - Madhya Pradesh
Person(s) Killed :
1. Ram Bahor Pandey, Sub.Engineer, Male, 59
Years

While a water tanker was being reversed on the haul road of an opencast coal mine, an employee coming behind water tanker on a motor-bike, was hit by the rear end of the water tanker and run over, which proved fatal instantly.

Had,

the water tanker been driven defensively and not been reversed without ensuring that no one was present in the area of reversal, as required under condition No. 11.0(4)(a) & 11.0(4)(e) of the permission under Regulation 98(1) & 98(3) of the Coal Mines Regulations 1957 granted vide this Directorate's letter No. 1533, Jabalpur dated 31.05.2012; this accident could have been averted.

Code : 0400 Machinery Other than Transp. Machinery

Code : 0443 Loading Machines
(6 Deaths)

44. Date - 10.01.16 Mine - BANKOLA
Time - 6.00 Owner - Eastern Coalfields Ltd.
Dist. - Burdwan, State - West Bengal

Person(s) Killed :

1. Juria Nahak, Cableman, Male, 52 Years

While reversing a SDL for unloading of coal in a depillaring district of an underground coal mine, the rear cableman was run over by the right side crawler chain of the SDL, which proved fatal on the way to surface.

Had,

i) the person not entered into the traverse path of the SDL violating the safe code of practices, thereby not negligently endangering his life by contravening the provisions of Regulation 190 and read with Regulation 38(1)(a) of the Coal Mines Regulations, 1957;

ii) the SDL not been operated negligently and presence of person along its traverse path also been ensured, thereby not negligently omitting to ensure safety of persons employed therein, by contravening the provisions Regulation 190 and read with Regulation 38(1)(a) of the Coal Mines Regulations, 1957; this accident could have been averted.

45. Date - 22.04.16
Time - 4.45

Mine - AMALGAMATED BLOCK II OCP
Owner - Bharat Coking Coal Ltd.
Dist. - Dhanbad, State - Jharkhand
Person(s) Killed :

1. Mohan Rawani, Contract employee, Male, 26

Years

While a contractor employee deployed as shovel operator was resetting position of shovel on trailer for its transportation outside the opencast coal mine in night shift, suddenly its left track chain slipped from the platform and shovel fell down on a haul road on its cabin side inflicting serious bodily injuries to him to which he succumbed after about two hours and fifteen minutes on the way to hospital.

Had,

the shovel been loaded and reset on trailer by a trained person under the supervision of an official in adequate lighting as required under Rule 6(1) of the Mines Vocational Training Rules, 1966 and Reg. 36(1) & 151(1) of the Coal Mines Regulation, 1957, this accident could have been averted.

46. Date - 26.04.16
Time - 16.45

Mine - BAGDEWA U/G MINE
Owner - South Eastern Coalfields Ltd.
Dist. - Korba, State - Chhattisgarh
Person(s) Killed :

1. Jai Singh, Dresser, Male, 40 Years

While an empty load haul dump machine, taking right turn at a junction on way to lift coal from faces in a development district of an underground coal mine, a dresser standing at the turning beside the coal pillar, was hit by the side of bucket of the machine, inflicting serious bodily injuries which proved fatal after three hours.

Had,

i) the load haul dump machine not been operated without ensuring that nobody was present in path of its movement as required under Code of practice for operator framed by the manager and thus not negligently endangered the life of persons as required under Regulation 38(1), 181(3) and 190 of the coal mines regulations, 1957;

ii) the victim not entered in the path of moving load haul dump machine as required under code of practice framed by the manager thus not negligently endangered his life as required under Regulation 38(1), 181(3) and 190 of the coal mines regulations, 1957, this accident could have been averted.

47. Date - 08.06.16
Time - 2.10

Mine - RAVINDRA KHANI NEW TECH
Owner - Singareni Collieries Company Ltd.
Dist. - Adilabad, State - Telangana
Person(s) Killed :
1. Yadla Mallaiah, Timber man, Male, 59 Years

While a person, unauthorizedly operated side discharge loader (SDL) to transport coggings sleepers in a depillaring panel of a underground coal mine, the SDL was struck on the side of the slice of the pillar and one person's legs were caught in between, inflicting amputation at his right leg and serious bodily injuries to left leg which proved fatal after 14 hours in hospital.

Had,

the SDL not been operated unauthorizedly and key of the SDL been kept under possession of the SDL operator, while leaving the SDL and disconnected power supply of SDL, contravening the provisions of regulation 55(5), 38(1)(a) and regulation 190 of the coal mines regulations, 1957, read with condition no.1 of the code of practices to operate the SDL framed by the manager of the mine respectively, this accident could have been averted.

48. Date - 16.07.16
Time - 11.15

Mine - DURGAPUR RAYATWARI
Owner - Western Coalfields Ltd.
Dist. - Chandrapur, State - Maharashtra
Person(s) Killed :
1. A.Namdeo Dadmal, SDL helper, Male, 59 Years

While a cable man was engaged for guiding trailing cable behind a side discharge loader machine (SDL) during its movement in a depillaring panel of a belowground coal mine, he was hit by the SDL machine while reversal near the junction of a slice face inflicting serious injuries to which he succumbed after about two and half hour at the hospital.

Had,

the side discharge loader machine(SDL) been carefully operated to ensure that no person was present within the reach of the SDL machine while reversing, thus not negligently omitted to ensure the safety of persons employed in the mine as required under regulation 190 of the coal mines regulations, 1957 read with code of practices framed for the purpose, this accident could have been averted.

49. Date - 02.12.16 Mine - BHARATPUR PROJECT
Time - 20.30 Owner - Mahanadi Coalfields Ltd.
Dist. - Angul, State - Orissa
Person(s) Killed :
1. Gautam Kr.Singh, Cont.Worker, Male, 24
Years

While a person was checking the Right Hand Side T-rod of the main leaf-spring of a tipper which was being loaded by an excavator, he was suddenly hit by the excavator bucket causing grievous injuries to head, lungs, and inguinal region to which he is succumbed after about 30 minutes.

Had,

i) the person been made aware of the code of practice of operation of tippers about not getting down from the tipper while the tipper was being loaded, as required under the provisions of Regulations 98(1) & 98(3) of the Coal Mines Regulations, 1957 read with exemption granted vide letter No. BBR-010687/BDH/CO-7/P-98(1)&(3)/2014/1256 dated 05.05.2014 and

ii) adequate illumination been ensured at the working place beyond day light hours for clear visibility to operators of Heavy Earth Moving Machinery in the area, as required by the provisions of Regulations 154(2)(b), 98(1) & 98(3) & 32 of the Coal Mines Regulations read with exemption granted vide letter No. BBR-010687/BDH/CO-7/P-98(1)&(3)/2014/1256 dated 05.05.2014 and relaxation granted vide this Directorate's Lr. No. 172 dated 21.01.2016, this accident could have been averted.

Code : 0448 Other Heavy Earth Moving Machinery
(3 Deaths)

50. Date - 12.05.16 Mine - RAJMAHAL OCP
Time - 7.40 Owner - Eastern Coalfields Ltd.
Dist. - Godda, State - Jharkhand
Person(s) Killed :
1. M.S.Rajput, CISF Constable, Male, 45 Years

While a CISF Constable standing beside OB heaps in dumping area over OB dump yard of an opencast mine was chasing away unauthorized persons, suddenly, he was pushed along with the overburden being dozed by a dozer, fell down & partially buried in the OB and received serious bodily injuries to which he succumbed after four & half days.

Had,

the dozer operator carefully examined his working place during dozing operation, thus, ensured that no person was in vicinity of dozer as required under the provisions of regulation 115(2) of the Coal Mines Regulations, 1957 and not negligently omitted the safety of person present in proximity of dozing area of mine as required under the provisions of Regulation 190 of the Coal Mines Regulations, 1957 read with Clause No. 16.2.1 of Permission Letter No. S4/03/26/006/II-B/(87)/1182 dated 08.04.1987; this accident could have been averted.

51. Date - 19.05.16 Mine - MOHER & MOHER AMLOHRI EXTENSION OCP
Time - 13.25 Owner - M/S SASAN POWER LTD.
Dist. - Singrauli, State - Madhya Pradesh
Person(s) Killed :
1. Chotelal Panika, helper, Male, 37 Years

While schedule maintenance of a dozer was in progress at OB dump yard by a crew of one mechanic and three helpers with one of them draining out its engine oil whilst being beneath the dozer, an auto electrician helper was deployed simultaneously on the dozer to check its defective horn. In the process of checking the horn, the dozer got started and moved in forward direction when the auto electrician helper attempted to stop its engine by operating different levers, running over the helper working beneath the dozer who succumbed to his injuries almost instantaneously on the spot.

Had,

i) a battery cut off switch been provided on the dozer or other positive means been taken (like removal of battery cables from its terminals) to prevent inadvertent operation of the dozer before any repair was under taken on it, as required by clause 7.7(a) of the Annexure to Directorate's letter no. 29020/12/2011-12/VR (NZ)/Moher/1313 dated 24.10.2011 granting relaxations from the provisions of Regulation 98(1) & (3) of the coal mines Regulations, 1957, and

ii) only competent persons been deputed to carry out the repairs on the dozer as to ensure that all work of repair and maintenance of the dozer was carried on in a safe manner as required by clause 6.2(d) of the Annexure to Directorate's letter no. 29020/12/2011-12/12/VR(NZ)/Moher/1313 dated 24.10.2011 granting relaxations from the provisions of Regulation 98(1) & (3) of the Coal Mines Regulations, 1957, this accident could have been averted.

52. Date - 05.09.16 Mine - ASHOK OPENCAST PROJECT
Time - 18.00 Owner - Central Coalfields Ltd.
Dist. - Chatra, State - Jharkhand
Person(s) Killed :
1. Md. Yusuf, Grade operator, Male, 47 Years

While a grader was in operation in the haul road of an opencast mine, the operator fell down from it's cabin and ran over by the same grader, resulting in multiple injuries to the operator which proved fatal on the way to hospital.

Had,

i) the grader been operated properly as required under Regulations 190 of the CMR, 1957.

ii) the seat belt been buckled properly and the victim not tried to come out from driving seat by opening the door while grader was in motion as required under SOP framed by the manager, this accident could have been averted.

Code : 0600 Electricity

Code : 0661 Overhead Lines
(2 Deaths)

53. Date - 18.06.16 Mine - CHORA 7 & 9 PIT COLLIERY
Time - 21.15 Owner - Eastern Coalfields Ltd.
Dist. - Burdwan, State - West Bengal
Person(s) Killed :
1. Mohanlal Keshari, Fan Khalasi, Male, 51

Years

While a Fan Khalasi cum Switch board attendant going to the substation got electrocuted due to fallen electrically charged cradle guard wire of 3.3KV over head line and died instantly.

Had,

the protective relays were maintained in healthy condition and test carried out periodically as required under Regulations 46(5), and 12(1) the Central Electricity Authority (Measures relating to Safety and Electric Supply) Regulations, 2010, this accident could have been averted.

54. Date - 24.08.16 Mine - MURAIIDIH
Time - 10.15 Owner - Bharat Coking Coal Ltd.
Dist. - Dhanbad, State - Jharkhand
Person(s) Killed :
1. Mohadeo Mahato, Contract employee, Male,

40 Years

While a person inadvertently came in contact with the pole of faulty electric line which received power from switchgear with defunct protective systems, received severe electric shock and died.

Had,

the over-current and earth fault protections of 11KV and 6.6KV switchgears been maintained in working order so as to automatically disconnect the power supply in the event of over-current and earth fault, as required under regulation 45(2)(i)(ii) of the central electricity authority (Measures relating to safety and electric supply) regulations, 2010, this accident could have been averted.

```

-----
Code : 0700      Dust, Gas, & Other Combustible Material
-----
Code : 0771      Occurrence of Gas
                  (1 Death)
-----

```

55. Date - 19.07.16 Mine - GODAVARI KHANI NO.7 (LE) PROJECT
Time - 13.50 Owner - Singareni Collieries Company Ltd.
Dist. - Karimnagar, State - Telangana
Person(s) Killed :
1. Minganaboina Anil, BG worker, Male, 22

Years

While a worker entered in an irrespirable atmosphere of an underground coal mine for attending nature's call, collapsed and succumbed almost instantaneously.

Had,

i) the part of the district where the accident occurred been effectively ventilated as required under provision of the regulations 43(3)(b) or the area having blackdamp been fenced off adequately to prevent inadvertent entry of person, as stipulated under regulation 43(6) of the coal mines regulations, 1957 and

ii) ventilation standards been ensured in the said part of the district, as required under provision of the regulations 42(1) and 130 of the coal mine regulations, 1957, this accident could have been averted.

Code : 0774 Explosion/Ignition of Gas/Dust etc.
(1 Death)

56. Date - 12.03.16 Mine - CHHATARPUR MINE NO.I
Time - 17.45 Owner - Western Coalfields Ltd.
Dist. - Betul, State - Madhya Pradesh
Person(s) Killed :
1. Prakash Bihare, Blasting crewman, Male, 40
Years

While development face lying within 2.5m of an opposite gallery, was blasted in an underground coal mine, it ignited the inflammable gas accumulated therein the opposite gallery, inflicting serious burn injuries to a blasting crewman posted as guard, who died in the hospital after about forty two hours during treatment.

Had,

i) the test for presence of inflammable gas in the joining gallery lying within 2.5m of the face of firing been made before charging and firing the shots as required under the provisions of Regulation 175(2) of the coal mines regulation 1957;

ii) the tests for inflammable gas been made in the area lying within 20m of the place of firing in each shift and a record thereof maintained in a bound paged book required to be kept maintained for the purpose as required under clause 3(c) of the permission of solid blasting granted vide this Directorate's letter no. NR-1/133 dated 27.01.2014 under the provision of Regulation 168(15), 173(a) & (c) and 175 of the Coal Mines Regulation 1957;

iii) the working places including the unused working temporarily stopped been inspected and examined for ventilation and presence of inflammable gases within two hours before commencement of work in a shift and at least in every four hours during which shift continues, as required under Regulation 113(3)(b) of the Coal Mines Regulation 1957;

iv) the gallery lying within 2.5m of the place of firing which was likely to be punctured, been inspected by a competent person for the presence of inflammable gas at least once in every seven days and a record thereof been maintained in a bound paged book required to be kept maintained for the purpose, as required under Regulation 143 of the Coal Mines Regulation 1957; and

v) the galleries not been extended beyond 4.5m from the nearest ventilation connection without coursing of current of air up to a point within 4.5m of the face by means of a fire resistant pipes, tubes, brattices or any other material so as to ensure that the velocity of air current within 4.5m of the discontinued face is not less than 30m per minute to produce ventilation adequate to dilute gases that are inflammable or noxious so as to render them harmless, as required under the provisions of the Regulations 130(1), 146 (1) and Regulation 136A of the Coal Mines Regulation 1957; this accident could have been prevented.

 Code : 0778 Other Combustible Material
 (2 Deaths)

57. Date - 10.04.16 Mine - MIC JHANJHRA PROJECT
 Time - 15.30 Owner - Eastern Coalfields Ltd.
 Dist. - Burdwan, State - West Bengal
 Person(s) Killed :
 1. P.S.Ghosh,contract worker, Male, 43 Years
 2. M.Kanakaiah,Contract worker, Male, 61
 Years

While a welder was cutting a closed metallic empty hydraulic oil drum with his helper by gas cutting on the surface of an underground mine, the accumulated gas inside the drum exploded resulting into serious bodily and burn injuries to him and burn injuries to his helper to which both of them died after three and five days respectively while under medical treatment at hospital.

 Code : 0779 Other Accidents due to Dust/Gas/Fire
 (1 Death)

58. Date - 22.02.16 Mine - SALANPUR
 Time - 16.45 Owner - Bharat Coking Coal Ltd.
 Dist. - Dhanbad, State - Jharkhand
 Person(s) Killed :
 1. Chandradeo Nonia,Dozer Operator, Male, 47
 Years

While a dozer, not in safe working order was being marched, in reverse direction, the right side track chain of dozer run over berm resulted in toppling of dozer. Dozer caught fire causing burn injuries to the operator which proved fatal almost instantly.

Had,

i) the working place was carefully examined by the assistant manager, after blasting prior to deployment of dozer, thereby not endangering the life and safety of dozer operator as required under regulation 42(3), read with regulation 190 of the Coal mines regulations, 1957.

ii) the dozer was properly maintained, in safe working order to avoid occurrence of fire in the dozer, thereby not endangering the life and safety of dozer operator as required under the regulation 50(a), read with regulation 190 of the coal mines regulations, 1957.

iii) the dozer was equipped with automatic fire detection and suppression system or semi-automatic type firefighting arrangement system as required under regulation 190 of the coal mines regulations, 1957 read with circular no. 10/2004.

iv) the opencast sections were kept under supervision of assistant manager or under manager and of an experienced overman in the afternoon shift. As required under regulation 36(1)(b) of the coal mines regulations, 1957, this accident could have been averted.

Code : 0800 Falls(Other than Falls of Ground)

Code : 0881 Fall of Person from Height/into Depth
(4 Deaths)

59. Date - 11.05.16 Mine - JALAGAM VENGALA RAO OPENCAST-1 MINE
Time - 11.30 Owner - Singareni Collieries Company Ltd.
Dist. - Khammam, State - Telangana
Person(s) Killed :
1. Merugu Ramachander, Fiter, Male, 51 Years

While working at edge of a walkway platform of a belt gantry in a coal handling plant of an opencast mine, for fabrication of side railing, a worker received head injuries when fell from a height of about 2m and became unconscious to which he succumbed after about 20 hours during treatment.

Had,

the responsible persons ensured to use safety belt while working at height by following safe operating procedure, as required under the provision of the Regulation 36(1)(iv) and Regulation 190 of the Coal Mines Regulations, 1957; this accident could have been averted.

60. Date - 25.05.16 Mine - JEENAGORA
Time - 12.15 Owner - Bharat Coking Coal Ltd.
Dist. - Dhanbad, State - Jharkhand
Person(s) Killed :
1. Ramanand Jaiswara, SDL operator, Male, 53
Years

While a person was taking a short cut route from lower to upper bench, along high & almost vertical sides of excavation, containing loose boulders precariously hanging, in support of 4 canvas make flexible pipe range laid along the sides, in an opencast coal mine, he fell down from a height of 10m and received serious bodily injuries due to fall of rolling loose boulders to which he succumbed while being shifted to company's nearby Jealgora Hospital.

Had,

i) Safety management plan, based on risk assessment identifying each hazardous activity including the hazardous job relating to fire fighting in quenching hot strata, been prepared and accordingly control measures been adopted in providing effective and proper supervision considering risks involved in it, thus not negligently omitted to do anything necessary for the safety of the persons employed at the mine in compliance with the provisions of Regulation 190 of the Coal Mines Regulations, 1957 read with DGMS Circular no. 13 of 2002.

ii) designated route or footpaths connecting benches for persons to travel and notice boards displaying the same been provided thus not negligently omitted to do anything necessary for the safety of the persons employed at the mine in compliance with the provisions of Regulation 190 of the Coal Mines Regulations, 1957.

iii) the persons been careful and not taken short cut route while climbing along high & almost vertical sides of excavation containing loose boulders precariously hanging, thus not negligently or wilfully did anything to endanger his own safety as required under provision of Regulation 190 of the Coal Mines Regulations, 1957, the accident could have been averted.

61. Date - 25.06.16
Time - 7.20

Mine - AMALGAMATED BLOCK II OCP
Owner - Bharat Coking Coal Ltd.
Dist. - Dhanbad, State - Jharkhand
Person(s) Killed :

1. G.Mahato, Contract Mazdoor, Male, 35

Years

While picking coal un-authorizely from a loaded coal tipper standing in queue for unloading at feeder breaker of an opencast coal mine, a contractual shale picker mazdoor fell down from the tipper, inflicting serious bodily injuries to which he succumbed after 10 hours while being treated in a hospital.

Had,

i) the job of shale picking at feeder breaker been supervised properly by an official to ensured that the person under his charge does not leave the work place without his permission and climbs on a loaded tipper as required under regulation 40(2) of the coal mines regulations 1957 and

ii) the deceased not left his work place and un-authorizely climbed on a loaded coal tipper to take out some piece of coal for his own use thus not endangering his own life as required under regulation 190 read with regulation 38(1)(a) of the coal mines regulations 1957, this accident could have been averted.

62. Date - 05.08.16
Time - 2.30

Mine - DOBARY
Owner - Bharat Coking Coal Ltd.
Dist. - Dhanbad, State - Jharkhand
Person(s) Killed :

1. A.Thivagar, Drill helper, Male, 20 Years

While a drill machine was being positioned under guidance of a drill helper during drilling operation in an opencast coal mine, suddenly the fractured inter-burden

parting collapsed into the underlying old developed gallery causing the drill helper engulfed into the loose over burden material leading to his death.

Had,

i) precautions while working over developed galleries by opencast method been taken by dividing the opencast workings into four zones based upon the actual thickness of the parting & demarcating the same with help of respective flags before deployment of drill machine and implementing the precautions by framing code of safe operation procedures outlining related to all activities considering risk involved while extracting developed pillars by opencast method in compliance with the condition 7.0 and 23.3 of DGMS permission granted under Reg.100(1) and relaxation under Reg.98(1) & (3) and of the coal mines regulations, 1957 vide this directorate's letter no. 1931, dated 17.12.2014 which was modified vide this directorate's letter no. R-2/414, dated 07.04.2015, thus not negligently omitted to do anything necessary for the safety of the persons employed therein in compliance with the provisions of Regulation 190 of the coal mines regulations, 1957,

ii) the opencast working during night shift operation, been placed under the charge of an assistant manager to ensure adequate competent supervision and adequate general lighting been provided in compliance with condition no. 17.1 of and 13.1 respectively of the DGMS permission granted under reg. 100(1) and relaxation under reg.98(1) &(3) and of the coal mines regulations, 1957 vide this directorate's letter no. 1931, dated 17.12.2014 which was modified vide this directorate's letter no. R-2/414, dated 07.04.2015, and

iii) deployment of trained workperson as drill operator been ensured while drilling over developed galleries in compliance with rule 6 of mine vocational training rule, 1966,

this accident could have been averted.

Code : 0883 Fall of Objects incl. Rolling Objects
(2 Deaths)

63. Date - 14.02.16	Mine - SASTI OC
Time - 8.30	Owner - Western Coalfields Ltd.
	Dist. - Chandrapur, State - Maharashtra
	Person(s) Killed :
	1. Wasudev R.Kubade, Cont. Worker, Male, 55

Years

While a person was engaged in dismantling an old electric pole installed by the side of a haul road leading to an internal overburden dump of an opencast coal mine, by sitting on one side of the pole and removing the foundation material around it, the pole got slid and fell over the head of the person; the person became unconscious due to internal injury at neck and later succumbed to death after about 57 hours.

Had,

it been ensured that the electric pole to be dismantled was secured properly by ropes to prevent the inadvertent movement of the pole while the foundation material was being removed and thereby negligently not endangering the life of a person in the mine as required under Regulation 190 of the Coal Mines Regulations, 1957 read

with code of practices framed for the purpose, this accident could have been averted.

64. Date - 12.09.16 Mine - PAREJ EAST OCP
Time - 17.30 Owner - Central Coalfields Ltd.
Dist. - Hazaribagh, State - Jharkhand
Person(s) Killed :
1. Arjun Munda, Fitter, Male, 40 Years

While a Fitter was passing nearby the partition wall of Excavation Workshop, the wall collapsed, inflicting thereby serious bodily injury to the Fitter which proved fatal on the way to hospital.

Code : 0900 Other Causes

Code : 0993 Drowning in Water
 (2 Deaths)

65. Date - 01.02.16 Mine - NEYVELI NO 2
Time - 15.00 Owner - Neyveli Lignite Corporation Ltd.
Dist. - Cuddalore, State - Tamil Nadu
Person(s) Killed :
1. M.Kumar, Contract Workman, Male, 46 Years

While a person was crossing over pontoon pump platform to walkway float, he slipped and fell down between the gap of pontoon and the walkway float drowned.

Had,

i) the pontoon and walkway float been anchored to its anchoring point at the side of the pontoon and gap between pontoon and walkway float maintained less than 0.30m as required by clause 3.2(a) of the 'APPENDIX' to the safe code of practice for use of pumps on pontoon vide this Directorate's letter No. D/11319, dated 28.12.1993 granted under Regulation 98(1) of the Coal Mines Regulation 1957.

ii) the fencing around Sluice/Non return valve of delivery pipe of pump at pontoon been provided to avoid persons crossing over it as required under clause 1.0(a) of the 'APPENDIX' to the safe code of practice for use of pumps on pontoon vide this Directorate's letter No. D/11319, dated 28.12.1993 granted under Regulation 98(1) of the Coal Mines Regulation 1957, this accident could have been averted.

66. Date - 16.02.16 Mine - NEYVELI NO 2
Time - 8.00 Owner - Neyveli Lignite Corporation Ltd.
Dist. - Cuddalore, State - Tamil Nadu
Person(s) Killed :
1. T. Kumaravel ,Sr Opr II, Male, 52 Years

While a person was operating a 3.5m³ hydraulic shovel for making approach road for lying conveyor belt on overburden bench, the shovel toppled into a pit which was previously formed due to removal of anchoring block of tail end of an old belt conveyor was filled with water and slush, submerging the operator's cabin into water and slush resulting death of operator due to drowning.

Had,

the pit formed due to removal of anchoring block of the tail end of the belt conveyor been filled with overburdened to restore to original level of overburden bench and unsafe condition was not made, and inspected properly for presence of any pit before deploying shovel, thus negligently omitted to take necessary steps for the safety of persons employed therein as required under regulation 39 read with regulation 190 of the coal mines regulations, 1957, this accident could have been averted.

Code : 0999 Unclassified
(1 Death)

67. Date - 16.05.16 Mine - CHASNALLA
Time - 12.05 Owner - Indian Iron & Steel Company Ltd.
Dist. - Dhanbad, State - Jharkhand
Person(s) Killed :

1. Binod Das, Contract worker, Male, 41 Years

While a dozer was passing through blasted area over an old developed waterlogged fiery galley in an opencast coal mine, due to sudden collapse of parting, the dozer submerged into waterlogged & fiery gallery, resulting into instantaneous death of the dozer operator because of blunt and burn injuries.

Had,

i) the dozer not been permitted to cross over the fiery developed waterlogged gallery without ascertaining the thickness of parting and accordingly the precautions been taken while extracting the developed pillars in compliance with the condition No. 7.5 and No.18 (i) respectively of the permission granted under Reg.100(1), 122,170(1A), 170(1B) and relaxation under Reg. 98(1) 98(3) and Teg.168(5) of the coal mines regulations, 1957 vide letter no. R-2/010130/p-16-2014/401 dated 01.04.2015, modified vide letter no. R-2/010130/p-15-2015/1234, dated 14.07.2015 and no. R-2/010130/p-30-2015/1263 dated 18.12.2015 (extensions of area). and

ii) due diligence been used by the mine management in securing compliance with the condition no. 7.5 & 18 (i) of the permission granted under Reg.100(1), 122, 170(1A), 170(1B) and relaxation under Reg. 98(1) 98(3) and Reg. 168(5) of the coal mines regulations, 1957, vide letter no. R-2/010130/p-16-2014/401 dated 01.04.2015, modified vide letter no. R-2/010130/p-15-2015/1234 dated 14.07.2015 and R-2/010130/p-30-2015/1263, dated 18.12.2015 (extensions of area), with regard to the provisions of the mines act, regulations, rules, by laws and orders made there under connection with the mine are conducted in accordance with the provisions of the mines act, 1952 and of the Regulations, rules , by-laws and orders made there under, as required under section 18(4) & 18(5) of the mines act 1952, this accident could have been averted.



4. ACCIDENT ANALYSIS IN COAL MINES: 2017

- The number of fatal accidents in coal mines in the year 2017 stands at 56 with 61 fatalities and no persons were seriously injured in these fatal accidents. The number of fatal accidents has decreased as compared to previous year 2016.
- The number of serious accidents in the year 2017 stands at 266 with 272 seriously injured persons. The number of serious accidents has decreased as compared to previous year 2016.
- Among the broad category of causes, most number of fatal accident occurred due to “Transportation Machinery (non-winding)”. Details can be seen in the tables.
- Among the broad category of causes, most number of serious accident occurred due to “Falls (other than fall of ground)”. Details can be seen in the tables.
- Maximum number of fatal accident as well as serious accident occurred Singareni Collieries Company Limited. Details can be seen in the tables.
- Maximum number of fatal accident occurred in the mines under Western Zone of this Directorate and maximum number of serious accident occurred in the mines under South Central Zone of this Directorate.
- There was no Major Accident.

Statement 4.1

Casualty/serious injury rates in coal mines for different companies in 2017

Sl.	Mineral/State/ District	Number of Accidents		No. of Persons Killed						No. of Persons Seriously Injured					
				Below Ground	Opencast		Above Ground		Total	Below Ground	Opencast		Above Ground		Total
		Fatal	Serious												
		M	M	F	M	F	M	M	F	M	M	F	M	F	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1. Coal															
Chhattisgarh															
	Bilaspur	1	0	1	0	0	0	0	1	0	0	0	0	0	0
	Raigarh	1	0	0	1	0	0	0	1	0	0	0	0	0	0
	Surguja	2	1	0	1	0	1	0	2	1	0	0	0	0	1
	Korea	1	2	0	1	0	0	0	1	2	0	0	0	0	2
	Korba	2	4	1	1	0	0	0	2	1	2	0	1	0	4
TOTAL : CHHATTISGARH		7	7	2	4	0	1	0	7	4	2	0	1	0	7
Jharkhand															
	Deoghar	1	0	0	1	0	0	0	1	0	0	0	0	0	0
	Dhanbad	1	10	1	0	0	0	0	1	9	0	0	1	0	10
	Godda	1	1	0	1	0	0	0	1	0	1	0	0	0	1
	Hazaribagh	3	2	2	1	0	1	0	4	1	0	0	1	0	2
	Palamau	1	0	0	1	0	0	0	1	0	0	0	0	0	0
	Ranchi	1	0	1	0	0	0	0	1	0	0	0	0	0	0
	Bokaro	1	0	0	1	0	0	0	1	0	0	0	0	0	0
	Chatra	1	0	0	1	0	0	0	1	0	0	0	0	0	0
	Ramgarh	1	1	0	1	0	0	0	1	1	0	0	0	0	1
TOTAL : JHARKHAND		11	14	4	7	0	1	0	12	11	1	0	2	0	14

<hr/>															
Madhya Pradesh															
Betul	2	0	2	0	0	0	0	2	0	0	0	0	0	0	0
Chhindwara	0	1	0	0	0	0	0	0	1	0	0	0	0	0	1
Shahdol	1	2	3	0	0	0	0	3	2	0	0	0	0	0	2
Umaria	0	1	0	0	0	0	0	0	1	0	0	0	0	0	1
Anuppur	0	1	0	0	0	0	0	0	1	0	0	0	0	0	1
Singrauli	3	6	0	3	0	0	0	3	0	6	0	0	0	0	6
<hr/>															
TOTAL : MADHYA PRADESH	6	11	5	3	0	0	0	8	5	6	0	0	0	0	11
<hr/>															
Maharashtra															
Chandrapur	1	1	0	1	0	0	0	1	0	1	0	0	0	0	1
Nagpur	2	3	1	0	0	2	0	3	2	0	0	1	0	0	3
Yavatmal	0	3	0	0	0	0	0	0	0	1	0	2	0	0	3
<hr/>															
TOTAL : MAHARASHTRA	3	7	1	1	0	2	0	4	2	2	0	3	0	0	7
<hr/>															
Orissa															
Angul	3	2	0	3	0	0	0	3	0	1	0	1	0	0	2
Jharsuguda	2	0	0	2	0	0	0	2	0	0	0	0	0	0	0
<hr/>															
TOTAL : ORISSA	5	2	0	5	0	0	0	5	0	1	0	1	0	0	2
<hr/>															
Telangana															
Adilabad	4	101	3	0	0	1	0	4	85	2	0	17	0	0	104
Karimnagar	4	58	1	2	0	1	0	4	40	5	0	14	0	0	59
Khammam	2	23	0	2	0	0	0	2	7	11	0	6	0	0	24
Warangal	0	37	0	0	0	0	0	0	36	1	0	1	0	0	38
Kothagudem	2	0	0	1	0	2	0	3	0	0	0	0	0	0	0
<hr/>															
TOTAL : TELANGANA	12	219	4	5	0	4	0	13	168	19	0	38	0	0	225
<hr/>															
Uttar Pradesh															

Sonebhadra	1	1	0	1	0	0	0	1	0	1	0	0	0	1
TOTAL : UTTAR PRADESH	1	1	0	1	0	0	0	1	0	1	0	0	0	1
West Bengal														
Bankura	0	1	0	0	0	0	0	0	1	0	0	0	0	1
Burdwan	9	3	5	1	0	3	0	9	3	0	0	0	0	3
Purulia	0	1	0	0	0	0	0	0	1	0	0	0	0	1
TOTAL : WEST BENGAL	9	5	5	1	0	3	0	9	5	0	0	0	0	5
ALL INDIA : COAL	54	266	21	27	0	11	0	59	195	32	0	45	0	272
2. Lignite														
Bikaner	1	0	0	1	0	0	0	1	0	0	0	0	0	0
TOTAL : RAJASTHAN	1	0	0	1	0	0	0	1	0	0	0	0	0	0
Tamil Nadu														
Cuddalore	1	0	0	1	0	0	0	1	0	0	0	0	0	0
TOTAL : TAMIL NADU	1	0	0	1	0	0	0	1	0	0	0	0	0	0
ALL INDIA : LIGNITE	2	0	0	2	0	0	0	2	0	0	0	0	0	0
ALL INDIA : ALL COAL	56	266	21	29	0	11	0	61	195	32	0	45	0	272

Note 1 : M:Male, F:Female

Note 2 : Fatal as well as serious accidents are considered in computing the figures of number of persons seriously injured in this statement.

Statement 4.2
Casualty/serious injury rates in coal mines for different companies in 2017

Company	Number of Accidents		Number of Persons Killed						Number of Persons Seriously Injured					
			Below Ground	Opencast		Above Ground		Total	Below Ground	Opencast		Above Ground		Total
	Fatal	Serious	Male	Male	Female	Male	Female	Male	Male	Female	Male	Female	Male	Female
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
BCCL	2	5	1	0	0	1	0	2	4	0	0	1	0	5
CCL	7	3	3	5	0	0	0	8	2	0	0	1	0	3
ECL	10	6	5	3	0	2	0	10	5	1	0	0	0	6
MCL	5	2	0	5	0	0	0	5	0	1	0	1	0	2
NCL	4	6	0	4	0	0	0	4	0	6	0	0	0	6
SECL	8	11	5	4	0	1	0	10	8	2	0	1	0	11
WCL	5	8	3	1	0	2	0	6	3	2	0	3	0	8
TOTAL : CIL	41	41	17	22	0	6	0	45	22	12	0	7	0	41
NLC	1	0	0	1	0	0	0	1	0	0	0	0	0	0
SCCL	12	219	4	5	0	4	0	13	168	19	0	38	0	225
TISCO	0	5	0	0	0	0	0	0	5	0	0	0	0	5
VSLPL	1	0	0	1	0	0	0	1	0	0	0	0	0	0
SASAN	0	1	0	0	0	0	0	0	0	1	0	0	0	1
NTPC	1	0	0	0	0	1	0	1	0	0	0	0	0	0
TOTAL : NON-CIL	15	225	4	7	0	5	0	16	173	20	0	38	0	231
TOTAL : ALL INDIA	56	266	21	29	0	11	0	61	195	32	0	45	0	272

STATEMENT NO. 4.3

Number of accidents and casualties/seriously injured persons in coal mines by place and detailed cause in 2017

CAUSE OF ACCIDENT	BELOW GROUND					OPENCAST					ABOVE GROUND					TOTAL				
	Fatal		Accident			Fatal		Accident			Fatal		Accident			Fatal		Accident		
	S/Accident		S/Accident			S/Accident		S/Accident			S/Accident		S/Accident			S/Accident		S/Accident		
	ACC	KILL	INJ	ACC	INJ	ACC	KILL	INJ	ACC	INJ	ACC	KILL	INJ	ACC	INJ	ACC	KILL	INJ	ACC	INJ
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
Fall of Roof	3	5	0	7	8	0	0	0	0	0	0	0	0	0	0	3	5	0	7	8
Fall of Sides (Other than Overhangs)	1	1	0	14	15	1	1	0	0	0	0	0	0	1	1	2	2	0	15	16
Fall of Overhangs	3	3	0	1	1	0	0	0	0	0	0	0	0	0	0	3	3	0	1	1
TOTAL : GROUND MOVEMENT	7	9	0	22	24	1	1	0	0	0	0	0	0	1	1	8	10	0	23	25
Falls of Objects from Cages, Skip etc.	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
Hit by Cages, Skip etc.	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
TOTAL : TRANSPORTATION MACHINERY (WINDING)	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2
Rope Haulage	5	5	0	18	18	0	0	0	0	0	0	0	0	2	2	5	5	0	20	20
Other Rail Transportation	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1	1
Conveyors	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	1	1	0	0	0
Dumpers	0	0	0	0	0	9	9	0	4	4	1	1	0	0	0	10	10	0	4	4
Wagon Movements	0	0	0	1	1	0	0	0	0	0	1	1	0	0	0	1	1	0	1	1
Wheeled Trackless(Truck,Tanker,etc.)	1	1	0	0	0	8	8	0	3	3	0	0	0	1	1	9	9	0	4	4
TOTAL : TRANSPORTATION MACHINERY (NON-WINDING)	6	6	0	19	19	17	17	0	8	8	3	3	0	3	3	26	26	0	30	30
Drilling Machines	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0
Cutting Machines	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1	1	0	0	0
Loading Machines	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2
Shovel, Draglines, Frontend Loader, etc.	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1	1	0	0	0
Crushing & Screening Plants	0	0	0	0	0	0	0	0	0	0	1	2	0	0	0	1	2	0	0	0
Other Heavy Earth Moving Machinery	0	0	0	0	0	5	5	0	2	2	1	2	0	3	3	6	7	0	5	5

Other Non-Transportation Machinery	0	0	0	6	6	0	0	0	1	1	0	0	0	2	2	0	0	0	9	9
TOTAL : MACHINERY OTHER THAN TRANSP. MACHINERY	1	1	0	8	8	7	7	0	3	3	2	4	0	5	5	10	12	0	16	16
Solid Blasting Projectiles	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1	1	0	0	0
Deep Hole Blasting Projectiles	0	0	0	2	5	0	0	0	0	0	0	0	0	0	0	0	0	0	2	5
Blown Through Shots	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1	1	0	0	0
Other Explosive Accidents	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1	1
TOTAL : EXPLOSIVES	0	0	0	2	5	2	2	0	1	1	0	0	0	0	0	2	2	0	3	6
Overhead Lines	0	0	0	0	0	0	0	0	1	1	1	1	0	0	0	1	1	0	1	1
Switch Gears, Gate End Boxes, Pommel, etc.	0	0	0	1	1	0	0	0	1	1	0	0	0	0	0	0	0	0	2	2
Power Cables Other Than Trailing Cables	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
Other Electrical Accidents	0	0	0	0	0	1	1	0	1	1	0	0	0	1	1	1	1	0	2	2
TOTAL : ELECTRICITY	0	0	0	2	2	1	1	0	3	3	1	1	0	1	1	2	2	0	6	6
Other Accidents due to Dust/Gas/Fire	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1	1	0	0	0
TOTAL : DUST, GAS & OTHER COMBUSTIBLE MATERIAL	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1	1	0	0	0
Fall of Person from Height/into Depth	0	0	0	55	55	0	0	0	13	13	1	1	0	16	16	1	1	0	84	84
Fall of Persons on the Same Level	1	1	0	2	2	0	0	0	0	0	0	0	0	0	0	1	1	0	2	2
Fall of Objects incl. Rolling Objects	0	0	0	46	46	0	0	0	2	2	2	2	0	15	16	2	2	0	63	64
Other Accidents due to Falls	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2
TOTAL : FALLS (OTHER THAN FALL OF GROUND)	1	1	0	105	105	0	0	0	15	15	3	3	0	31	32	4	4	0	151	152
Irruption of Water	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0	0	0
Drowning in Water	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0
Unclassified	1	1	0	30	30	0	0	0	2	2	0	0	0	3	3	1	1	0	35	35
TOTAL : OTHER CAUSES	3	4	0	30	30	0	0	0	2	2	0	0	0	3	3	3	4	0	35	35
ALL INDIA : ALL COAL	18	21	0	190	195	29	29	0	32	32	9	11	0	44	45	56	61	0	266	272

STATEMENT 4.4**Number of fatal accidents in coal mines by major cause and responsibility during the year 2017**

Responsibility / Major Cause Group	1	2	3	4	5	6	7	8	9	Total
Management	0	0	2	3	0	0	0	0	1	6
Management & Sub. Sup. Staff(SSS)	7	0	6	0	2	0	1	1	1	18
Management, SSS & Coworker	0	0	2	0	0	0	0	0	1	3
Management,SSS,Coworker,Deceased	0	0	1	0	0	0	0	0	0	1
Management, SSS & Deceased	1	0	1	1	0	0	0	0	0	3
Management,SSS,Deceased & Others	0	0	1	0	0	0	0	0	0	1
Management & Coworker	0	0	0	0	0	1	0	1	0	2
Subordinate Supervisory Staff(SSS)	0	0	0	0	0	0	0	2	0	2
Sub. Sup. Staff & Coworker	0	0	0	1	0	0	0	0	0	1
Coworker	0	0	2	0	0	0	0	0	0	2
Coworker & Deceased	0	0	1	2	0	0	0	0	0	3
Coworker,Deceased & Others	0	0	1	0	0	0	0	0	0	1
Deceased	0	0	7	2	0	1	0	0	0	10
Deceased & Injured	0	0	0	1	0	0	0	0	0	1
Deceased & Others	0	0	1	0	0	0	0	0	0	1
Injured	0	0	1	0	0	0	0	0	0	1
Total	8	0	26	10	2	2	1	4	3	56

STATEMENT NO. 4.5

Causewise number of fatal accidents in Coal Mines for different companies in 2017

Cause/Company	BCCL	CCL	ECL	MCL	NCL	NEC	SECL	WCL	CIL	SCCL	IISCO	NLC	TISCO	OTHERS	TOTAL
Fall of Roof	0	0	0	0	0	0	2	1	3	0	0	0	0	0	3
Killed-S/Injured :	0-0	0-0	0-0	0-0	0-0	0-0	4-0	1-0	5-0	0-0	0-0	0-0	0-0	0-0	5-0
Fall of Sides	0	0	2	0	0	0	0	2	4	1	0	0	0	0	5
Killed-S/Injured :	0-0	0-0	2-0	0-0	0-0	0-0	0-0	2-0	4-0	1-0	0-0	0-0	0-0	0-0	5-0
Rope Haulage	1	0	1	0	0	0	0	0	2	3	0	0	0	0	5
Killed-S/Injured :	1-0	0-0	1-0	0-0	0-0	0-0	0-0	0-0	2-0	3-0	0-0	0-0	0-0	0-0	5-0
Dumpers	1	0	1	3	3	0	0	0	8	1	0	1	0	0	10
Killed-S/Injured :	1-0	0-0	1-0	3-0	3-0	0-0	0-0	0-0	8-0	1-0	0-0	1-0	0-0	0-0	10-0
Trucks	0	2	2	1	0	0	2	0	7	2	0	0	0	0	9
Killed-S/Injured :	0-0	2-0	2-0	1-0	0-0	0-0	2-0	0-0	7-0	2-0	0-0	0-0	0-0	0-0	9-0
Other Machinery	0	1	1	1	1	0	2	1	7	3	0	0	0	2	12
Killed-S/Injured :	0-0	1-0	1-0	1-0	1-0	0-0	2-0	2-0	8-0	4-0	0-0	0-0	0-0	2-0	14-0
Explosives	0	1	0	0	0	0	1	0	2	0	0	0	0	0	2
Killed-S/Injured :	0-0	1-0	0-0	0-0	0-0	0-0	1-0	0-0	2-0	0-0	0-0	0-0	0-0	0-0	2-0
Fall of Persons	0	0	0	0	0	0	0	1	1	1	0	0	0	0	2
Killed-S/Injured :	0-0	0-0	0-0	0-0	0-0	0-0	0-0	1-0	1-0	1-0	0-0	0-0	0-0	0-0	2-0
Fall of Objects	0	0	1	0	0	0	0	0	1	1	0	0	0	0	2
Killed-S/Injured :	0-0	0-0	1-0	0-0	0-0	0-0	0-0	0-0	1-0	1-0	0-0	0-0	0-0	0-0	2-0
Other causes	0	3	2	0	0	0	1	0	6	0	0	0	0	0	6
Killed-S/Injured :	0-0	4-0	2-0	0-0	0-0	0-0	1-0	0-0	7-0	0-0	0-0	0-0	0-0	0-0	7-0
Belowground	1	2	5	0	0	0	3	3	14	4	0	0	0	0	18
Killed-S/Injured :	1-0	3-0	5-0	0-0	0-0	0-0	5-0	3-0	17-0	4-0	0-0	0-0	0-0	0-0	21-0
Opencast	0	5	3	5	4	0	4	1	22	5	0	1	0	1	29
Killed-S/Injured :	0-0	5-0	3-0	5-0	4-0	0-0	4-0	1-0	22-0	5-0	0-0	1-0	0-0	1-0	29-0
Aboveground	1	0	2	0	0	0	1	1	5	3	0	0	0	1	9
Killed-S/Injured :	1-0	0-0	2-0	0-0	0-0	0-0	1-0	2-0	6-0	4-0	0-0	0-0	0-0	1-0	11-0
TOTAL	2	7	10	5	4	0	8	5	41	12	0	1	0	2	56
Killed-S/Injured :	2-0	8-0	10-0	5-0	4-0	0-0	10-0	6-0	45-0	13-0	0-0	1-0	0-0	2-0	61-0

STATEMENT NO. 4.6

Causewise number of serious accidents in Coal Mines for different companies in 2017

Cause/Company	BCCL	CCL	ECL	MCL	NCL	NEC	SECL	WCL	CIL	SCCL	IISCO	NLC	TISCO	OTHERS	TOTAL
Fall of Roof	0	0	0	0	0	0	1	0	1	6	0	0	0	0	7
S/Injured :	0	0	0	0	0	0	1	0	1	7	0	0	0	0	8
Fall of Sides	1	0	0	0	0	0	3	1	5	8	0	0	3	0	16
S/Injured :	1	0	0	0	0	0	3	1	5	9	0	0	3	0	17
Rope Haulage	0	0	0	0	0	0	0	0	0	20	0	0	0	0	20
S/Injured :	0	0	0	0	0	0	0	0	0	20	0	0	0	0	20
Dumpers	0	0	1	0	0	0	0	0	1	3	0	0	0	0	4
S/Injured :	0	0	1	0	0	0	0	0	1	3	0	0	0	0	4
Trucks	0	0	0	1	0	0	0	0	1	3	0	0	0	0	4
S/Injured :	0	0	0	1	0	0	0	0	1	3	0	0	0	0	4
Other Machinery	2	0	2	0	2	0	2	2	10	10	0	0	0	0	20
S/Injured :	2	0	2	0	2	0	2	2	10	10	0	0	0	0	20
Explosives	0	0	0	0	0	0	1	0	1	2	0	0	0	0	3
S/Injured :	0	0	0	0	0	0	1	0	1	5	0	0	0	0	6
Fall of Persons	2	1	1	1	2	0	2	2	11	75	0	0	0	0	86
S/Injured :	2	1	1	1	2	0	2	2	11	75	0	0	0	0	86
Fall of Objects	0	0	0	0	0	0	0	1	1	60	0	0	1	1	63
S/Injured :	0	0	0	0	0	0	0	1	1	61	0	0	1	1	64
Other causes	0	2	2	0	2	0	2	2	10	32	0	0	1	0	43
S/Injured :	0	2	2	0	2	0	2	2	10	32	0	0	1	0	43
Belowground	4	2	5	0	0	0	8	3	22	163	0	0	5	0	190
S/Injured :	4	2	5	0	0	0	8	3	22	168	0	0	5	0	195
Opencast	0	0	1	1	6	0	2	2	12	19	0	0	0	1	32
S/Injured :	0	0	1	1	6	0	2	2	12	19	0	0	0	1	32
Aboveground	1	1	0	1	0	0	1	3	7	37	0	0	0	0	44
S/Injured :	1	1	0	1	0	0	1	3	7	38	0	0	0	0	45
TOTAL	5	3	6	2	6	0	11	8	41	219	0	0	5	1	266
S/Injured :	5	3	6	2	6	0	11	8	41	225	0	0	5	1	272

STATEMENT NO. 4.7**Regionwise/zonewise number of accidents and resultant casualties/seriously injured persons in coal mines in 2017**

Region/Zone	Fatal Accidents			Serious Accidents	
	No. of Accidents	Fatalities	S/Injured	No. of Accidents	S/Injured
Dhanbad II	0	0	0	1	1
Dhanbad III	1	1	0	9	9
Koderma	1	1	0	0	0
Central Zone	2	2	0	10	10
Sitarampur I	3	3	0	3	3
Sitarampur II	4	4	0	2	2
Sitarampur III	4	4	0	1	1
Eastern Zone	11	11	0	6	6
Ajmer	1	1	0	0	0
Varanasi	4	4	0	7	7
Northern Zone	5	5	0	7	7
Hyderabad I	8	9	0	118	121
Hyderabad II	4	4	0	101	104
South-Central Zone	12	13	0	219	225
Bhubaneswar	5	5	0	2	2
Ranchi	7	8	0	3	3
South-Eastern Zone	12	13	0	5	5
Chennai	1	1	0	0	0
Southern Zone	1	1	0	0	0
Bilaspur	7	7	0	7	7
Jabalpur	1	3	0	4	4
Nagpur I	4	5	0	4	4
Nagpur II	1	1	0	4	4
Western Zone	13	16	0	19	19
ALL INDIA	56	61	0	266	272

STATEMENT NO. 4.8**Summary of Findings of Fatal Accidents during the year 2017**

Code : 0100 Ground Movement

Code : 0111 Fall of Roof
 (5 Deaths)

1. Date - 01.02.17 Mine - BAHREBAND U.G.PROJECT
 Time - 13.50 Owner - South Eastern Coalfields Ltd.
 Dist. - Shahdol, State - Madhya Pradesh
 Person(s) Killed :
 1. Besahu, Driller, Male, 53 Years
 2. Ram Bharos, Driller, Male, 42 Years
 3. Sahdeo, Support Mistry, Male, 42 Years

While a drilling crew comprising of three persons and a dresser was preparing for drilling in a development gallery of 4.6m width and 3.2m height using coal drill at a depth of 44m, a portion of sandstone roof measuring about 4.2m 2 to 3m x 0 to 0.45m thick parted off the roof and fell down from a height of 3.2m, inflicting fatal injuries to three workmen who died thereon the spot whereas the other one escaped with minor injuries.

Had,

the workings been kept supported as per Systematic Support Rules framed under Regulation 108(1)(bb) of the Coal Mines Regulations, 1957;

this accident could have been averted.

2. Date - 19.02.17 Mine - TAWA
 Time - 20.30 Owner - Western Coalfields Ltd.
 Dist. - Betul, State - Madhya Pradesh
 Person(s) Killed :
 1. Dilip Kumar, Gen. Mazdoor, Male, 31 Years

While goaf-edge cog, set underneath a ledge was being tightened by a support crew of two person, in a depillaring district of an underground coal mine; a layer of stone about 0.60m x 0.55m x 0.18m (thick) got detached from the ledge and fell over one of them from height of about 2.7m inflicting serious bodily injuries to which he succumbed on the way to hospital.

Had,

i) the roof at goaf-edge, set underneath a ledge of a slip plane at outbye end of split gallery, having disturbed and fractured roof then tested, examined carefully, made safe and kept secure by dressing, erecting temporary supports/corner props systematically before engaging the work person there at; standing orders framed under Regulation 108(6)(c) with regard to examination, dressing and erection of roof support been strictly followed, as required under the provision of Regulation 109(3)(d) & 109(8)(a) of the Coal Mines Regulations, 1957; read with Regulation 44(2)(a), 44(3)(a) & 113(3)(b) of the Coal Mines Regulations, 1957;

ii) the operation of dressing and supporting at goaf-edge, set underneath a ledge of a slip plane at outbye end of split gallery, having disturbed and fractured roof been done under the constant supervision and direction of Overman/senior officials to ensure that subordinate officials and competent persons in their district carry out their respective duties in proper manner which was necessary to ensure safety and proper discipline of the persons employed therein as required by standing orders framed under Regulation 108(6)(c) read with Regulation 43(1)(d) & (e) of the Coal Mines Regulations, 1957; and

this accident could have been averted.

5. Date - 24.11.17 Mine - TELWASA OC
Time - 23.30 Owner - Western Coalfields Ltd.
Dist. - Chandrapur, State - Maharashtra
Person(s) Killed :
1. N.Jha, Dozer Operator, Male, 57 Years

While a dozer was levelling a coal face in an opencast mine, side of coal rib measuring about 20m (length) x 5 to 8m (width) x 10 to 12 m (height) fell over the dozer burring it completely along with the operator who was recovered dead after six hours.

Had,

i) silt and spoil bank of about 2.26 lakh m3 not been retained by coal rib of about 12m-15m width (artificial means) in excess of its natural angle of repose as required under clause 4.6 of annexure "A" to the permission letter No.NR-II/010673/Anumati/98(1) & (3)/2013/280 dated 14-02-2014 granted under Regulation 98(1) & (3) of the Coal Mines Regulations,1957.

ii) work not been carried out in coal face/bench at lower level and within a distance of 60m of an area containing water, muck or silt as required under clause 17.0 of annexure "A" to the permission letter No.NR-II/010673/Anumati/98(1) & (3)/2013/280 dated 14-02-2014 granted under Regulation 98(1) & (3) of the Coal Mines Regulations,1957.

iii) the side of the working place/coal bench been kept secure as required under Regulation 102(1) of the Coal Mines Regulations,1957.

this accident could have been averted.

Code : 0113 Fall of Overhangs
(3 Deaths)

6. Date - 20.02.17 Mine - SARNI
Time - 21.30 Owner - Western Coalfields Ltd.
Dist. - Betul, State - Madhya Pradesh
Person(s) Killed :
1. Tulsi Ram, Blasting Crew, Male, 59 Years

While a blasting crew was connecting leads of charged shot holes drilled in a freshly formed overhanging side at roof level in an underground coal mine, a layer of coal measuring 0.65m (length) x 0.45m (width) x 0.20m (thick) detached from the overhang and fell over him from a height of 2.5m inflicting seriously bodily injuries to which he succumbed on the way to hospital.

Had,

the overhanging side formed at roof lever been made safe and kept secure by dressing, erecting stay props or other suitable means of support at intervals not exceeding one meter, before engaging the work person there at, as required under the provision of Regulation 109(6) of the Coal Mines Regulations, 1957; the standing orders framed under Regulation 108(6)(C) with regard to examination, dressing and erection support been strictly followed, as required under the provision of Regulation 108(5) of the Coal Mines Regulations, 1957 read with clause No. 1.0 & 4.0(b) of the approved SSR of the district,

this accident could have been averted.

7. Date - 06.08.17 Mine - SHYAMSUNDARPUR
Time - 16.20 Owner - Eastern Coalfields Ltd.
Dist. - Burdwan, State - West Bengal
Person(s) Killed :
1. Ramyadi Prasad, Conveyor Operator, Male,
54 Years

While a person near his workplace was present beneath an unsupported overhang in coal roof, a mass of coal measuring about 2.0m(L) X 0.3m(W) X 0.3m-0.5m (Thick) parted from the overhang and fell down from a height of about 2.3m and broke into pieces; part of which fell over and hit him inflicting serious bodily injuries to which he succumbed at the spot.

Had,

i) the overhang at the workplace been kept secured & supported as required under the provisions of Regulation 109(6) read with Regulation 108(5) of the Coal Mines Regulations, 1957;

ii) the person not slept while on duty as required under the provision of Regulation 38(6) of the Coal Mines Regulations, 1957;

this accident could have been averted.

8. Date - 06.09.17 Mine - BEJDIH
Time - 10.30 Owner - Eastern Coalfields Ltd.
Dist. - Burdwan, State - West Bengal
Person(s) Killed :
1. Azad Khan, Contractor, Male, 38 Years

While two contractor's workers were travelling along travelling roadway to reach their work place of a development district in an underground coal mine, a mass of overhanging shale piece measuring about 0.9m (length) x 0.75m(width) x 0.065m (thick) parted off from roof and fell from a height of 2.35m, inflicting serious bodily injuries to one of them in which he succumbed after two days while the other contractor's worker escaped unhurt.

Had,

Overhanging roof of the gallery along travelling roadway been properly dressed and kept secure before work persons were allowed to travel and place had been examined by the officials and supervisory staff as required under the provisions of Regulation 102(1) read with Regulations 44(3)(a), 43(1)(d) and 42(3) of the Coal Mines Regulations, 1957,

this accident could have been averted.

```

-----
Code : 0300      Transportation Machinery(Non-Winding)
-----
Code : 0332      Rope Haulage
                  (5 Deaths)
-----

```

9. Date - 12.08.17 Mine - GODAVARI KHANI NO.7 (LE) PROJECT
Time - 22.30 Owner - Singareni Collieries Company Ltd.
Dist. - Karimnagar, State - Telangana
Person(s) Killed :
1. K.Narsaiah, Hauler Operator, Male, 58
Years

While three workmen were set riding a loaded set of tubs along a haulage roadway, one of them slipped and fell down and was ran over by a loaded tub in an underground coal mine causing serious injuries to his both legs and succumbed to the injuries in hospital after 36 days of treatment.

Had,

the workmen did not resort to set riding in contravention of Regulation 89(3) and

the person in charge at the bottom of the haulage incline did not allow anyone to set ride the tubs in contravention of Regulation 53(10) of the Coal Mines Regulations, 1957

this accident could have been averted.

10. Date - 19.08.17 Mine - RAVINDRA KHANI NO.5
Time - 6.10 Owner - Singareni Collieries Company Ltd.
Dist. - Adilabad, State - Telangana
Person(s) Killed :
1. Dasari Lachanna, G. Mazdoor, Male, 55 Years

While a set of five loaded tubs was being lowered down in a tunnel at 1 in 18 gradient without coupling it with haulage rope, last tub derailed and while trying to control the momentum of set of tubs one Trammer stumbled and fell down causing injury to his forehead, which prove fatal a month later.

Had,

the Trammer not lowered the loaded set of tubs without coupling haulage rope negligently and wilfully as required under Safe Operation procedure enforced at the mine in contravention of provision of Regulation 190 of the Coal Mines Regulations, 1957,

this accident could have been averted.

11. Date - 20.08.17 Mine - SRIRAMPUR NO.3 & 3 A
Time - 4.30 Owner - Singareni Collieries Company Ltd.
Dist. - Adilabad, State - Telangana
Person(s) Killed :
1. R. Rajaiah, Coal Filler, Male, 57 Years

While a set of four loaded tubs was being lowered down in haulage incline dipping @ 1 in 4, the leading two tubs derailed and leading tub toppled, knocking down a trammer present nearby, thus causing serious bodily injuries to him, which proved fatal a short while later.

Had,

a) the track line was properly maintained as required under the provision of Reg. 87(1)(b) of Coal Mine Regulation, 1957 and

b) the trammer (deceased) taken shelter in the manhole after setting the haulage rope and the set of tubs in motion as required under the provision of Reg. 87(6)(f) and Reg. 190 of Coal Mine Regulation, 1957,

this accident could have been averted.

12. Date - 21.09.17 Mine - PHULARITAND
Time - 15.00 Owner - Bharat Coking Coal Ltd.
Dist. - Dhanbad, State - Jharkhand
Person(s) Killed :
1. B. Rawani, Support Mazdoor, Male, 39 Years

While a support mazdoor was travelling up along haulage roadway in an incline without justifiable purpose in an underground coal mine, a set of loaded coal tubs being hauled up hit him inflicting serious bodily injuries to which he succumbed on the spot.

Had,

i) it been ensure that except for the purposes of inspection, examination or repairs, every person other than an official or a haulage attendant travelled by the travelling roadway in as perf the provision of Regulation 88(3) of Coal Mines Regulation,1957(Regulation 93(3) of Coal Mines Regulation 2017),

ii) travelling roadway been provided in the intake airway of the mine as per the provision of Regulation 135(3) of Coal Mines Regulation,1957 (Regulation 158(3) of Coal Mines Regulation 2017), and

iii) it been seen that except for the purpose of inspection, examination and repairs, every person travelled by the travelling roadway as per the provision of Regulation 43(5) Coal Mines Regulation, 1957 (Regulation 47(5)(h) of Coal Mines Regulation 2017).

this accident could have been averted.

13. Date - 16.11.17
Time - 15.40

Mine - NARSAMODA
Owner - Eastern Coalfields Ltd.
Dist. - Burdwan, State - West Bengal
Person(s) Killed :
1. Ranjit Bouri, Loose Man, Male, 54 Years

While a looseman was travelling along rope haulage roadway, a set of tubs derailed during lowering and hit him causing serious bodily injuries to which he succumbed after two hours twenty minutes in hospital.

Had,

The looseman travelled along travelling roadway as required under the provisions of Regulation 40(6) and Regulation 93(3) of the Coal Mines Regulation,2017;

this accident could have been averted.

Code : 0334 Conveyors
(1 Death)

14. Date - 16.08.17
Time - 20.00

Mine - PAKRI BARWADIH COAL MINING PROJECT
Owner - NTPC LTD.
Dist. - Hazaribagh, State - Jharkhand
Person(s) Killed :
1. P.C. Das, Contract Worker, Male, 44 Years

While two workers were approaching drive head of the apron feeder through dribble conveyor for examining/cleaning clogged material after stoppage of apron feeder/dribble (spillage) conveyor in coal crushing plant of a Mine, suddenly dribble conveyor came into operation thereby trapping both the workers, however one of the worker got entangled in between channel of dribble conveyor & base and he received serious bodily injuries which proved fatal soon after.

Had,

i) the worker been allowed to examine/clean spillage material at the head end drum after taking proper shutdown.

ii) the Plant control room in charge been informed after local (Part plant) shutdown that persons were working inside the dribble conveyor,

iii) SOP framed by the manager been followed,

iv) emergency stop field switch was provided with lock and key arrangement.

this accident could have been averted.

Code : 0335 Dumpers
(10 Deaths)

15. Date - 11.02.17 Mine - NIGAH I PROJECT
Time - 9.20 Owner - Northern Coalfields Ltd.
Dist. - Singrauli, State - Madhya Pradesh
Person(s) Killed :
1. Ram D. Kushwaha, Driver, Male, 46 Years

While a water tanker, deployed for refilling of potable water in drinking water tanks kept at different locations of the mine, entered operational area of HEMM working on an OB bench and tried to pass across a moving 120 Te carrying capacity dumper, it collided with the moving dumper, toppled on its side and rolled over to inflict serious bodily injuries to the tanker driver, who succumbed to his injuries after about 11 hours whilst undergoing treatment at hospital. The helper of the water tanker escaped unhurt.

Had,

i) the water tanker been driven carefully and defensively as required by clause 20(3)(c) of Directorate's letter No.4426 dated 11.08.1989 granting relaxations from the provisions of Regulation 98(1) & (3) of the Coal Mines Regulations,1957, and

ii) the water tanker not been driven into or allowed to enter the operational area of HEMM/ dumpers unless the operation of HEMM was suspended and clearance to the effect was given by the competent person(s)/mine official(s) supervising operations thereat , as required by the safe operating procedures/code of traffic rules framed by the manager in accordance with clause 19(4)(c) of Directorate's letter No.4426 dated 11.08.1989 granting relaxations from the provisions of Regulation 98(1) & (3) of the Coal Mines Regulations, 1957,

this accident would have been averted.

16. Date - 25.02.17 Mine - DAMAGORIA
Time - 20.45 Owner - Bharat Coking Coal Ltd.
Dist. - Burdwan, State - West Bengal
Person(s) Killed :
1. Vijay k. Raut, Surface Trainee, Male, 33
Years

While a workman was returning home after completion of his assigned job at mine office of an opencast mine, he entered into Coal Handling Plant on a motor cycle and was hit by a tipper thereby inflicting serious bodily injuries, which proved fatal on the spot.

Had,

the dumper operator been careful and vigilant enough while operating the tipper and not negligently omitting to ensure safety of persons as required under Regulation 38(1) and Regulation 190 of the Coal Mines Regulation,1957.

the deceased not entered into the CHP on motorcycle unauthorizedly and omitting to ensure safety of persons as required under Regulation 38(3) (b) and Regulation 190 of the Coal Mines Regulations, 1957

this accident could have been averted.

17. Date - 21.03.17 Mine - SAMLESWARI OCP
Time - 5.40 Owner - Mahanadi Coalfields Ltd.
 Dist. - Jharsuguda, State - Orissa
 Person(s) Killed :
 1. G.Majhi, Contractor, Male, 41 Years

While an empty tipper driven by a person was moving down hill along a haul road, it suddenly went uncontrolled, jumped the protective berm on the cleaner-side and fell down to a sump about 53 m below, inflicting serious bodily injuries to the operator to which he succumbed instantaneously.

Had,

the person been careful while driving, thus not negligently omitting to do anything for his own safety, as required by the provisions of Regulations 38(1)(a), 98(1), 98(3) & 190 of the Coal Mines Regulations, 1957 read with exemption granted vide letter No. 010702/BDH/CO-9/P-98(1) & (3)/2013/690 dated 01.04.2013, this accident would have been averted.

18. Date - 30.03.17 Mine - KANIHA OPENCAST PROJECT
Time - 9.20 Owner - Mahanadi Coalfields Ltd.
 Dist. - Angul, State - Orissa
 Person(s) Killed :
 1. Jagdish Bhutia, Contract worker, Male, 30

Years

While a person was present about 3.0m in front of a tipper on a level ground after having his food, the tipper was suddenly driven forward due to which he was run over by the rear cleaner side tyres, inflicting serious bodily injuries to which he succumbed instantaneously.

Had,

it been ensured before operating the tipper that no person whose safety is likely to be endangered due to the tipper movement, is present in the vicinity, thus not negligently omitting to do anything for the safety of persons in the vicinity as contained under the provisions of Regulation 38(1)(a) of the Coal Mines Regulations, 1957 read with Regulations 98(1), 98(3) of the Coal Mines Regulations, 1957, Regulation 190 of the Coal Mines Regulations, 1957 and clause 17.1 of the exemption accorded vide DGMS letter No. BDH/CO-14/P-98(1)&(3)/2015/0056, dated 16-06-2015,

this accident could have been averted.

19. Date - 29.05.17 Mine - NEYVELI NO 1
Time - 10.30 Owner - Neyveli Lignite Corporation Ltd.
 Dist. - Cuddalore, State - Tamil Nadu
 Person(s) Killed :
 1. S.Naveen Kr., Contract Employee, Male, 25

Years

While a dumper was being reversed for positioning it towards loading point on an overburden bench in an opencast mine, a supervisor was hit by front left mud-guard and then run over by front left wheel of the dumper inflicting fatal injuries.

Had,

the dumper been reversed carefully by the dumper operator taking the help of the mirrors fitted on the dumpers and thus, not negligently or wilfully omitted to have done anything necessary for the safety of persons employed therein, as required under Regulation 190 of the Coal Mines Regulation, 1957 read with sub-clause 5.5 of clause 5 of DGMS Circular No.11/1973,

this accident could have been averted.

20. Date - 10.06.17 Mine - KHADIA PROJECT
Time - 23.25 Owner - Northern Coalfields Ltd.
Dist. - Sonbhadra, State - Uttar Pradesh
Person(s) Killed :
1. Yashwant Choubey, Driver, Male, 46 Years

While a water tanker operator was opening the valve of sprinkling system installed at the rear of the tanker, whilst it was parked at unauthorized place on a haul road, a 18.7m³ carrying capacity empty tipper on way to OB face and travelling in the same direction hit him, inflicting serious bodily injuries to him, to which he succumbed whilst undergoing treatment at hospital.

Had,

i) the water tanker not been parked at unauthorized place on haul road as called for by the safe operating procedures/code of traffic rules framed by the manager under clause 21(3)(c) of Directorate's letter no.7145 dated 16.06.1982 granting relaxations from the provisions of Regulation 98(1) &(3) of the Coal Mines Regulation, 1957, read with DGMS Circular No.(Tech) 01 of 1989,

ii) fluorescent jacket been worn by the water tanker driver so that he could be seen conspicuously by the operators of tippers plying on the haul road, thus not negligently endangering his own life and safety, as called for by the provisions of Regulation 190 of the Coal Mines Regulations, 1957,

iii) the tipper been driven carefully and defensively as called for by clause 22(3)(c) of directorate's letter no.7145 dated 16.06.1982 granting relaxations from the provisions of Regulation 98(1) &(3) of the Coal Mines Regulations, 1957 and,

iv) The hazard-indicator/parking lights been provided and kept maintained on water tanker and defective water tanker not been used as required by clause 7(2) of Directorate's letter no.7145 dated 16.06.1982 granting relaxations from the provisions of Regulation 98(1) &(3) of the Coal Mines Regulation, 1957, and,

this accident would have been averted.

21. Date - 10.06.17 Mine - SONEPUR BAZARI PROJ.(KUMARKHALA O.C.P)
Time - 1.25 Owner - Eastern Coalfields Ltd.
Dist. - Burdwan, State - West Bengal
Person(s) Killed :
1. P.K.Burnwal, Contract Employee, Male, 30

Years

While a dumper was overtaking another dumper moving at front in a haul road, it collided with the front dumper in which operator of overtaking dumper received serious bodily injuries and died at a hospital after one and half hours.

Had,

the dumper operator drove the dumper at slow prescribed speed, maintained safe distance between dumpers & not tried to overtake the dumper ahead and not negligently omitted his own safety as required under the provisions of Regulation 190 of the Coal Mines Regulations, 1957 read with clause 21.1.C & Cause 22.3(a) of the permission letter No. S3/010807/Perm-98(1)&(3)/ 2010/1073 dated 12/5/2010 and also read with conditions of SOP issued to dumper operator;

this accident could have been averted.

22. Date - 23.06.17 Mine - RAMAGUNDAM OC-III
Time - 10.00 Owner - Singareni Collieries Company Ltd.
 Dist. - Karimnagar, State - Telangana
 Person(s) Killed :
 1. Vanam R. Prasad, Overman, Male, 53 Years

While a supervisor was going on an overburden bench of an opencast coal mine towards a shovel, a 100 T dumper, which was going towards the same shovel for taking load, ran over the supervisor, killing him on the spot.

Had,

the dumper operator properly observed surroundings while driving the vehicle & not violated safe practices and order of the Manager given to him in the form of Standard Operating Procedure (SOP) thus not negligently omitted to ensure the safety of persons employed therein as required under the provisions of the Regulation 38(1) (a) read with the Regulation 190 of the Coal Mines Regulation, 1957;

this accident could have been averted.

23. Date - 02.08.17 Mine - DUDHICHUA PROJECT
Time - 15.40 Owner - Northern Coalfields Ltd.
 Dist. - Singrauli, State - Madhya Pradesh
 Person(s) Killed :
 1. Pankaj Singh, Contractor, Male, 55 Years

While a 100te left hand drive dumper was on way to workshop, it dashed a jeep from its right side which had suddenly entered into its blind zone. This caused jeep to topple and get dragged on the ground for a distance of about 6m, inflicting serious bodily injuries to its driver to which he succumbed while on the way to hospital.

Had,

i) the dumper been driven carefully and defensively as called for by clause 22(3)(c) of directorate's letter No.7025 dated 14.06.1982 granting relaxations from the provisions of Regulation 98(1) & (3) of the Coal Mines Regulations, 1957,

ii) the jeep been driven carefully and defensively and been kept away from the operational area of HEMM, as called for by Clause of code of traffic rules/SOP framed by the manager under clause 21(3)(c) of Directorate's letter No.7025 dated 14.06.1982 granting relaxations from the provisions of Regulation 98(1) & (3) of the Coal Mines Regulations, 1957, read with Reg.190 and DGMS Circular No.(Tech) 01 of 1989, and

iii) the jeep driven by unauthorized driver not been allowed to enter in the mine contravening the provisions of Regulation 190 of the Coal Mines Regulations, 1957 respectively,

this accident could have been averted.

24. Date - 06.12.17 Mine - BHUBANESWARI OPENCAST PROJECT
Time - 6.05 Owner - Mahanadi Coalfields Ltd.
 Dist. - Angul, State - Orissa
 Person(s) Killed :
 1. Dhananjay Singh, Contractual, Male, 49
Years

While an empty tipper was reversing to place near pay loader for loading, it hit and ran over a person with rear non drivers side tyres causing grievous injuries to head, due to which he succumbed instantaneously.

Had,

i) the tipper driver carefully examined the surroundings before reversing and ensured that there is no person whose safety is likely to be endangered is present behind the reversing tipper, thus not negligently omitting to do for the safety of the persons employed in the mine, as required by the provisions of Regulations 40(1) and 40(4) (a) of Coal Mines Regulation, 2017, and

ii) the unqualified supervisor worn fluorescent jacket for better visibility to the operators, thus not negligently omitting to do for his own safety, as required by the provisions of Regulation 41(1) and 41(4) (a) of Coal Mines Regulation, 2017,

this accident would have been averted.

Code : 0336 Wagon Movements
(1 Death)

25. Date - 19.11.17 Mine - BHATGAON
 Time - 16.45 Owner - South Eastern Coalfields Ltd.
 Dist. - Surguja, State - Chhattisgarh
 Person(s) Killed :
 1. Bhola, Brakeman, Male, 58 Years

While a person was connecting air hoses in between the loaded railway wagons along a railway track in the railway siding, prior to completion of loading operation of all wagons in a rake, he was trapped beneath the wheels when the set of rear wagons went rolled over with momentum imparted to rear most wagon by another rolling down loaded wagon, inflicting serious bodily injuries to which he succumbed on the spot.

Had,

i) he not been allowed to enter in between the loaded wagons either willingly or negligently;

ii) detail nos. 20 & 23 of the Safe operating procedures been implemented that hoses shall be connected only after completion of loading operation of all empty wagons in a rake; and

iii) a suitable and effective means of audible & visible warning signal to indicate either commencement, continued or completion of loading operation till rolling down of loaded wagons halted, been installed, maintained and operated in working order so as prevent entry of any person in between the wagons;

this accident could have been averted.

Code : 0339 Wheeled Trackless (Truck, Tanker, etc.)
(9 Deaths)

26. Date - 11.01.17 Mine - KANIHA OPENCAST PROJECT
 Time - 15.00 Owner - Mahanadi Coalfields Ltd.
 Dist. - Angul, State - Orissa
 Person(s) Killed :
 1. K.Chandra Chattar, Cont.Worker, Male, 35
Years

While a person was engaged on top of a tipper-mounted water tanker for filling water, he suddenly lost balance, slipped and fell down on to the ground about 3.0m below and was instantaneously run over by the rear-cleaner side tyres of another water-filled tanker which was being driven out of the area, inflicting grievous injuries to which he succumbed instantaneously.

Had, the work of the water filling been organized in a proper/specified manner and the persons working in this connection having been issued safe code of practice for safe filling of water tanker, thus not negligently omitting to do for safety of persons, as required by the provisions of Regulations 41(4), 36(1)(a)(ii), 37(1) of Coal Mines Regulations, 1957 read with Reg. 98(1) & 98(3) of Coal Mines Regulations, 1957, exemption granted vide letter No. BDH/CO-14/P-98(1) & (3)/2015/0056, dated 16/01/2015, Reg. 32 of Coal Mines Regulations, 1957 and the exemption granted vide Lr. No. 178 dated 21.01.2016,

this accident could have been averted.

27. Date - 20.02.17	Mine - KHAS MAHAL PROJECT
Time - 13.30	Owner - Central Coalfields Ltd.
	Dist. - Bokaro, State - Jharkhand
	Person(s) Killed :
	1. Sudhan Kr.Singh, Dozer Optr., Male, 59 Years

While a ramp was being formed by pushing the loose Coal from a bench to its bottom by a dozer in an opencast Coal mine, operator of the dozer came out parking the dozer on the ramp having a gradient of 1 in 6, keeping engine on, gear in neutral, blade in raised position and was observing the status of the ramp being formed when the dozer suddenly started moving down towards him and he climbed on it to stop it, slipped in the process and fell down and got crushed to death by the dozer instantly.

Had,

i) The dozer operator parked the dozer by keeping the engine in off condition and dozer blade grounded as required under condition No. 4 of the Safe Operating Procedure prepared and issued by manager vide letter No. PO/AKKOCP/SOP/2016/293B, date 27/05/2016 read with Regulation 190 of the Coal Mines Regulations, 1957;

ii) The overman supervising the ramp preparation work, ensured by not allowing the dozer operator to carry out his duty in an improper manner by parking the dozer on ramp that too keeping the engine "ON", not keeping the dozer blade in the ground and coming out of dozer for no reason and not tried to get on to the moving dozer as required under Regulation 43(1)(d) of the Coal Mines Regulations, 1957,

iii) The Asst. Manager of the mine supervising the ramp preparation operation, seen that the dozer operation work for ramp preparation in his assigned part of the mine, was carried out in accordance with the provisions of the Act and of the regulations, orders made there under, by not allowing the boxer operator to carry out his duty in an improper manner by parking the dozer on ramp that too keeping the engine "ON", not keeping the dozer blade in the ground and coming out of dozer for no reason and tried to get on to the moving dozer as required under Regulation 42(1) of the Coal Mines Regulations, 1957,

iv) The Engineer of the mine authorized to ensure proper installation, maintenance, operation or examination of dozers deployed in the mine, ensured the dozer operation was properly carried out by not allowing the dozer operator get off from the dozer by parking blade in the ground and coming out of dozer for no reason and tried to get on to moving dozer as required under Regulation 50(d) of the Coal Mines Regulations, 1957,

v) The Manager of the mine observing the ramp preparation work, taken all possible steps to ensure that the dozer operator carried out his duty in a proper manner by not allowing the dozer operator to parking the dozer on ramp that too keeping the engine "ON", not keeping the dozer blade in the ground and required under regulation 41(4) of the Coal Mines Regulations, 1957,

this accident could have been averted.

28. Date - 23.02.17 Mine - RAMAGUNDAM OC-II
Time - 19.00 Owner - Singareni Collieries Company Ltd.
Dist. - Karimnagar, State - Telangana
Person(s) Killed :
1. Bhagwandeem, Truck Driver, Male, 30 Years

While a truck was parked on an overburden bench having mild gradient (1 in 30) in an opencast coal mine, its operator, who went down and was observing repair work of another truck parked nearby, was hit by the same truck when it started moving down soon after; to which he succumbed almost instantly.

Had, such circumstance was not created to allow the truck to move uncontrolled on a gradient (1 in 30) by disobeying the Standard Code of Practice and thus not negligently endangered his own life by contravening Regulations 38 (1) (a) & 190 of the Coal Mines Regulation, 1957;

this accident could have been averted.

29. Date - 02.03.17 Mine - GAUTHAM KHANI O/C
Time - 3.30 Owner - Singareni Collieries Company Ltd.
Dist. - Khammam, State - Telangana
Person(s) Killed :
1. Raju Singh, Welder Contractor, Male, 23
Years

While a contractor's workman unauthorizedly drove a tractor inside an opencast workings, which is prohibited by order, it toppled hitting a boulder on the berm of a haul road to which he received head injuries and succumbed after 64 hours at hospital.

Had, the contractor's workman didn't disobey the lawful instructions of his superior official and followed safe operating procedures issued by the Manager as required under Regulations 38(1), thus not negligently endangered his own safety by contravening Regulation 190 of the Coal Mines Regulations, 1957;

this accident could have been averted.

30. Date - 05.04.17 Mine - BAROUD OCM
Time - 14.10 Owner - South Eastern Coalfields Ltd.
Dist. - Raigarh, State - Chhattisgarh
Person(s) Killed :
1. Santosh Ratnesh, Driver, Male, 38 Years

While loading coal in a tipper truck by a defective pay loader in the coal stock yard, the driver of the tipper truck alighted from the operator cabin in to the loading area and was caught between rear side of reversing pay loader and one of the truck standing in a queue and was hit by the pay loader resulting serious bodily injury to which he succumbed almost instantly.

Had,

i) the defective pay loader not been operated at high speed and without Audio Visual Alarm in contravention of Clause No.15 & 8 of SOP No. SECL/Raigarh/Baroud/Mine/Manager/2016 Dated 04.05.2016 framed in compliance with permission granted under Reg.98(1) & (3) of the Coal Mines Regulations, 1957 vide letter No.RGR/Baroud/P-98(1) & (3)/17/2015/1936 dated 06.08.2015 and Reg.38(1) (a) of The Coal Mines Regulations, 1957;

ii) loading not been allowed to continue with overcrowding of tippers standing in two rows in contravention of Clause no.1 of SOP No. SECL/Raigarh/Baroud/Mine/Manager/2016 dated 04.05.2016 framed in compliance with permission granted under Reg.98(1) & (3) of the Coal Mines Regulations,1957 vide letter No. RGR/Baroud/P-98(1)&(3)/17/2015/1936 dated 06.08.2015, Reg. 44(1) (a) &(b) & 42(1) of The Coal Mines Regulations,1957;

iii) working of payloader with defects not been allowed such as weak service brake, defunct parking brake, defunct Audio Visual Alarm and Rear View Camera in Contravention of Reg. 50(a) & (d) of the Coal Mines Regulations 1957 and

iv) not failed implementing the SOP framed in compliance with permission granted under Reg. 98(1)&(3) of the coal Mines Regulations,1957 vide letter no.RGR/Baroud/P-98(1)&(3)/17/2015/1936 dated 06.08.2015 and Reg.41(9) of the Coal Mines Regulations,1957 and Section 18(4) of the Mines Act,1952,

this accident could have been averted.

31. Date - 07.04.17	Mine - CHITRA
Time - 15.40	Owner - Eastern Coalfields Ltd.
	Dist. - Deoghar, State - Jharkhand
	Person(s) Killed :
	1. Deo Karan Kol, Contractual Opertor, Male,

36 Years

While a Tractor with trailer was plying in downhill gradient of the haul road in an open cast mine, the front left wheel of the tractor detached from its axle due to collision with a rock boulder of the berm, resulting into toppling of the tractor due to jack-knifing, thereby inflicting serious bodily injuries to its operator and helper, which later on proved fatality of the operator and helper escaped unhurt.

Had,

1) the instructions of the competent person been followed and the Tractor with trailer been plied carefully in an adverse condition on downhill gradient of haul road, thus not negligently omitting to ensure the safety of work persons employed therein, as required under the provisions of Regulation38(1) (a) of the Coal Mines Regulations,1957;

2) the standard type equipment been provided in the mine as per conditions stipulated in open cast working permission, thus not negligently omitting to ensure the safety of persons employed therein, as required under the provisions of Section 18(1) & 18(4) of Mines Act,1952 and Regulation 190 of the Coal Mines Regulation,1957;

this accident could have been averted.

32. Date - 21.05.17	Mine - ASHOK OPENCAST PROJECT
Time - 3.10	Owner - Central Coalfields Ltd.
	Dist. - Chatra, State - Jharkhand
	Person(s) Killed :
	1. Birendra Singh,Contact Supervisor, Male,

45 Years

While a contractor's supervisor was present in a crowded temporary parking yard, close to a surface miner coal face of an Opencast Coal Mine, he was knocked down by an unidentified tipper causing fatal injury to him.

Had,

i) The tipper been parked in a systematic manner at waiting point (temporary parking yard) as required by the SOP framed by the manager.

ii) Supervisor taken all due precaution while sending tipper from the waiting point to coal face as required by the SOP framed by the manager and Regulation 190 of the CMR, 1957

this accident could have been averted.

33. Date - 02.07.17 Mine - MIC JHANJHRA PROJECT
Time - 5.30 Owner - Eastern Coalfields Ltd.
 Dist. - Burdwan, State - West Bengal
 Person(s) Killed :
 1. Ramesh Prasad, CM Opnr., Male, 34 Years

While an operator of a Coal hauler (ramcar) was negotiating a curve along its designed traverse path at a junction of an underground coal mine, it ran over a continuous miner operator, inflicting serious bodily injuries, which proved fatal on the way to hospital.

Had,

the person not left his designed place of work and not stayed in the vicinity of turning radius of Coal hauler (ramcar), thereby negligently or wilfully omitting to do anything to endanger his own life, by contravening the provisions of Regulation 38(3)(b) and 190 of the Coal Mines Regulations, 1957;

this accident could have been averted.

34. Date - 21.10.17 Mine - DIPKA MINE NO.IA
Time - 17.30 Owner - South Eastern Coalfields Ltd.
 Dist. - Korba, State - Chhattisgarh
 Person(s) Killed :
 1. Sangam Kr. Gochayat, Contract Driver,
Male, 39 Years

While a contractual tipper driver, after parking his loaded tipper on the side road, was crossing road, from front side of a stationary empty tipper in a coal bench of an opencast coal mine, empty tipper moved forward suddenly, dashed and run over him by the front left tyre. He died almost instantly.

Had,

i) Empty stationary tipper not been moved forward suddenly, without ensuring that no one is present in the vicinity of the tipper by sounding audible warning as per code of practices framed under clause 16.11 & clause 17.5.9 of the permission renewed vide letter no. 2200 dated 10.05.2016 under Regulations 98(1) & (3) of the CMR 1957/ Regulation 110 of Coal Mine Regulations 2017.

ii) Contractual driver not been got down from his tipper in loading and unloading area as per code of practice framed for coal loading & transport under clause 16.11 of the permission renewed vide letter no. 2200 dated 10.05.2016 under Regulations 98(1) & (3) of the Coal Mine Regulations 1957 / Regulation 110 of the Coal Mine Regulations, 2017

this accident could have been averted.

Code : 0400 Machinery Other than Transp. Machinery

Code : 0441 Drilling Machines
(1 Death)

35. Date - 25.06.17 Mine - DHELWADIH PROJECT
Time - 13.45 Owner - South Eastern Coalfields Ltd.
 Dist. - Bilaspur, State - Chhattisgarh
 Person(s) Killed :
 1. Budhwar Das, UDM Helper, Male, 46 Years

While a universal drill machine was in operation at a coal face in an underground coal mine, its mast swung in uncontrolled manner and hit a helper, inflicting serious injuries to him, to which he succumbed two hours later.

Had,

no person been allowed to remain in swing area of the mast of the universal drill machine under operation as required under Clause 8.0 of the Code of Practice for operation of universal drill machine framed by the manager, thus not negligently endangering the life of a person, as required under Regulation 190 of the Coal Mines Regulations, 1957 read with Regulation 38 (1), 40, 43(1)(d) and 44(1)(b) of Coal Mines Regulation, 1957,

this accident could have been averted.

Code : 0442 Cutting Machines
 (1 Death)

36. Date - 13.02.17 Mine - SAMLESWARI OCP
Time - 18.45 Owner - Mahanadi Coalfields Ltd.
 Dist. - Jharsuguda, State - Orissa
 Person(s) Killed :
 1. R.S.Hembram, Contractor, Male, 38 Years

While a surface miner was being operated very close to the bench edge in a narrow area, it toppled to its right side and fell down about 24m below into a de-coaled area, thereby inflicting grievous injuries to the person operating it which turned fatal after about two hours.

Had,

the surface miner patch been provided with minimum stipulated levels of illumination, thus not negligently omitting to do for safety of persons employed as required by the provisions of Regulations 154(2), 42(2), 98(1) & 98(3) of Coal Mines Regulations 1957 read with exemption granted vide letter No. 010702/BDH/CO-9/P-98(1)&(3)/2013/690 dated 1.1.2013 and DGMS Circular No.06 of 2016, and

the person obeyed the lawful instruction that of not operating the surface miner in a narrow area, thus not negligently omitting to do anything for his own safety as required by the provisions of Regulations 38(1)(a), 43(1)(a), 98(1) & 98(3) of Coal Mines Regulations, 1957 read with exemption granted vide letter No.010702/BDH/CO-9/P-98(1) & (3)/2013/ 690 dated 1.4.2013.

this accident would have been averted.

Code : 0446 Shovel, Draglines, Frontend Loader, etc.
 (1 Death)

37. Date - 03.12.17 Mine - GURHA(EAST) LIGNITE OPENCAST MINE
Time - 19.00 Owner - V S LIGNITE POWER PVT. LTD.
 Dist. - Bikaner, State - Rajasthan
 Person(s) Killed :

1. Kalpesh Ramani, Fitter, Male, 22 Years

While a trial run was being carried out after routine check of an idle excavator in an opencast lignite mine, it inadvertently ran over a mechanical fitter inflicting serious injury, to which he succumbed on way to hospital.

Had,

the excavator not been operated otherwise than by or under constant supervision of a competent person as required by Regulation 213(1) of the Coal Mines Regulations, 2017,

this accident could have been averted.

Code : 0447 Crushing & Screening Plants
(2 Deaths)

38. Date - 18.04.17 Mine - MANUGURU OPENCAST MINE
 Time - 10.20 Owner - Singareni Collieries Company Ltd.
 Dist. - BHADRADRI KOTHAGUDEM, State - Telangana
 Person(s) Killed :
 1. D.R.Reddy, G. Mazdoor, Male, 34 Years
 2. M.Pawan Kumar, Badli Worker, Male, 32
Years

While a person was operating the chute of a coal bunker in an Opencast mine to load a tipper parked below, the bunker collapsed on him and on another person standing below, to which they succumbed almost instantaneously.

Had the Bunkers been;

-constructed based on technical design considering strength, stability and factor of safety with control panel away from the structure(as suggested vide DGMS technical circular no. 02 of 1999 and 01 of 2013 read with reg. 182 of the Coal Mines Regulations, 1957);

-of good construction, suitable material, adequate strength and free from visible defect(as required under reg. 182 of the Coal Mines Regulations, 1957);

-installed and commissioned after fulfilling the provisions of the act, and of the Regulations or Orders made thereunder relating to the installations, maintenance, operations or examination of machinery by appointing a Colliery Engineer /Competent person (as required under reg. 33, reg. 36 and reg. 50 of the Coal Mines Regulations, 1957),

this accident could have been averted.

Code : 0448 Other Heavy Earth Moving Machinery
(7 Deaths)

39. Date - 03.01.17 Mine - DUDHICHUA PROJECT
 Time - 16.35 Owner - Northern Coalfields Ltd.
 Dist. - Singrauli, State - Madhya Pradesh
 Person(s) Killed :
 1. B.Mahalaxmi Naidu, Cont.Supervisor, Male,
31 Years

While a road grader was being reversed at an OB face, a supervisor inadvertently entered in its close proximity/operational area whilst talking on walkie-talkie, and was run over by its rear right wheels to receive serious bodily injuries, to which he succumbed on the spot almost instantaneously.

Had,

the road grader been driven carefully & defensively and without any distraction, and none had inadvertently ventured in its close proximity/operational area, thus not negligently endangering life and safety of persons employed in the mine/his own life, as called for by provisions of Regulation 190 of the Coal Mines Regulations, 1957,

this accident could have been averted.

40. Date - 07.03.17	Mine - TETARIAKHAR OCP
Time - 19.00	Owner - Central Coalfields Ltd.
	Dist. - Palamau, State - Jharkhand
	Person(s) Killed :
	1. Mathia Oraon, S.Guard, Male, 55 Years

While a Security Guard was present without any justifiable reason at a coal transport road beyond 67 m from the weighbridge, his allotted place of work, he was run over by a truck and died on the spot.

Had,

i) the Security Guard not been present at the coal transport road without any justifiable cause authority as required under Regulation 38(3)(b) of CMR, 1957 and

ii) the person not wilfully and negligently endangered his own safety by remaining present in the coal transport road in contravention of the provisions of Regulation 190 of CMR, 57.

iii) the coal transportation truck been operated with due precautions such that no person remained present around the truck while it is being operated as required under Regulation 190 of CMR, 57

this accident could have been averted.

41. Date - 09.05.17	Mine - GAUTHAM KHANI O/C
Time - 9.45	Owner - Singareni Collieries Company Ltd.
	Dist. - Khammam, State - Telangana
	Person(s) Killed :
	1. Gnanchand, Cont.Worker, Male, 21 Years

While a compressor mounted truck was being reversed in an overburden bench of an opencast coal mine, it hit an employee engaged by a contractor for cleaning of drill cuttings of a tyre-mounted drill, and he was crushed between the truck being reversed and the drill machine, resulting into severe bodily injuries to which he succumbed while being taken to hospital.

Had,

the truck being reversed provided with a reversal alarm which shall activate automatically while reversing as required by DGMS(Tech) Circular No. 9 dated 03.12.2003 thus not negligently omitted to ensure the safety of the persons engaged in the mine as required under the provisions of Regulation 190,

the Safe Operating Procedure framed to prohibit engagement of two machinery within 50m of each other issued vide Lr. No. KGM/GKOCPSO/15/316, dated 01.06.2015, is enforced, as required under the provisions of Regulation 42(1), and

at least one of the Under Manager or the Overman supervised the marching operation thus not negligently omitted to ensure the safety of the persons engaged in the mine as required under the provisions of Regulation 190 of the Coal Mines Regulations, 1957,

this accident could have been averted.

42. Date - 21.05.17	Mine - MANUGURU OPENCAST MINE
Time - 5.15	Owner - Singareni Collieries Company Ltd.
	Dist. - BHADRADRI KOTHAGUDEM, State - Telangana
	Person(s) Killed :
	1. Pyla M. Rao, Dozer Optr., Male, 36 Years

While a contractor's work person was engaged as dozer operator on facing operation at a loading point in an overburden bench of an opencast mine, for facilitating proper positioning of the tippers, the dozen operator somehow fell down and ran over by the same dozer while it was moving, inflicting serious bodily injuries to which he succumbed on the spot. The dozer then struck with the overburden face and stalled.

Had the work person used the seat belt, he would not have fallen down the moving vehicle, thus not negligently endangering life and safety of himself, as required under the provisions of SOP read with Regulation 190 of the Coal Mines Regulations, 1957,

this accident could have been averted.

43. Date - 11.06.17	Mine - GOKUL O/C MINE
Time - 17.10	Owner - Western Coalfields Ltd.
	Dist. - Nagpur, State - Maharashtra
	Person(s) Killed :
	1. Indrajit Tripathi, Col. Manager, Male, 52 Years
	2. Jang Singh Gill, Contractor, Male, 56 Years

While a mobile crane was lifting a toppled-tipper on road side, outside but adjacent to the boundary of an opencast coal mine, the crane toppled and hit two mine officials supervising the operation inflicting serious bodily injuries to them, to which they succumbed on the way to hospital.

Had,

i) a crane of underrated capacity (12 Te) not been opted/used for recovery/lifting the toppled tipper-trailer weighing about 40 Te;

ii) the recovery/ lifting operation been immediately stopped after the first indication of overloading of crane with lifting of its rear wheel; and

iii) it been ensured that no one was present near the crane while in operation;

thus not negligently endangered the life of person and not omitted to ensure the safety of person, as required by the provisions of the Regulation 190 of the Coal Mine Regulations, 1957 read with the Safe Operating Procedure (SOP) of crane operation, this accident could have been averted.

44. Date - 17.11.17	Mine - RAJMAHAL OCP
Time - 8.45	Owner - Eastern Coalfields Ltd.
	Dist. - Godda, State - Jharkhand
	Person(s) Killed :

1. Rajeev Kr. Singh, Dozer Optr., Male, 35
Years

While a dozer was being reversed on a continuous stretch of 40 meter in a coal stock yard of an open cast mine, it got toppled on the ground from a height of 2 meter of coal heap inflicting serious bodily injuries to its operator and killing him almost instantly.

Had,

the laid down SOP been followed strictly, the duties of the competent person been performed vigilantly and the danger warning been regarded carefully, thus negligently not omitting to ensure safety of persons employed therein, by contravening the provisions of Regulation 40(1) of the Coal Mines Regulations,2017;

this accident could have been averted.

Code : 0500 Explosives

Code : 0551 Solid Blasting Projectiles
(1 Death)

45. Date - 05.04.17 Mine - BHURKUNDA MINE-A
Time - 14.15 Owner - Central Coalfields Ltd.
Dist. - Hazaribagh, State - Jharkhand
Person(s) Killed :
1. Ramesh Manjhi, Contractual, Male, 30

Years

While deep hole blasting was conducted in overburden benches of an opencast coal mine, flying fragments travelled by a distance of 280m to hit one of the blasting helpers(guard) present there who died on the spot soon after.

Had,

i) the blasting helper (guard) taken proper shelter himself after evacuation of persons from danger zone as required under Reg.170(1A) (b), Reg.45(b) and Reg.43(d) of the CMR,1957.

ii) the burden from free face kept as per blast design.

iii) there been adequate blasting shelters for taking shelter during blasting operation as required under Reg. 170(2) of CMR,1957.

This accident could have been averted.

Code : 0558 Blown Through Shots
(1 Death)

46. Date - 18.03.17 Mine - NAWAPARA U/G PROJECT
Time - 3.00 Owner - South Eastern Coalfields Ltd.
Dist. - Surguja, State - Chhattisgarh
Person(s) Killed :
1. Maiku,Dresser, Male, 44 Years

While two working faces in a development district had approached within 2.0 m of each other and a round of shots was fired in one of the said faces, without

withdrawing person from the other, flying fragments of coal released due to blown through of shots from the other side of parting hit a dresser who was present in other face, inflicting injuries on head and eye of dresser to which he succumbed almost instantly.

Had,

i) the person was withdrawn from other face approached within 2.0 m of the face, where a round of shots was fired by the Shotfirer as required under the provision of the Regulation 170(3) of the Coal Mines Regulations,1957,

ii) the Overman and Shotfirer been vigilant and taken necessary steps to withdraw person from other face approached within 2.0 m of the face, where a round of shots was fired by the shotfirer, as required under the provision of the Regulation 170(3) of the Coal Mines Regulations,1957 read with Tech. circular no.16 of 1982 and Regulation 43(1) of the Coal Mines Regulations,1957,

iii) the Mining Sirdar been placed in the development district by the Asst. Manager to ensure that person was withdrawn from other face approached within 2.0 m of the face, where a round of shots was fired by the Shotfirer as required under the provision of the Regulation 170(3) of the Coal Mines Regulations,1957 read with Tech. circular no.1 of 1977 & circular No.4 of 1996 and Regulation 42(1) of the Coal Mines Regulations,1957 and

iv) the card system for blasting been followed strictly in the development district as required under Regulation 170(3) of the Coal Mines Regulations,1957 read with Tech. circular no.4 of 1996 and Regulation 41(9) of the Coal Mines Regulations,1957,

this accident could have been averted.

Code : 0600 Electricity

Code : 0661 Overhead Lines
 (1 Death)

47. Date - 24.08.17 Mine - BONJAMEHARI
Time - 7.45 Owner - Eastern Coalfields Ltd.
 Dist. - Burdwan, State - West Bengal
 Person(s) Killed :
 1. Firoj Ahmad Khan,Electrician, Male, 47

Years

While an electrician was working on a live 3.3 KV overhead line by climbing double pole structure, he received electric shock and succumbed to injuries on the way to the hospital.

Had,

the work been not attempted on live electric supply line as required under Regulation 19(3) of Central Electricity Authority(Measures related to Safety and Electric Supply) Regulations,2010 this accident could have been averted.

Code : 0669 Other Electrical Accidents
 (1 Death)

48. Date - 19.04.17 Mine - JHARKHAND OCP

Time - 10.30

Owner - Central Coalfields Ltd.

Dist. - Ramgarh, State - Jharkhand

Person(s) Killed :

1. B.P.Mahato, Contractor labour, Male, 32

Years

While a person was trying to dismantle the charged jumpers of 3.3KV overhead lines without ensuring proper shut down, he came in close proximity of the conductor and electrocuted succumbed to death during first aid at mine dispensary.

Had,

adequate shut down measures been ensured as Regulation 19(1) of Central Electricity Authority (Measures relating to safety and Electric Supply) Regulations 2010 read with BIS 5216 before start of the maintenance, repairing, assembling and dismantling work of electrical installations.

Code : 0700 Dust, Gas, & Other Combustible Material

Code : 0779 Other Accidents due to Dust/Gas/Fire
(1 Death)

49. Date - 04.05.17
Time - .10

Mine - CHIRIMIRI

Owner - South Eastern Coalfields Ltd.

Dist. - Korea, State - Chhattisgarh

Person(s) Killed :

1. Roshanlal, Contractor Worker, Male, 40

Years

While a contractor worker was quenching fire in coal bench by water jet standing at a distance of about 6m from the toe of bench in night shift of an open cast coal mine, suddenly hot material of the bench slide from a height of about 10 m forming a cloud of hot ash and steam, causing severe burn injuries to which he succumbed after 8 days in hospital. Two dumper operators standing nearby in wind direction escaped with reportable burn injuries.

Had,

Quenching of fire with water jet not been done on the coal bench on fire standing near toe of the bench without proper supervision and code of safe practice framed for the workers deployed for firefighting been implemented as per clause VI 24.0 (c) in Annexure I of the permission renewed vide letter no 1571 dated 20.06.2012 under Regulations 101(1), 98(1) & (3) of the CMR 1957,

this accident could have been averted.

Code : 0800 Falls(Other than Falls of Ground)

Code : 0881 Fall of Person from Height/into Depth
(1 Death)

50. Date - 06.06.17

Mine - GODAVARI KHANI NO.5

Time - 13.30

Owner - Singareni Collieries Company Ltd.

Dist. - Karimnagar, State - Telangana

Person(s) Killed :

1. Santhu Sagar, C.C.Workman, Male, 45 Years

While a contractor's work person was engaged for cleaning of accumulated dry leaves over old Asbestos roofing for replacement of the same, the old sheet over which he was sitting broke down and he fell down on ground from a height of 8.1 m receiving fatal injuries.

Had the work person been not allowed to work without using safety belt as required under the provisions of Regulation 191C read with 190 of the Coal Mines Regulations, 1957,

this accident could have been averted.

Code : 0882 Fall of Persons on the Same Level
(1 Death)

51. Date - 04.11.17
Time - 16.30

Mine - SAONER MINE NO.3

Owner - Western Coalfields Ltd.

Dist. - Nagpur, State - Maharashtra

Person(s) Killed :

1. B.K. Singh, SDL Optr., Male, 52 Years

While a work person was returning to surface from his workplace, in the end of the shift, by travelling road way, he fell down and got injured on his head to which he succumbed after walking a little distance along the travelling roadway.

Had,

1) it been ensured that the belt operator (deceased) was not allocated alone, in remote part of mine, and could get assistance after getting injured or could be discovered after becoming unconscious, as required under the Regulation 132(9) of CMR, 2017 (Regulation 115(8) of CMR, 1957).

2) it been ensured that travelling roadways provided for the belt operators to travel to and from their workplaces between 4L/42AR and 42R/4L (1 in 4 gradient drift) was made/kept in convenient and safe condition by proper supervision and ensuring that adequate number of Overman/Mining Sirdars were appointed in the mine so that all the workplaces including travelling roadways were placed under the charge of a Mining Sirdar or other competent person till the end of working shift and inspection of all workplaces including travelling roadways where persons were required to pass or stationed including the remote workplace where the belt operator was stationed in the development district, was carried out as per statute to ensure that the work place and the travelling roadways were maintained in safe condition, thereby negligently not endangering the life of the belt operator, as required under Regulation 129 (1) & (5) and Regulation 33(2) read with Regulation 239 of CMR, 2017 (Regulation 13(1) & (3)(b) and Regulation 34(1A) read with Regulation 190 of CMR, 1957).

This accident could have been averted.

Code : 0883 Fall of Objects incl. Rolling Objects
(2 Deaths)

52. Date - 12.03.17
Time - 9.45

Mine - SIDULI

Owner - Eastern Coalfields Ltd.

Dist. - Burdwan, State - West Bengal

Person(s) Killed :

1. Anjani Kr.Gupta,Contract worker, Male, 37

Years

While a welder was cutting the edge of the horizontal leg of the 'L' shaped mild steel channel welded above the gantry trusses of an un-used CHP in an underground mine, the vertical leg of the 'L' shaped channel tilted downwards on the working platform due to buckling of one of the truss member and hit at the scalp of welder on platform, thus he sustained serious head injuries, which proved fatal later in the hospital,

Had,

i) the effective supervision in deciding proper sequence of cutting operation of the load members been ensured, thereby not negligently omitting to ensure the implementation of safe operating procedures, by contravening the provisions of Regulation 39 and 190 of the Coal Mines Regulation,1957.

ii) the execution of specialized job been ensured with proper workmanship and effective supervision to ensure safety of persons deployed therein, thereby not negligently or wilfully omitting to do anything to endanger their life, by contravening the provisions of Regulation 190 of the Coal Mines Regulation,1957.

this accident could have been averted.

53. Date - 03.05.17
Time - 20.40

Mine - RAVINDRA KHANI NO.8

Owner - Singareni Collieries Company Ltd.

Dist. - Adilabad, State - Telangana

Person(s) Killed :

1. A.Shankaraiah,Outsider, Male, 49 Years

While a group of five workmen unloading TOR Steel Rod bundles by 10T mobile crane from a lorry at area store on surface, suddenly one bundle fell down on legs of a workman, causing serious injuries to which he succumbed on the way to hospital.

Had,

adequate illumination been provided at the unloading area for safe unloading of material as required under the provisions of Regulation 151(1) of Coal Mines Regulations 1957;

the unloading operation been properly supervised by ensuring safety of persons employed in the said operations as was required under Regulations 40(1) & 190 of the Coal Mines Regulations 1957;

proper safe code of practice been framed and implemented for safe unloading operation of heavy material thus not negligently omitting to do what was necessary for the life and safety of persons employed in such operations as was required under regulation 190 of Coal Mines Regulations 1957;

this accident could have been averted.

Code : 0900 Other Causes

Code : 0991 Irruption of Water
(2 Deaths)

54. Date - 16.08.17

Mine - SAYAL "D"

Time - 7.15

Owner - Central Coalfields Ltd.

Dist. - Hazaribagh, State - Jharkhand

Person(s) Killed :

1. P.Nonia, Trammer, Male, 57 Years

2. Ashok Kumar, Pump Khalasi, Male, 47 Years

While a brick wall, partly converted into isolation stopping being used to hold water inside and being used for pumping out of water therefore, suddenly failed to withstand the pressure of water body inside & was washed away resulting in inrush of water through the main headings of an underground coal mine to which two pump khalasis present in the main dip sump area washed/carried away into the main dip sump along with muck & other materials in the way and died in the process due to drowning.

Had,

the retaining wall been constructed or the brick wall been converted into water dam of standard design & construction for holding water after determining the possible head of water accumulation inside and then only used for pumping from inside the wall as required under Regulation 129(1) of the Coal Mines Regulation, 1957 read with D.G.'s Circular No.7 of 1976 (Technical); and person not been deployed in the areas lying beneath & within 60m of any water logged workings in any direction as prohibited under Regulation 127(1) & (3) of the Coal Mines Regulation, 1957.

This accident could have been averted.

Code : 0993 Drowning in Water
(1 Death)

55. Date - 25.07.17
Time - 18.30

Mine - KUARDIH

Owner - Eastern Coalfields Ltd.

Dist. - Burdwan, State - West Bengal

Person(s) Killed :

1. Bishwanath Bouri, SDL Operator, Male, 44

Years

While three persons who were permitted to go belowground workings of the mine when the jore water was flowing above the withdrawal level, were returning back after inspection of underground pump station, they encountered inrush of water along main dip, caused due to entry of accumulated surface water to overlying seam and subsequent collapse of intermittent parting; two persons walked & entered against the water current for safety, suddenly, both of them fell down and one person was moved down the dip with water current and got drowned and other person escaped with minor injuries. The third person walking behind restrained himself in advancing in the water current, retreated, travelled along return airway and escaped unhurt.

Had,

i) persons been not sent to belowground workings of the mine when the water level at the jore had crossed withdrawal level fixed for safe workings of the mine and the jore was flowing above danger level,

ii) persons been not allowed to belowground workings of the mine when huge surface water was accumulated over the low lying areas within the leasehold where back filled & abandoned pits existed in shallow cover areas and illegal coal extraction by miscreants was susceptible,

this accident could have been averted.

Code : 0999 Unclassified
(1 Death)

56. Date - 26.02.17
Time - 23.30

Mine - CHURI
Owner - Central Coalfields Ltd.
Dist. - Ranchi, State - Jharkhand
Person(s) Killed :

1. Dhani Mahto, Timber Helper, Male, 45

Years

While a person was coming out of the mine from underground working district in the middle of the shift, he went to disused part of the mine workings and remained there for more than forty hours for unknown reason, later on identified by his co worker and was brought to surface and hospitalized however he died after about 36 hour, during treatment at the hospital.

Had,

i) the deceased not crossed the fencing as required under Regulations 38(1)(a), 38(3)(a) of the CMR, 1957.

ii) the Check IN and Check OUT been marked by seeing victim personally at lamp room and at time keeper's office as required under Regulation, 48(d) and 57(1), 57(2) of CMR, 1957.

iii) the overman ensured that every persons deployed in underground workings under his charge had actually came out of the mine as required Reg. 43(1)(e) and 43(9) of CMR, 1957.

iv) the Assistant Manager ensured that every persons deployed in underground under his charge had actually came out of the mine and all the work was carried out in accordance with the provisions of the act and Rules, Regulations framed thereunder as required under Reg. 42(1) of CMR, 1957).

the incident could have been averted.



5. ACCIDENT ANALYSIS IN COAL MINES: 2018

- The number of fatal accidents in coal mines in the year 2018 stands at 49 with 62 fatalities and 11 seriously injured in these fatal accidents. The number of fatal accidents has decreased as compared to previous year 2017.
- The number of serious accidents in the year 2018 stands at 265 with 268 seriously injured persons. The number of serious accidents has increased by 1 as compared to previous year 2017.
- Among the broad category of causes, most number of fatal accident occurred due to “Transportation Machinery (non-winding)”. Details can be seen in the tables.
- Among the broad category of causes, most number of serious accident occurred due to “Falls (other than fall of ground)”. Details can be seen in the tables.
- Maximum number of fatal accident occurred in South Eastern Coalfields Limited. Maximum number of serious accident occurred in Singareni Collieries Company Limited. Details can be seen in the tables.
- Maximum number of fatal accident occurred in the mines under Western Zone of this Directorate and maximum number of serious accident occurred in the mines under South Central Zone of this Directorate.
- Major Accident 1:
 - Date of Accident: 21 July 2018; Mine Name: TAPIN NORTH; Mine Owner: Central Coalfields Limited; Number of Persons Killed: 4; Number of Persons Seriously Injured: 7
 - Cause of the Accident: While a Road Grader machine was being parked inside the Tyre Shed in the precincts of the Workshop during day light hours, the operator lost control of the machine and hit and broke the partition wall(of about 13 meter long, 4 meter high and 25.4 cm thick) made of brick in cement and 11(eleven) persons standing/sitting in the other side of the wall were buried under the fallen debris of the broken wall and received serious bodily injuries to which 3 persons died on the spot and another injured person succumbed to his injuries on the way to hospital.
 - What could have averted this accident: Had,
 1. the hazard identified due to the risk of lack of adequate and specified parking space for heavy Earth Moving Machineries inside the workshop/mine been mitigated accordingly and the control measures been implemented for parking the road grader machine inside the Tyre Shed as part of the safety management plan as required under Regulation 104(4)&(8) read with DGMS Circular(Technical) No.8 of 2003 and thus negligently or wilfully not endangered the life of persons employed in the mine as required under Regulation 239 of the Coal Mines Regulation,2017;
 2. and, the adequate and suitable Rest Shelter been provided and maintained in the Mine/Workshop as required under Rules 62 and 63 of the Mines Rules 1955 for the work persons to take rest and food and give protection against Weather and thus negligently or wilfully not

endangered the life of persons employed in the mine as required under Regulation 239 of the Coal Mines Regulation, 2017;

- Major Accident 2:
 - Date of Accident: 25 October 2018; Mine Name: NAHERIYA UG MINE; Mine Owner: Western Coalfields Limited; Number of Persons Killed: 4; Number of Persons Seriously Injured: 0
 - Cause of the Accident: While five persons were attempting to retrieve a Load Haul Dump Machine which was stuck up in the goaf, suddenly a portion of the roof measuring about 6.5m in length, 6.5m in width and 1.6m to 2.5m in thickness fell from a height of 4.4m and buried five persons completely inflicting fatal injuries to four persons while the fifth person escaped without any injury.
 - What could have averted this accident: Had,
 1. goaf edge supports been erected as required under Regulation 112(1), 123(3) of the Coal Mines Regulations, 2017 read with clause 4.0(a) of the support plan approved vide letter no. NR-1/010576/C/P/11/2018/1086 dated 29/5/2018
 2. the entrance to the goaf been provided with an efficient fence, barrier or gate as required under regulations 128(4) of the Coal Mines Regulations, 2017, and
 3. the panel been placed under the charge of the Mining Sirdar as required under Regulation 129(1) of the Coal Mines Regulations, 1957.

Statement 5.1
Casualty/serious injury rates in coal mines for different companies in 2018

Sl.	Mineral/State/ District	Number of Accidents		No. of Persons Killed						No. of Persons Seriously Injured					
		----- Fatal	Serious	Below Ground ----- M	Opencast			Above Ground ----- M F		Below Ground ----- M	Opencast		Above Ground ----- M F		Total
					M	F	M	F	M		F	M	F		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1.	Coal														
	Chhattisgarh														
	Bilaspur	0	1	0	0	0	0	0	0	2	0	0	0	0	2
	Surguja	0	1	0	0	0	0	0	0	1	0	0	0	0	1
	Korea	0	2	0	0	0	0	0	0	2	0	0	0	0	2
	Korba	11	2	5	7	0	1	0	13	2	0	0	1	0	3
	Surajpur	1	0	2	0	0	0	0	2	0	0	0	0	0	0
	TOTAL : CHHATTISGARH	12	6	7	7	0	1	0	15	7	0	0	1	0	8
	Jharkhand														
	Dhanbad	4	8	0	3	1	2	0	6	5	2	0	1	0	8
	Hazaribagh	2	2	0	1	0	4	0	5	1	2	0	7	0	10
	Bokaro	2	1	2	0	0	0	0	2	1	0	0	0	0	1
	Chatra	1	0	0	1	0	0	0	1	0	0	0	0	0	0
	Ramgarh	0	2	0	0	0	0	0	0	0	2	0	0	0	2
	TOTAL : JHARKHAND	9	13	2	5	1	6	0	14	7	6	0	8	0	21
	Madhya Pradesh														
	Betul	0	2	0	0	0	0	0	0	2	0	0	0	0	2
	Chhindwara	1	1	4	0	0	0	0	4	0	0	0	1	0	1
	Shahdol	0	3	0	0	0	0	0	0	2	0	0	1	0	3
	Anuppur	1	3	1	0	0	0	0	1	3	0	0	0	0	3
	Singrauli	4	8	0	3	0	1	0	4	0	8	0	0	0	8
	TOTAL : MADHYA PRADESH	6	17	5	3	0	1	0	9	7	8	0	2	0	17
	Maharashtra														
	Chandrapur	2	5	0	1	0	1	0	2	3	2	0	0	0	5
	Nagpur	0	2	0	0	0	0	0	0	2	0	0	0	0	2

Yavatmal	0	4	0	0	0	0	0	0	1	2	0	1	0	4
TOTAL : MAHARASHTRA	2	11	0	1	0	1	0	2	6	4	0	1	0	11
Orissa														
Angul	3	1	0	2	0	1	0	3	0	2	0	0	0	2
Sundergarh	3	0	0	3	0	0	0	3	0	1	0	0	0	1
Jharsuguda	2	1	1	1	0	0	0	2	0	0	0	1	0	1
TOTAL : ORISSA	8	2	1	6	0	1	0	8	0	3	0	1	0	4
Telangana														
Adilabad	2	85	0	2	0	0	0	2	67	4	0	15	0	86
Karimnagar	0	69	0	0	0	0	0	0	45	11	0	13	0	69
Khammam	3	12	1	1	0	1	0	3	1	7	0	4	0	12
Warangal	2	37	1	1	0	0	0	2	32	1	0	4	0	37
Kothagudem	1	1	0	1	0	0	0	1	0	0	0	1	0	1
Kalaburagi	0	2	0	0	0	0	0	0	0	1	0	1	0	2
Mancherial	0	1	0	0	0	0	0	0	0	0	0	1	0	1
TOTAL : TELANGANA	8	207	2	5	0	1	0	8	145	24	0	39	0	208
Uttar Pradesh														
Sonebhadra	1	0	0	1	0	0	0	1	0	0	0	0	0	0
TOTAL : UTTAR PRADESH	1	0	0	1	0	0	0	1	0	0	0	0	0	0
West Bengal														
Burdwan	1	8	2	0	0	0	0	2	6	0	0	3	0	9
TOTAL : WEST BENGAL	1	8	2	0	0	0	0	2	6	0	0	3	0	9
ALL INDIA : COAL	47	264	19	28	1	11	0	59	178	45	0	55	0	278
2. Lignite														
Bharuch	1	0	0	2	0	0	0	2	0	0	0	0	0	0
Bhavanagar	0	1	0	0	0	0	0	0	0	1	0	0	0	1
TOTAL : GUJARAT	1	1	0	2	0	0	0	2	0	1	0	0	0	1
Tamil Nadu														
Cuddalore	1	0	0	1	0	0	0	1	0	0	0	0	0	0

TOTAL : TAMIL NADU	1	0	0	1	0	0	0	1	0	0	0	0	0	0
ALL INDIA : LIGNITE	2	1	0	3	0	0	0	3	0	1	0	0	0	1
ALL INDIA : ALL COAL	49	265	19	31	1	11	0	62	178	46	0	55	0	279

Note 1 : M:Male, F:Female

Note 2 : Fatal as well as serious accidents are considered in computing the figures of number of persons seriously injured in this statement.

Statement 5.2
Casualty/serious injury rates in coal mines for different companies in 2018

Company	Number of Accidents		Number of Persons Killed						Number of Persons Seriously Injured					
			Below Ground	Opencast		Above Ground		Total	Below Ground	Opencast		Above Ground		Total
	Fatal	Serious		Male	Female	Male	Female			Male	Female	Male	Female	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
BCCL	4	6	0	3	1	2	0	6	4	1	0	1	0	6
CCL	5	5	2	2	0	4	0	8	2	4	0	7	0	13
ECL	1	9	2	0	0	0	0	2	7	0	0	3	0	10
MCL	8	2	1	6	0	1	0	8	0	3	0	1	0	4
NCL	4	7	0	3	0	1	0	4	0	7	0	0	0	7
SECL	13	12	8	7	0	1	0	16	12	0	0	2	0	14
WCL	3	14	4	1	0	1	0	6	8	4	0	2	0	14
TOTAL : CIL	38	55	17	22	1	10	0	50	33	19	0	16	0	68
GMDC	0	1	0	0	0	0	0	0	0	1	0	0	0	1
IISCO	0	1	0	0	0	0	0	0	0	1	0	0	0	1
NLC	1	0	0	1	0	0	0	1	0	0	0	0	0	0
SCCL	8	207	2	5	0	1	0	8	145	24	0	39	0	208
GIPCL	1	0	0	2	0	0	0	2	0	0	0	0	0	0
SASAN	1	1	0	1	0	0	0	1	0	1	0	0	0	1
TOTAL : NON-CIL	11	210	2	9	0	1	0	12	145	27	0	39	0	211
TOTAL : ALL INDIA	49	265	19	31	1	11	0	62	178	46	0	55	0	279

STATEMENT NO. 5.3

Number of accidents and casualties/seriously injured persons in coal mines by place and detailed cause in 2018

CAUSE OF ACCIDENT	BELOW GROUND					OPENCAST					ABOVE GROUND					TOTAL				
	Fatal Accident		S/Accident			Fatal Accident		S/Accident			Fatal Accident		S/Accident			Fatal Accident		S/Accident		
	ACC	KILL	INJ	ACC	INJ	ACC	KILL	INJ	ACC	INJ	ACC	KILL	INJ	ACC	INJ	ACC	KILL	INJ	ACC	INJ
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
Fall of Roof	3	8	0	9	10	0	0	0	0	0	0	0	0	0	0	3	8	0	9	10
Fall of Sides (Other than Overhangs)	1	1	1	12	13	0	0	0	0	0	0	0	0	0	0	1	1	1	12	13
Fall of Overhangs	0	0	0	2	2	1	3	0	0	0	0	0	0	0	0	1	3	0	2	2
TOTAL : GROUND MOVEMENT	4	9	1	23	25	1	3	0	0	0	0	0	0	0	0	5	12	1	23	25
Breakage of Rope,Chain,Craw/Suspn. Gear	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
Hit by Cages, Skip etc.	0	0	0	4	4	0	0	0	3	3	0	0	0	3	3	0	0	0	10	10
Overwinding of Cages/Skip (downgoing)	0	0	0	1	1	0	0	0	0	0	0	0	0	1	1	0	0	0	2	2
Other Accident due to Winding Operation	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	1	1
TOTAL : TRANSPORTATION MACHINERY (WINDING)	0	0	0	6	6	0	0	0	3	3	0	0	0	5	5	0	0	0	14	14
Rope Haulage	2	2	0	19	19	0	0	0	1	1	0	0	0	0	0	2	2	0	20	20
Conveyors	1	1	0	3	3	0	0	0	1	1	0	0	0	1	1	1	1	0	5	5
Dumpers	1	1	0	0	0	8	9	0	7	7	1	1	0	1	1	10	11	0	8	8
Wagon Movements	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
Wheeled Trackless(Truck,Tanker,etc.)	0	0	0	1	1	5	5	1	4	4	0	0	0	0	0	5	5	1	5	5
TOTAL : TRANSPORTATION MACHINERY (NON-WINDING)	4	4	0	24	24	13	14	1	13	13	1	1	0	2	2	18	19	1	39	39
Drilling Machines	0	0	0	0	0	3	3	0	0	0	0	0	0	0	0	3	3	0	0	0
Cutting Machines	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	1	1
Loading Machines	1	1	0	0	0	0	0	0	0	0	1	1	0	1	1	2	2	0	1	1
Shovel, Draglines, Frontend Loader, etc.	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1	1	0	0	0
Crushing & Screening Plants	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	1	1	0	0	0
Other Heavy Earth Moving Machinery	0	0	0	0	0	1	1	0	1	1	2	5	7	1	1	3	6	7	2	2
Other Non-Transportation Machinery	0	0	0	10	10	0	0	0	1	1	0	0	0	9	9	0	0	0	20	20
TOTAL : MACHINERY OTHER THAN TRANSP. MACHINERY	1	1	0	10	10	5	5	0	2	2	4	7	7	12	12	10	13	7	24	24

Deep Hole Blasting Projectiles	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	1	1	0	1	1
Misfires/Sockets(While Drilling into)	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1	1	0	0	0
TOTAL : EXPLOSIVES	0	0	0	1	1	2	2	0	0	0	0	0	0	0	0	2	2	0	1	1
Overhead Lines	0	0	0	0	0	3	3	2	0	0	0	0	0	0	0	3	3	2	0	0
Switch Gears, Gate End Boxes, Pommel, etc.	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	1	1	0	1	1
Energized Machines	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0
Other Electrical Accidents	0	0	0	1	1	0	0	0	1	1	0	0	0	0	0	0	0	0	2	2
TOTAL : ELECTRICITY	1	1	0	2	2	4	4	2	1	1	0	0	0	0	0	5	5	2	3	3
Other Accidents due to Dust/Gas/Fire	1	3	0	0	0	0	0	0	0	0	1	1	0	0	0	2	4	0	0	0
TOTAL : DUST, GAS & OTHER COMBUSTIBLE MATERIAL	1	3	0	0	0	0	0	0	0	0	1	1	0	0	0	2	4	0	0	0
Fall of Person from Height/into Depth	0	0	0	44	45	2	2	0	12	12	1	1	0	13	13	3	3	0	69	70
Fall of Persons on the Same Level	0	0	0	3	3	0	0	0	2	2	0	0	0	0	0	0	0	0	5	5
Fall of Objects incl. Rolling Objects	0	0	0	30	30	0	0	0	2	2	0	0	0	8	8	0	0	0	40	40
Other Accidents due to Falls	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
TOTAL : FALLS (OTHER THAN FALL OF GROUND)	0	0	0	78	79	2	2	0	16	16	1	1	0	21	21	3	3	0	115	116
Irruption of Water	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0
Drowning in Water	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	2	2	0	0	0
Unclassified	0	0	0	30	30	0	0	0	8	8	1	1	0	8	8	1	1	0	46	46
TOTAL : OTHER CAUSES	1	1	0	30	30	2	2	0	8	8	1	1	0	8	8	4	4	0	46	46
ALL INDIA : ALL COAL	12	19	1	174	177	29	32	3	43	43	8	11	7	48	48	49	62	11	265	268

STATEMENT 5.4**Number of fatal accidents in coal mines by major cause and responsibility during the year 2018**

Responsibility / Major Cause Group	1	2	3	4	5	6	7	8	9	Total
Management	1	0	2	3	0	2	0	1	1	10
Management & Sub. Sup. Staff(SSS)	2	0	2	3	2	3	1	1	2	16
Management, SSS & Shotfirer	1	0	0	0	0	0	0	0	0	1
Management, SSS & Coworker	0	0	2	0	0	0	0	0	0	2
Management,SSS,Coworker,Deceased	0	0	1	0	0	0	0	0	0	1
Management, SSS & Deceased	0	0	2	0	0	0	0	0	0	2
Management, SSS & Others	0	0	0	1	0	0	0	1	0	2
Management & Coworker	0	0	2	0	0	0	0	0	0	2
Management & Deceased	0	0	2	0	0	0	0	0	0	2
Management & Contractor's Worker	0	0	0	2	0	0	0	0	0	2
Sub. Sup. Staff & Coworker	0	0	2	0	0	0	1	0	0	3
Sub.Sup.Staff & Others	0	0	1	0	0	0	0	0	0	1
Coworker	0	0	1	1	0	0	0	0	0	2
Deceased	1	0	0	0	0	0	0	0	0	1
Deceased & Others	0	0	1	0	0	0	0	0	0	1
Others	0	0	0	0	0	0	0	0	1	1
Total	5	0	18	10	2	5	2	3	4	49

STATEMENT NO. 5.5

Causewise number of fatal accidents in Coal Mines for different companies in 2018

Cause/Company	BCCL	CCL	ECL	MCL	NCL	NEC	SECL	WCL	CIL	SCCL	IISCO	NLC	TISCO	OTHERS	TOTAL
Fall of Roof	0	0	1	0	0	0	1	1	3	0	0	0	0	0	3
Killed-S/Injured :	0-0	0-0	2-0	0-0	0-0	0-0	2-0	4-0	8-0	0-0	0-0	0-0	0-0	0-0	8-0
Fall of Sides	1	0	0	0	0	0	1	0	2	0	0	0	0	0	2
Killed-S/Injured :	3-0	0-0	0-0	0-0	0-0	0-0	1-1	0-0	4-1	0-0	0-0	0-0	0-0	0-0	4-1
Rope Haulage	0	1	0	0	0	0	0	0	1	1	0	0	0	0	2
Killed-S/Injured :	0-0	1-0	0-0	0-0	0-0	0-0	0-0	0-0	1-0	1-0	0-0	0-0	0-0	0-0	2-0
Dumpers	1	0	0	1	2	0	4	0	8	1	0	0	0	1	10
Killed-S/Injured :	1-0	0-0	0-0	1-0	2-0	0-0	4-0	0-0	8-0	1-0	0-0	0-0	0-0	2-0	11-0
Trucks	0	0	0	1	0	0	2	0	3	2	0	0	0	0	5
Killed-S/Injured :	0-0	0-0	0-0	1-1	0-0	0-0	2-0	0-0	3-1	2-0	0-0	0-0	0-0	0-0	5-1
Other Machinery	1	2	0	2	1	0	2	0	8	2	0	0	0	1	11
Killed-S/Injured :	1-0	5-7	0-0	2-0	1-0	0-0	2-0	0-0	11-7	2-0	0-0	0-0	0-0	1-0	14-7
Explosives	0	0	0	1	0	0	1	0	2	0	0	0	0	0	2
Killed-S/Injured :	0-0	0-0	0-0	1-0	0-0	0-0	1-0	0-0	2-0	0-0	0-0	0-0	0-0	0-0	2-0
Fall of Persons	0	0	0	1	0	0	0	1	2	1	0	0	0	0	3
Killed-S/Injured :	0-0	0-0	0-0	1-0	0-0	0-0	0-0	1-0	2-0	1-0	0-0	0-0	0-0	0-0	3-0
Fall of Objects	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Killed-S/Injured :	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0
Other causes	1	2	0	2	1	0	2	1	9	1	0	1	0	0	11
Killed-S/Injured :	1-0	2-1	0-0	2-1	1-0	0-0	4-0	1-0	11-2	1-0	0-0	1-0	0-0	0-0	13-2
Belowground	0	2	1	1	0	0	5	1	10	2	0	0	0	0	12
Killed-S/Injured :	0-0	2-0	2-0	1-0	0-0	0-0	8-1	4-0	17-1	2-0	0-0	0-0	0-0	0-0	19-1
Opencast	2	2	0	6	3	0	7	1	21	5	0	1	0	2	29
Killed-S/Injured :	4-0	2-1	0-0	6-2	3-0	0-0	7-0	1-0	23-3	5-0	0-0	1-0	0-0	3-0	32-3
Aboveground	2	1	0	1	1	0	1	1	7	1	0	0	0	0	8
Killed-S/Injured :	2-0	4-7	0-0	1-0	1-0	0-0	1-0	1-0	10-7	1-0	0-0	0-0	0-0	0-0	11-7
TOTAL	4	5	1	8	4	0	13	3	38	8	0	1	0	2	49
Killed-S/Injured :	6-0	8-8	2-0	8-2	4-0	0-0	16-1	6-0	50-11	8-0	0-0	1-0	0-0	3-0	62-11

STATEMENT NO. 5.6

Causewise number of serious accidents in Coal Mines for different companies in 2018

Cause/Company	BCCL	CCL	ECL	MCL	NCL	NEC	SECL	WCL	CIL	SCCL	IISCO	NLC	TISCO	OTHERS	TOTAL
Fall of Roof	0	1	0	0	0	0	2	1	4	5	0	0	0	0	9
S/Injured :	0	1	0	0	0	0	3	1	5	5	0	0	0	0	10
Fall of Sides	2	0	1	0	0	0	1	1	5	9	0	0	0	0	14
S/Injured :	2	0	2	0	0	0	1	1	6	9	0	0	0	0	15
Rope Haulage	0	0	0	0	0	0	1	0	1	19	0	0	0	0	20
S/Injured :	0	0	0	0	0	0	1	0	1	19	0	0	0	0	20
Dumpers	1	1	0	1	2	0	0	0	5	3	0	0	0	0	8
S/Injured :	1	1	0	1	2	0	0	0	5	3	0	0	0	0	8
Trucks	0	0	0	0	1	0	0	0	1	4	0	0	0	0	5
S/Injured :	0	0	0	0	1	0	0	0	1	4	0	0	0	0	5
Other Machinery	1	1	5	0	0	0	3	3	13	31	0	0	0	0	44
S/Injured :	1	1	5	0	0	0	3	3	13	31	0	0	0	0	44
Explosives	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
S/Injured :	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
Fall of Persons	1	1	1	0	3	0	1	4	11	61	1	0	0	1	74
S/Injured :	1	1	1	0	3	0	1	4	11	62	1	0	0	1	75
Fall of Objects	1	0	1	1	0	0	0	2	5	35	0	0	0	0	40
S/Injured :	1	0	1	1	0	0	0	2	5	35	0	0	0	0	40
Other causes	0	1	1	0	1	0	4	3	10	39	0	0	0	1	50
S/Injured :	0	1	1	0	1	0	4	3	10	39	0	0	0	1	50
Belowground	4	2	6	0	0	0	10	8	30	144	0	0	0	0	174
S/Injured :	4	2	7	0	0	0	11	8	32	145	0	0	0	0	177
Opencast	1	3	0	1	7	0	0	4	16	24	1	0	0	2	43
S/Injured :	1	3	0	1	7	0	0	4	16	24	1	0	0	2	43
Aboveground	1	0	3	1	0	0	2	2	9	39	0	0	0	0	48
S/Injured :	1	0	3	1	0	0	2	2	9	39	0	0	0	0	48
TOTAL	6	5	9	2	7	0	12	14	55	207	1	0	0	2	265
S/Injured :	6	5	10	2	7	0	13	14	57	208	1	0	0	2	268

STATEMENT NO. 5.7**Regionwise/zonewise number of accidents and resultant casualties/seriously injured persons in coal mines in 2018**

Region/Zone	Fatal Accidents			Serious Accidents	
	No. of Accidents	Fatalities	S/Injured	No. of Accidents	S/Injured
Dhanbad II	3	5	0	5	5
Dhanbad III	1	1	0	3	3
Koderma	2	2	0	1	1
Central Zone	6	8	0	9	9
Sitarampur I	0	0	0	4	4
Sitarampur II	0	0	0	3	3
Sitarampur III	1	2	0	1	2
Eastern Zone	1	2	0	8	9
Ahmedabad	0	0	0	1	1
Surat	1	2	0	0	0
North-Western Zone	1	2	0	1	1
Varanasi	5	5	0	8	8
Northern Zone	5	5	0	8	8
Hyderabad I	6	6	0	119	119
Hyderabad II	2	2	0	88	89
South-Central Zone	8	8	0	207	208
Bhubaneswar	5	5	1	2	2
Chaibasa	3	3	1	0	0
Ranchi	3	6	8	4	4
South-Eastern Zone	11	14	10	6	6
Chennai	1	1	0	0	0
Southern Zone	1	1	0	0	0
Bilaspur	11	14	1	6	7
Jabalpur	2	2	0	6	6
Nagpur I	1	4	0	5	5
Nagpur II	2	2	0	9	9
Western Zone	16	22	1	26	27
ALL INDIA	49	62	11	265	268

STATEMENT NO. 5.8**Summary of Findings of Fatal Accidents during the year 2018**

Code : 0100 Ground Movement

Code : 0111 Fall of Roof
 (8 Deaths)

1. Date - 07.10.18 Mine - KHOTTADIH
 Time - 4.20 Owner - Eastern Coalfields Ltd.
 Dist. - Burdwan, State - West Bengal
 Person(s) Killed :
 1. C.S.Giri, Sirdar, Male, 50 Years
 2. K.Mahto, Dresser, Male, 53 Years

While a sirdar and dresser were standing beneath unsupported roof in a development face in an underground coal mine, a part of roof measuring about 3.0m (L) x 1.2m (W) x 0.15m-0.3 m(T) parted suddenly from a height of 2.35m and trapped both of them under the fall which proved fatal instantly.

Had the roof been kept supported at the face as per Support Plan as required under Regulations 123(5) and 115(1) read with Regulation 48(2)(f) and 48(3) of the Coal Mines Regulations, 2017.

this accident could have been averted.

2. Date - 25.10.18 Mine - NAHERIYA UG MINE
 Time - 10.45 Owner - Western Coalfields Ltd.
 Dist. - Chhindwara, State - Madhya Pradesh
 Person(s) Killed :
 1. Ram Prakash, LHD Optr., Male, 45 Years
 2. Ravi Shankar, Gen. Mazdoor, Male, 30
Years
 3. Rajesh, Fitter, Male, 33 Years
 4. Md. Rafique, LHD Optr., Male, 41 Years

While five persons were attempting to retrieving a Load Haul Dump Machine which was stuck up in the goaf, suddenly a portion of the roof measuring about 6.5m in length, 6.5m in width and 1.6m to 2.5m in thickness fell from a height of 4.4m and buried five persons completely inflicting fatal injuries to four persons while the fifth person escaped without any injury.

Had,

a) goaf edge supports been erected as required under Regulation 112(1), 123(3) of the Coal Mines Regulations, 2017 read with clause 4.0(a) of the support plan approved vide letter no. NR-1/010576/C/P/11/2018/1086 dated 29/5/2018

b) the entrance to the goaf been provided with an efficient fence, barrier or gate as required under regulations 128(4) of the Coal Mines Regulations, 2017, and

c) the panel been placed under the charge of the Mining Sirdar as required under Regulation 129(1) of the Coal Mines Regulations, 1957.

this accident could have been averted.

3. Date - 23.11.18 Mine - KUMDA 7&8 INCLIE
 Time - 9.45 Owner - South Eastern Coalfields Ltd.

1. R. Prasad, Sirdar, Male, 54 Years
2. A.K. Singh, Crewman, Male, 48 Years

this accidnet could have been averted.

4. Date - 13.01.18 Mine - VIJAY WEST U/G MINE
Time - 1.15 Owner - South Eastern Coalfields Ltd.
Dist. - Korba, State - Chhattisgarh
Person(s) Killed :
1. Rajesh, Cableman, Male, 36 Years

continuous miner not been deployed prior to examination of sides & roof by a competent persons and gallery kept secured by proper dressing and supporting as required under Regulations 45(1), 47(2)(c), 129(3) read with Clause 6.3 of Annexure-I of Systematic Support Rule of the permission granted under Regulation 99(2), in variance to Sub-Regulation 99(4), Regulations 105(1), 108 and 126 of the Coal Mines Regulations, 1957 vide this Directorate letter No. BSP/1386 dated 20/03/2017.

this accident could have been averted.

Code : 0113 Fall of Overhangs
(3 Deaths)

5. Date - 09.11.18 Mine - ROCP/SOUTH JHARIA
 Time - 9.30 Owner - Bharat Coking Coal Ltd.
 Dist. - Dhanbad, State - Jharkhand
 Person(s) Killed :
 1. C. Kumari, Outsider, Female, 13 Years
 2. P. Kumar, Outsider, Female, 18 Years
 3. N. Mahto, Outsider, Female, 20 Years

While a group of persons were digging coal from a highwall of a discontinued area of the opencast patch by making an undercut in about 3m thick No. X coal seam of about 15m in length 2 to 3m in depth and about 2m high, a block of coal from roof fell from a height of about 2m causing fatal injuries to three of them almost instantly.

Had,

the exposed No. X coal seam of the opencast working out of use which was dangerous, was completely filled in or kept securely fenced as required under Regulation 128(7) of Coal Mines Regulations, 2017,

this accident could have been averted.

Code : 0300 Transportation Machinery(Non-Winding)

Code : 0332 Rope Haulage
(2 Deaths)

6. Date - 24.06.18 Mine - VENKATESH KHANI NO.7
 Time - 11.00 Owner - Singareni Collieries Company Ltd.
 Dist. - Khammam, State - Telangana
 Person(s) Killed :
 1. T.V.Satyanarayana, Fitter, Male, 30 Years

While a fitter was doing maintenance work at return pulley near disembarking station of a man riding chairlift system in an underground coal mine, one of the co-worker started the man riding chair lift system, maintenance fitter slipped and fell on return pulley, got trapped between pulley and wire rope due to which he sustained serious bodily injuries and succumbed on the way to hospital.

Had

the man-riding system not put in operation while maintenance being done in contravention of Regulation 211(4) of the Coal Mines Regulations, 2017.

this accident could have been averted.

7. Date - 21.12.18 Mine - DHORI KHAS
Time - 2.30 Owner - Central Coalfields Ltd.
Dist. - Bokaro, State - Jharkhand
Person(s) Killed :
1. Hemlal Kumar, Haulage Attendant, Male, 45
Years

While a set of loaded coal tubs were being lowered in a haulage roadway having down gradient of about 1 in 25 in an underground coal mine, suddenly a haulage attendant who was working in this haulage roadway came across these loaded coal tubs and was hit and run over and succumbed to his injuries.

Had,

i) the suitable warning system like audio-visual-alarm was provided in the haulage roadway to warn the persons working in this haulage roadway to take safe refuge, while lowering loaded tubs from 13D/30L, which was necessary for safety of the persons working in that haulage roadway as required under Regulation 239 of the Coal Mines Regulations, 2017

ii) the competent person been appointed as haulage attendant to perform the work in safe manner as required under Regulation 35(1) of the Coal Mines Regulations, 2017, and

iii) the person deployed as haulage attendant in the mine been imparted training on haulage attendant job as required under Rule 15 read with DGMS Cir. Legis. 04/1975 of the Mine Vocational Training Rules, 1966,

this accident could have been averted.

Code : 0334 Conveyors
(1 Death)

8. Date - 08.11.18 Mine - HIRAKHAND BUNDIA MINE
Time - 10.30 Owner - Mahanadi Coalfields Ltd.
Dist. - Jharsuguda, State - Orissa
Person(s) Killed :
1. D. Kanjee, Belt Opnr., Male, 56 Years

While a person was cleaning spillage coal by shovelling coal with a hand shovel by standing at a close proximity of the belt conveyor in the tail of a stopped conveyor belt, at a place not illuminated, suddenly the conveyor was put in motion without giving pre-start warning alarm, the person got trapped between conveyor belt and tail end drum of the belt assembly and received serious bodily, to which he succumbed almost instantaneously.

Had,

i) the audio visual prestart warning alarm not been defunct in contravention of Regulation 97(5) of the Coal Mines Regulations, 2017.

ii) the cleaning of belt conveyor not been carried out while in motion in contravention with Code of Practice Clause No. A(5) framed in compliance with Regulation 97(6) of the Coal Mines Regulations, 2017.

iii) Fail safe system existed, so that belt conveyor could not be started or put in motion while spillage cleaning is in progress as required under Regulation 97(6) of the Coal Mines Regulations, 2017

iv) the sufficient lighting been provided at the tail end drum of conveyor belt as required under Code of Practice Clause No. A(9) framed in compliance with Regulation 97(6) read with DG Tech Cir 07/2016 & Regulation 178(b) of the Coal Mines Regulations, 2017.

v) the effective means of telecommunication along with broadcasting facilities been provided at the drive head of conveyor belt as required under Regulation 97(4) of Coal Mines Regulation 2017

this accident could have been averted.

Code : 0335 Dumpers
(11 Deaths)

9. Date - 08.02.18 Mine - SAMLESWARI OCP
 Time - 8.30 Owner - Mahanadi Coalfields Ltd.
 Dist. - Jharsuguda, State - Orissa
 Person(s) Killed :
 1. B. Mahto, Tipper Driver, Male, 35 Years

While an empty tipper was being driven at high speed along down gradient it went uncontrolled and jumped the berm on its left and fell down 15 m below into excavated area, thereby inflicting serious bodily injuries to the person driving it which turned fatal after about one hour.

Had,

there been an effective system in place at the mine for preventing over-speeding of tippers as required by the provisions of Regulation 63(1)(d) read with Regulations 40(1) and 40(4)(a) of Mines Regulations, 2017 and the formulated transport rules, and

the berm made on the haul road been of an adequate design and construction to effectively arrest the movement of the tipper colliding against it, as required by the provisions of Regulation 101 of Coal Mines Regulations, 2017,

this accident would have been averted.

10. Date - 07.03.18 Mine - GEVRA PROJECT
 Time - 4.45 Owner - South Eastern Coalfields Ltd.
 Dist. - Korba, State - Chhattisgarh
 Person(s) Killed :
 1. D. Malakar, Dumper Operator, Male, 56 Years

While a dumper operator was turning a dumper near a coal face in an opencast coal mine, he drove the dumper onto the edge of an adjoining sump filled with about 2 metre deep water causing the dumper to topple into the sump sideways submerging its operator's cabin, in which the operator got drowned and succumbed almost instantly.

Had a berm (parapet wall) of adequate size been maintained and warning signs displayed along the edge of the sump as required under Regulation 101 read with DGMS(Tech)/ Circular No. 9, dated 02.12.2008 and Regulation 239 of the Coal Mines Regulation 2017, this accident could have been averted.

11. Date - 09.03.18 Mine - SRIRAMPUR OCP-I
 Time - 2.50 Owner - Singareni Collieries Company Ltd.
 Dist. - Adilabad, State - Telangana

Person(s) Killed :

1. V.Sudheer, Spotter, Male, 34 Years

While a dumper was being reversed on an advancing overburden bench of an opencast mine for positioning near an excavator for taking load; a contractual workman engaged as Spotter in the vicinity of loading site, run over by the front wheel of dumper, received serious bodily injuries to which he succumbed at hospital.

Had,

(i) The spotter been positioned at an elevated place away from working area dumper movement as per condition No.6(i) of permission Letter No. HR02(SCZ)/2015/1098, Hyderabad dated: 11.03.2015,

(ii) the working area been kept under constant supervision by a mining Sirdar/overman,

(iii) the dumper operator been vigilant and not operated carelessly omitting to ensure safety of the person working in the vicinity as required of him as per Condition No. 17.2 of permission Letter No. HR02(SCZ)/2015/1098, Hyderabad dated: 11.03.2015,

this accident could have been averted.

12. Date - 06.05.18
Time - 14.45

Mine - VALIA LIGNITE MINE

Owner - Gujarat Industries Power Company Limited

Dist. - Bharuch, State - Gujarat

Person(s) Killed :

1. A.Patel, Dumper Operator, Male, 19 Years

2. L.Kr.Pathak, Dumper Operator, Male, 24

Years

While a loaded dumper was being driven down a haul road party at 1 in 13.2 gradient and partly plane to an in pit over burden dump in an open cast lignite mine the dumper operator momentarily lost his control over the dumper and could not turn the dumper towards safe side in time and fell down with nose dive from top of the OB dump to its bottom in a depth of about 12cm causing instant death of operator and serious bodily injuries to another operator sitting in the same cabin to which he succumbed about 4.30 hrs later in a hospital.

Had

(i) Dumper been driven defensively and in full control by the operator as required under Regulation 63(1)(d) of the CMR,2017 read with perm. Condition no. 22.5(b) of the permission no. SR/Lignite/Valia-(perm-98)-2017-1144 dated 31.7.2017,

(ii) Dumper operator not negligently operated dumper too fast and not endangered his own life and life of another dumper operator sitting in cabin as required under Regulation 239 of the CMR,2017,

(iii) Dumper operator not negligently allowed another operator inside the cabin and not endangered his life as required under Reg.63(3) read with Reg.216(7) of the CMR,2017 and

(iv) a person of less than 20 Yrs of age and having few days experience of dumper operation not been authorised as competent person to drive dumper in mine by the Manager as required under Reg.2(1)(m) and of the CMR,2017 read with Section 18(4) of the Mines Act,1952,

this accident could have been averted.

13. Date - 12.07.18

Mine - KUSMUNDA OCP

Time - 13.40 Owner - South Eastern Coalfields Ltd.
Dist. - Korba, State - Chhattisgarh
Person(s) Killed :
1. Rakesh Kumar Patel, Contract Emp., Male,
25 Years

While an empty tipper was being reversed for positioning near an excavator for being loaded at an overburden bench of an opencast coal mine, a contractor supervisor, present behind the tipper and talking on walkie-talkie facing opposite to the tipper, was run over by the near left wheel of the tipper, to which he succumbed almost instantly.

Had,

i) the tipper not been reversed unless there was a clear view of the area behind it, thus negligently not endangering the life of a person,

ii) it been ensured that rear vision system and audio-visual alarm interlocked with reverse gear for automatic operation during reversal was fitted in the tipper.

iii) it been ensured that the ground mounted person was not allowed to remain into active working area of excavator & tipper

iv) a system been established and implemented, to prevent presence of ground mounted person into active working area of excavator & tipper,

this accident could have been averted.

14. Date - 23.08.18 Mine - KUSMUNDA OCP
Time - 3.00 Owner - South Eastern Coalfields Ltd.
Dist. - Korba, State - Chhattisgarh
Person(s) Killed :
1. V.K.Ram, Tipper Driver, Male, 28 Years

While an empty tipper was being driven down the gradient on a haul road of an opencast coal mine the tipper collided head to tail with another empty tipper standing unattended in breakdown condition damaging the cabin of the former tipper, in which its driver got entrapped, receiving serious bodily injuries, to which he succumbed while being shifted to hospital after being rescue about two and half hours after the accident.

Had,

(i) The tipper driver not drowsed and remained cautious during driving, thus not negligently endangered his life as required under Regulation 40(1), 4(a)&(7) and 63(1)(d) read with Regulation 239 of the Coal Mines Regulations, 2017,

(ii) It been ensured that parking indicator in tipper was in order and retro reflective reflectors was fitted on all sides of tipper effectively, as required under Regulation 54(a) & (d) and 216(2) of the Coal Mines Regulations, 2017 read with DGMS Circular (Tech.) No. 05 of 2010.

This accident could have been averted.

15. Date - 27.09.18 Mine - BINA PROJECT
Time - 1.30 Owner - Northern Coalfields Ltd.
Dist. - Sonbhadra, State - Uttar Pradesh
Person(s) Killed :
1. R. Goswami, Cont. Worker, Male, 50 Years

While a tipper operator was on the way to OB loading face, parked his tipper on haul road due to unknown reason and alighted from it. The tipper started rolling down of its own and rear right tyre roll over the operator inflicting him serious injuries to which he succumbed instantaneously.

Had,

i) the operator been made it confirmed that parking brake was fully engaged before alighting from tipper and followed the Rule (4)(2) of SOP supplied to him and strictly adhere to the transport rules made under Regulation 109 while operating the tipper in contravention of the provision of the provision of Regulation 63 of Coal Mines Regulation 2017.

ii) the operator been not left the engine in running condition and kept ignition key in ON position thus negligently or wilfully omitted to do thing necessary for the safety of the persons employed therein in contravention of the provision of Regulation 239 of Coal Mines Regulation 2017

iii) the engineer ensured it that door opening alarm which indicates the non-engagement of parking brake be in working condition and seen that examination of machineries are properly being carried out by himself and the subordinate appointed for the purpose in contravention of the Regulation 54(d) of Coal Mines Regulation 2017, this accident could have been averted.

16. Date - 13.11.18
Time - 5.00

Mine - NIGAHI PROJECT
Owner - Northern Coalfields Ltd.
Dist. - Singrauli, State - Madhya Pradesh
Person(s) Killed :
1. Ramayan Singh, Tipper Optr., Male, 37
Years

While an empty 18.8 cubic meter carrying capacity tipper was returning from OB dump yard on a 15.5m wide haul road having almost flat gradient, the operator lost control over the tipper and after crossing the berm provided on the left side of the haul road, fell on to the bottom haul road, received serious bodily injuries to which he succumbed at the site of accident.

Had,

i) the tipper been driven defensively and not too fast, and provisions of transport rules been followed as required under the provisions of Reg. 63(d)&(j) of The Coal Mines Regulations, 2017

ii) the haul road been provided with strong parapet wall of proper shape and of compact formation and strong enough to stop the tipper to cross over the berm provided at the haul road as required under clause 6 of conditions for haul road notified vide No. GSR.976(E) dated 01.10.2008 under the provisions of Reg. 101 of The Coal Mines Regulations, 2017,

17. Date - 13.12.18
Time - 7.15

Mine - KUSMUNDA OCP
Owner - South Eastern Coalfields Ltd.
Dist. - Korba, State - Chhattisgarh
Person(s) Killed :
1. S.K. Sahu, Guard, Male, 28 Years

While an empty tipper returning from a feeder was crossing a 4-way junction and at the same time changing the lane from his right to left, down the gradient of an opencast coal mine, a contractor's security guard crossing the junction on his bike from left to right was dashed by the front left side of the tipper and was dragged with the tipper for a distance of about 15m, inflicting him serious head injuries to which he succumbed instantly.

Had,

i) the tipper driver remained cautions during driving, thus not negligently endangered the life of a person as required under Regulations 40(1) & (4)(a), 63(1)(d), (f) & (g) read with regulation 239 of the coal mines regulations, 2017,

ii) the two wheeler not been allowed to ply on the haul road made for tippers, as required under Regulation 101 of the CMR, 2017 read with DGMS (Legis.) Circular No. 03 of 2018 and clause no. (8) of Gazette Notification No. GSR 976(E), Dhanbad, dated 1st October 2018,

iii) the deployment of security guard brought in the knowledge of Agent or Manager and imparted training before being deployed in the mine as required under Reg. 39(2)(a) of the CMR, 2017,

this accident could have been averted.

18. Date - 26.12.18	Mine - PHULARITAND
Time - 19.25	Owner - Bharat Coking Coal Ltd.
	Dist. - Dhanbad, State - Jharkhand
	Person(s) Killed :
	1. Ram Ratan Singh, F.B. Opnr., Male, 53 Years

While a loading supervisor was riding on his two wheeler along the wagon loading platform road at Railway siding of a coal mine, he was hit and ran over by a tipper coming from opposite direction causing serious bodily injuries to which he succumbed almost instantaneously.

Had,

the person not been riding on his two wheeler along the wagon loading platform road at Railway siding without justifiable purpose as per Safe Operating Procedure framed by the Manager under Regulation 110 read with Regulation 42(1) of the Coal Mine Regulation, 2017 and

the tipper been operated cautiously and defensively as required under provision of Regulation 63(d) of the Coal Mine Regulation, 2017.

this accident could have been averted.

Code : 0339 Wheeled Trackless (Truck, Tanker, etc.)
(5 Deaths)

19. Date - 22.01.18	Mine - MANUGURU OPENCAST MINE
Time - 14.45	Owner - Singareni Collieries Company Ltd.
	Dist. - BHADRADRI KOTHAGUDEM, State - Telangana
	Person(s) Killed :
	1. Rama Krishna Raju, Chainman, Male, 49 Years

While two surveying personnel of an opencast coal mine were going on motor cycle to attendance clerk's office to book their attendance at the end of the shift, as it was situated about 700 metre away from their survey office which itself was further away from the mine premises and thus they require to travel on a public road by their own means many a times, they were hit by a private sand truck to which the pillion rider came under the wheels of the truck and received crush injuries to which he succumbed almost instantaneously. The other one escaped with minor injuries.

Had,

the attendance clerk's office was provided within the mine premises as required under Rule 78(3) of the Mines Rules, 1955 read with Section 48 of the Mines Act, 1952, and

the survey office was provided at the mine as required under Regulation 64(6) of the Coal Mines Regulations, 2017,

this accident could have been averted.

20. Date - 24.01.18
Time - 21.50

Mine - GEVRA PROJECT
Owner - South Eastern Coalfields Ltd.
Dist. - Korba, State - Chhattisgarh
Person(s) Killed :
1. T.Ranjan Sahu, Surface M.Operator, Male,

35 Years

While an operator of surface mine was walking on the haul road on way to working face at the beginning of night shift in an opencast coal mine, a Service and maintenance van coming from behind hit him inflicting serious injuries to which he succumbed almost instantly.

Had,

the Service and maintenance van been driven carefully and not negligently or wilfully omit to do anything necessary for the safety of the person employed in the mine as required under Regulation 239 of the Coal Mines Regulations, 2017

this accident could have been averted.

21. Date - 02.05.18
Time - 22.30

Mine - KANCHAN O/C
Owner - South Eastern Coalfields Ltd.
Dist. - Korba, State - Chhattisgarh
Person(s) Killed :
1. Santram Pal, Contractor Worker, Male, 23

Years

While a light motor vehicle carrying a helper was going down on the haul road of an opencast coal mine for refuelling in diesel operated equipment, the driver lost control over vehicle due to over speed and resulting into toppling of the vehicle; meanwhile the helper jumped out from the vehicle, inflicting serious injuries to him which he succumbed alter on and the driver escaped unhurt.

Had,

1) the vehicle been driven carefully and was kept under control thus not negligently omitting to ensure own safety and safety of co-worker as required under provision of Regulation 40(4)(a) read with Regulation 239 of the Coal Mines Regulations, 2017,

2) the transport rules framed by the Manager been effectively complied with as required under Regulation 109(3) read with Regulation 45(1) and Regulation 47(1) of the coal Mines Regulations, 2017 and

3) seat belt been used by the helper while seated in the vehicle as required under regulation 40(4) (a) of the Coal Mines Regulations, 2017,

This accident could have been averted.

22. Date - 28.05.18
Time - 12.20

Mine - KAKATIYAKHANI OPENCAST SECTOR-I PROJECT
Owner - Singareni Collieries Company Ltd.
Dist. - Warangal, State - Telangana
Person(s) Killed :
1. A Mallaiah, Contractor Worker, Male, 50

Years

While a tyre mounted concrete mixing vehicle was being driven on an Incline plane of 1 in 5 gradient, the driver lost control of the vehicle and jumped out of its cabin to rescue himself as a result the vehicle ran down and hit a tractor trolley being loaded with earthen material by a group of three contractor work persons, the trolley in turn pressed one of the work person against the side of the Incline

wall, resulting into serious bodily injuries which proved fatal after half an hour while he was being treated at the hospital.

Had,

(i) the vehicle been not driven in an uncontrolled manner, negligently omitting to ensure the safety of the work persons, in contravention of provisions of Regulation 63(d) of Coal Mine Regulation, 2017 and

(ii) the tyre mounted cement mixing vehicle been not deployed on an Incline plane of 1 in 5 gradient omitting to ensure the safety of the workers engaged in contravention provisions of Regulation 239 of Coal Mine Regulation, 2017;

this accident could have been averted.

23. Date - 03.09.18
Time - 22.15

Mine - KULDA OPENCAST MINE
Owner - Mahanadi Coalfields Ltd.
Dist. - Sundergarh, State - Orissa
Person(s) Killed :

1. Rajdev Singh, Cont. Supervisor, Male, 44

Years

While a light motor vehicle with its driver and supervisor was negotiating the entry ramp of a haul road of an opencast mine, it suddenly overturned inflicting serious injuries to the supervisor, which turned fatal on the way to the hospital and the driver escaped with minor injuries.

Had,

i) the haul road been kept free of undulations and slush and maintained in good condition as required under Regulation 101 of the Coal Mines Regulations, 2017 read with Regulation 260 of the Coal Mines Regulations, 2017 read with condition 4.0 (1) of the permission No. Kulda/OCP/290, dated 20.02.17 granted under Regulation 98(1) &(3) of the Coal Mines Regulations, 1957 and;

ii) the light motor vehicle not been driven negligently by the driver during poor visibility thus not endangering his own and co-passenger's safety, as required under Regulation 239 of the Coal Mines Regulations, 2017,

this accident could have been averted.

Code : 0400 Machinery Other than Transp. Machinery

Code : 0441 Drilling Machines
(3 Deaths)

24. Date - 05.01.18
Time - 12.30

Mine - DUDHICHUA PROJECT
Owner - Northern Coalfields Ltd.
Dist. - Singrauli, State - Madhya Pradesh
Person(s) Killed :

1. S.Kr.Panika, Contractor, Male, 22 Years

While a contractor drill operator was driving unauthorizedly a truck mounted drill machine along with two co-workers on a light vehicle road having width of about 11.5m and a gradient of 1 in 15.4, he lost control over the vehicle shifting gear and it ran over the berm and roll down to topple into the drain about six meter below, inflicting serious bodily injuries to one person and minor injuries to remaining two persons. One of the seriously injured persons succumbed to their injuries whilst undergoing treatment at the hospital.

Had,

i) the drill machine not been driven unauthorizedly and carelessly and had been kept under control thus not negligently omitted to ensure his own safety and that of co-workers in contravention to the provisions of Regulation 239 of the Coal Mines Regulation, 2017 read with condition no.7 of code of practice framed for operation and maintenance of drill machine by the manager under Reg.110(3) of the CMR, 2017,

ii) the unauthorised persons not been allowed to ride on the truck mounted drill machine in accordance with the provision Regulation 63(3) of the Coal Mines Regulation, 2017, and

iii) the seat belt been provided and maintained in truck mounted drill machine and thus not negligently omitted to ensure safety of employee in contravention to the provisions of Regulation 239 of the Coal Mines Regulations, 2017, respectively,

this accident could have averted.

25. Date - 02.09.18
Time - 9.00

Mine - KOYAGUDEM OCP- I
Owner - Singareni Collieries Company Ltd.
Dist. - Khammam, State - Telangana
Person(s) Killed :
1. R. Sathiamoorthi, Cont. Emp., Male, 28

Years

While a person standing on ground was directing crawler mounted drill to position for diesel filling from an oil barrel mounted on truck mounted drill, he was hit by rear part of crawler drill causing serious bodily injuries on head to which he succumbed while on the way to hospital.

Had,

i) Safe Operating Procedure formulated by the manager for diesel filling by proper bowser been ensured implemented by the Agent, Manager and Contractor of the mine as required under Section 18(4) of the Mines Act, 1952, Regulation 43(6) and Regulation 39 respectively read with Regulation 239 of the Coal Mines Regulations, 2017,

ii) unsafe truck mounted drills been ensured not deployed in the mine by the Agent, Manager and Contractor of the mine required under Section 18(4) of the Mines Act, 1952, Regulation 39 and Regulation 239 of the Coal Mines Regulations, 2017 read with Condition No. 16.1 of Annexure-I of permission granted under Regulations 98(1) and 98(3) of the Coal Mines Regulations 1957 vide this Directorate's letter No. H1/66020/Perm/1382 dated 15.06.2009 and

iii) the drill operator ensured that there is no person within the machine swing area before operating the drill machine as required under Regulation 44(1)(a) of the Coal Mines Regulations, 2017,

this accident could have been averted.

26. Date - 28.11.18
Time - 17.30

Mine - MOHER & MOHER AMLOHRI EXTENSION OCP
Owner - M/S SASAN POWER LTD.
Dist. - Singrauli, State - Madhya Pradesh
Person(s) Killed :
1. A. Srivastava, Cont. Welder, Male, 32

Years

While a welder was engaged in welding on stuck drill rod of drill machine to build grips for the purpose of unscrewing it on a drill platform in an opencast coal mine, the inadvertent operation of a breakout wrench pressed the welder between the breakout wrench and drill rod causing him serious bodily injury to which he succumbed almost instantaneously.

Had,

i) the personnel deployed been attentive and been taken reasonable care to ensure that break out wrench lever not been inadvertently operated while motor in running and the welder been not left running unattended, thus negligently not endangering life and safety of the persons employed in welding of drill rod, as called for by the provisions of Regulation 40(4)(a) and Regulation 239 of Coal Mines Regulations 2017.

ii) the electrical isolation been carried out to ensure that the breakout wrench been not able to re-energised inadvertently while welder was working on a drill platform thus not negligently omitted to ensure safety of the welder in contravention of Regulation 208(7) and 239 of Coal Mines Regulations 2017.

iii) the proper instructions been given and the proper supervision been exercised for carrying out isolation for welding job in drill machine and its verification by a competent person as per management laid down Safe Operating Procedure (SOP), as called for by the provisions of Regulation 208(7) and Regulation 40(1) of Coal Mines Regulations 2017.

this accident could have been averted.

Code : 0443 Loading Machines
(2 Deaths)

27. Date - 04.01.18 Mine - AMALGAMATED SUDAMDIH PATHERDIH COAL MINE
Time - 18.00 Owner - Bharat Coking Coal Ltd.
Dist. - Dhanbad, State - Jharkhand
Person(s) Killed :
1. R.Rawani, Payloader Operator, Male, 50
Years

While operating a pay loader in the camp area workshop established in the leasehold of an opencast coal mine, the operator fell down and was run over by left rear wheel causing fatal injuries.

Had,

provisions of safety and proper discipline of contractual work persons engaged in incidental job to mining operations in the workshop camp, been ensured as required under Regulation 36(1) of the Coal Mines Regulations, 2017,

this accident could have been averted.

28. Date - 17.10.18 Mine - JHIRIA U.G. MINE
Time - 5.30 Owner - South Eastern Coalfields Ltd.
Dist. - Anuppur, State - Madhya Pradesh
Person(s) Killed :
1. Kanhaiyalal, Dresser, Male, 59 Years

While a LHD was moving towards the face for loading of coal in the development district of an underground coal mine, a dresser was run over by the LHD when he entered in the hazardous area where LHD was in operation and he succumbed to injuries instantly.

Had,

i) the suitable cross-over or cross-under bridge been provided in the conveyor roadway for travelling of persons as required under Regulations 93(4) of the Coal Mines Regulations, 2017, and

ii) it been effectively enforced the provisions of codes of practice to prevent workers for working or travelling in hazardous area while LHD was in operation as required under Regulation 110(4) Coal Mines Regulations, 2017

this accident could have been averted.

Code : 0446 Shovel, Draglines, Frontend Loader, etc.
(1 Death)

29. Date - 23.10.18 Mine - KHAIRAGURA OC
Time - 12.10 Owner - Singareni Collieries Company Ltd.
Dist. - Adilabad, State - Telangana
Person(s) Killed :
1. Ade Sai Kumar, Helper, Male, 25 Years

While a supervisor along with two helpers were positioning the boom of an excavator for changing the bucket one of the helper got hit by the Boom Arm and received serious bodily injuries and succumbed on the way to hospital.

Had,

i) authorised person operated the excavator as required under Regulation 216(7) of the Coal Mines Regulations, 2017

ii) the excavator was not operated when person was near as required under Regulation 62(g) of the Coal Mines Regulations, 2017

iii) Safe Operating Procedure been framed and implemented considering team of persons, tools and tackles for the specific maintenance work as required under Regulation 110 of the Coal Mines Regulations, 2017,

this accident could have been averted.

Code : 0447 Crushing & Screening Plants
(1 Death)

30. Date - 24.03.18 Mine - JAGANNATH
Time - 18.35 Owner - Mahanadi Coalfields Ltd.
Dist. - Angul, State - Orissa
Person(s) Killed :
1. P.K.Das, Cleaning Mazdoor, Male, 43 Years

While hammering a coal boulder stuck up in the hopper of a crusher in the coal handling plant, by standing with one leg on the coal boulder and another on the crusher drum, the cleaning mazdoor got unbalanced & fell down due to rotation of crusher drum and was trapped under the crusher drum, receiving serious head & bodily injury by cutting picks of the drum to which he succumbed almost instantly.

Had,

(i) the person not been allowed to break the coal boulder without locking the crusher drum & without any supervision in contravention of Regulation 211(4) read with Regulation 47(1) & 54(d) of the Coal Mines Regulation, 2017.

(ii) The code of practice been framed & enforced for coal boulder breaking in the hopper of crusher thereby negligently omitted to ensure the safety of persons in contravention of Regulation 110(2) read with Regulation 239 of the Coal Mines Regulation, 2017.

(iii) the mechanised means of breaking the Coal boulder i.e. Hydraulic Rock Breaker been deployed at the crusher thereby altogether eliminating the risk as per Regulation 104(2) (a) of the Coal Mines Regulations, 2017.

this accident could have been averted.

Code : 0448 Other Heavy Earth Moving Machinery
(6 Deaths)

31. Date - 21.07.18 Mine - TAPIN NORTH
 Time - 13.50 Owner - Central Coalfields Ltd.
 Dist. - Hazaribagh, State - Jharkhand
 Person(s) Killed :
 1. Amrit Kumar, EP Fitter, Male, 40 Years
 2. Mithun, Gen. Mazdoor, Male, 34 Years
 3. Arjun Munda, EP Mazdoor, Male, 31 Years
 4. Kalia Ganju, SDL Helper, Male, 49 Years

While a Road Grader machine was being parked inside the Tyre Shed in the precincts of the Workshop during day light hours, the operator lost control of the machine and hit and broke the partition wall (of about 13 meter long, 4 meter high and 25.4 cm thick) made of brick in cement and 11 (eleven) persons standing/sitting in the other side of the wall were buried under the fallen debris of the broken wall and received serious bodily injuries to which 3 persons died on the spot and another injured person succumbed to his injuries on the way to hospital.

Had

the hazard identified due to the risk of lack of adequate and specified parking space for heavy Earth Moving Machineries inside the workshop/mine been mitigated accordingly and the control measures been implemented for parking the road grader machine inside the Tyre Shed as part of the safety management plan as required under Regulation 104(4)&(8) read with DGMS Circular (Technical) No.8 of 2003 and thus negligently or wilfully not endangered the life of persons employed in the mine as required under Regulation 239 of the Coal Mines Regulation, 2017;

and

the adequate and suitable Rest Shelter been provided and maintained in the Mine/Workshop as required under Rules 62 and 63 of the Mines Rules 1955 for the work persons to take rest and food and give protection against Weather and thus negligently or wilfully not endangered the life of persons employed in the mine as required under Regulation 239 of the Coal Mines Regulation, 2017;

this accident could have been averted.

32. Date - 23.11.18 Mine - KUSMUNDA OCP
 Time - 21.00 Owner - South Eastern Coalfields Ltd.
 Dist. - Korba, State - Chhattisgarh
 Person(s) Killed :
 1. N.P. Devangan, Engineer, Male, 57 Years

While reversing a dozer in an excavation workshop of an open cast coal mine, a person was caught below the right-side track chain of the dozer, thereby inflicting serious bodily injuries to him, to which he succumbed at the spot.

Had,

adequate precautions been taken while reversing the dozer, thereby not negligently or wilfully endangered life of the person employed therein, by contravening the Regulation 239 of the Coal Mines Regulations 2017 and

Safe code of practices while reversing the dozer been implemented, thereby negligently not omitting to ensure safety of persons employed therein, by contravening the provisions of Regulation 239 of the Coal Mines Regulations 2017 read with SOP's issue number Kusmunda/Excavation/Dozer/SOP/18-19/001 and Regulation of the Coal Mines Regulations 2017.

this accident could have been averted.

33. Date - 24.11.18 Mine - AMRAPALLI OCP
Time - 20.35 Owner - Central Coalfields Ltd.
 Dist. - Chatra, State - Jharkhand
 Person(s) Killed :
 1. L.K. Mahto, Cont. Worker, Male, 21 Years

While dozing coal in the top of a coal stock the dozer inadvertently reached near the edge, fell from the edge and stuck down the slope to which operator sitting in the cabin buried up to his waist in the coal stock and received serious bodily injuries and later succumbed during treatment at the hospital.

Had,

i) the operator been followed the Safe Operating Procedure prepared by the manager of the mine and not reached the dozer near to the edge of the coal heap as required under Reg. 239 read with Reg. 40.

ii) the dozer been provided with the Roll Over Protection System/ Fall Over Protection System cabin along with the operator seat belt as required Reg. 216(2) read with Gazette Notification no. GSR 987(E) dated 04.10.2018 and safety management plan (SMP) prepared under Reg. 104 of CMR, 2017

iii) effective supervision been ensured by placing the working under the charge of a mining Sirdar and overman as required under Reg. 129, Reg. 33 & Reg. 35.

this accident could have been averted.

Code : 0500 Explosives

Code : 0552 Deep Hole Blasting Projectiles
 (1 Death)

34. Date - 23.11.18 Mine - KULDA OPENCAST MINE
Time - 14.15 Owner - Mahanadi Coalfields Ltd.
 Dist. - Sundergarh, State - Orissa
 Person(s) Killed :
 1. Md. Israfil Ansari, Tipper Optr., Male,
24 Years

While a coal bench of an opencast mine was blasted, a tipper engaged in transportation of coal entered within the danger zone at that instant and was overturned due to effect of blasting inflicting serious bodily injuries to the tipper operator who died on the way to the hospital.

Had,

the tipper not been allowed to enter within a radius of 500m from the place of blasting hereinafter referred to as the danger zone as required under Regulation 196(2)(b) of the Coal Mines Regulations, 2017 read with Reg. 194 of the Coal Mines Regulations, 2017 read with the Gazette of India Notification No. G.S.R. 985(E), Condition 25.0, dated, 1st October, 2018,

this accident could have been averted.

Code : 0555 Misfires/Sockets(While Drilling into)
(1 Death)

35. Date - 02.02.18 Mine - MANIKPUR OCP
Time - 3.30 Owner - South Eastern Coalfields Ltd.
Dist. - Korba, State - Chhattisgarh
Person(s) Killed :
1. R.K.Kushre, Drill Helper, Male, 18 Years

While drilling was being carried out by deploying a drill on a overburden bench in night shift in an opencast coal mine the rotating drill bit hit to a misfire shot of earlier blasting, which exploded, a crater of about 1.2x1.2m 0.5 size was formed at the drilling place, the fly off rocks & ejected iron pieces of drill machine hit to a contractual worker engaged for demarcation of position of shot holes and cleaning of drill cutting, thus inflicting serious bodily injuries to which he succumbed on way to hospital.

Had,

the misfires was detected & dealt with properly before drilling new hole, as required under regulation 204 also read with reg. 239 of the CMR, 2017 and para 6.0 of the code of practice for blasting framed by the manger;

this accident could have been averted.

Code : 0600 Electricity

Code : 0661 Overhead Lines
(3 Deaths)

36. Date - 31.07.18 Mine - PINDRA
Time - 15.15 Owner - Central Coalfields Ltd.
Dist. - Hazaribagh, State - Jharkhand
Person(s) Killed :
1. Binay Kumar Nonia, Regular Emp., Male, 48
Years

While two persons were being carried out a maintenance work on double pole of 3.3KV Overhead Line in an opencast mine, the power got resumed resulting electric shock which proved fatal to one person and the other one received serious burn injuries subsequently his left hand was imputed on the next day.

Had,

adequate shutdown measures been ensured as required under Regulation 19(1) of Central Electricity Authority (Measures relating to safety and Electric supply) Regulation 2010 read with BIS 5216 and adequate numbers of Electrical Supervisors and Electricians holding a valid certificate of competency been appointed as required under Regulation 3 (1) read with 115 (1) (i)(ii)(iii)(iv) of Central

Electricity Authority (Measures relating to safety and Electric supply) Regulation 2010, this accident could have been averted.

37. Date - 15.08.18 Mine - KUYA COLLIERY
Time - 11.00 Owner - Bharat Coking Coal Ltd.
Dist. - Dhanbad, State - Jharkhand
Person(s) Killed :
1. B.L. Mahato, Cont. Worker, Male, 30 Years

While a contractual worker ascended an electric pole without effective supervision and without the use of proper Personal Protective Equipment (PPE) and safety devices, to reconnect a 3.3KV power cable to an overhead line, which got charged inadvertently due to improper implementation of shutdown procedure, received electric shock due to coming in contact with the live conductor and fell down from the top of pole of 12m height and received grievous head injuries, which proved fatal afterwards.

Had

the job been carried out under effective supervision by following proper shutdown procedure using proper PPE like safety belt, insulating protective equipment and tools/devices like line tester, hydraulic ladder as required under Regulations 19(1)&(2) read with IS:5216-1982 and Regulation 115(1)(i) of Central Electricity Authority (Measures relating to Safety and Electric Supply) Regulations, 2010

this accident could have been averted.

38. Date - 31.10.18 Mine - LINGARAJ OCP
Time - 13.10 Owner - Mahanadi Coalfields Ltd.
Dist. - Angul, State - Orissa
Person(s) Killed :
1. B. Nayak, Cont. Worker, Male, 43 Years

While a contractor worker was working on triple pole structure of 3.3KV Overhead Line for fixing a cradle guard in an opencast coal mine, came in contact with the live overhead conductor got electrocuted and a co-worker who was trying to rescue him also received serious burn injuries due to electric shock.

Had,

adequate shutdown measures been taken by isolating the feeder properly to prevent from being inadvertently electrically charged as required under Regulation 19(1) of Central Electricity Authority (Measures relating to safety and Electric supply) Regulations 2010 read with BIS 5216 and also adequate precautions and interlocking been ensured to prevent possibly of inadvertent feedback from DG supply which was not intended to be operated in parallel as required under Regulation 45(1)(iii) of Central Electricity Authority (Measures relating to safety and Electric supply) Regulations 2010.

Code : 0663 Switch Gears, Gate End Boxes, Pommel, etc.
(1 Death)

39. Date - 10.09.18 Mine - GEVRA PROJECT
Time - 20.15 Owner - South Eastern Coalfields Ltd.

Dist. - Korba, State - Chhattisgarh

Person(s) Killed :

1. Dilip kumar, Mechanical Fitter, Male, 50

Years

While a mechanical fitter was doing the connection of a 1.5hp pump motor from a live ICTP switch under a planned pipe line maintenance work, received electric shock and succumbed to his injuries on the way to hospital.

Had,

i) the work on live line being done by a person who is designated in that behalf, taking safety precautions as required under Regulations 19(3) of the CEA (Measures relating to Safety and Electric Supply) Regulations, 2010

and

ii) a register of designating person(s) to operate and carry out the work on electric lines and apparatus being maintained as required under Regulation 3 of CEA (Measures relating to Safety and Electric Supply) Regulations, 2010,

this accident could have been averted.

Code : 0664 Energized Machines
(1 Death)

40. Date - 14.09.18
Time - 13.30

Mine - DHORI KHAS
Owner - Central Coalfields Ltd.
Dist. - Bokaro, State - Jharkhand
Person(s) Killed :
1. M. Nonia, Cont. Worker, Male, 37 Years

While six workers in two crew of three workers each, without using proper Personal Protective Equipment (PPE) like insulated hand gloves & shoes, were engaged in drilling and drilling related operations at two distinct locations belowground, received electric shock due to leakage of electricity from an electric network whose controlling switchgears were in use with defunct earth fault protections, resulted into fatality of a contractual worker.

Had,

i) the earth fault protections provided with the controlling switchgears, catering power to SDL, sr. no. 692 installed belowground at 37th level/15th dip of 7/8 Incline mine, as required under Reg-1000(1) of Central Electricity Authority (Measures Relating to Safety and Electric Supply) Regulations, 2010 been maintained and

ii) the insulation resistance (IR) value of the concerned switchgears & cables been maintained at least 1 Mega-Ohm as required under Reg-33(1)(ii) of Central Electricity Authority (Measures Relating to Safety and Electric Supply) Regulations, 2010 and

iii) the job been carried out using proper Personal Protective Equipment (PPE) like insulated hand gloves & shoes as required under Reg-19(2) of Central Electricity Authority (Measures Relating to Safety and Electric Supply) Regulations, 2010

this accident could have been averted.

Code : 0700 Dust, Gas, & Other Combustible Material

Code : 0779 Other Accidents due to Dust/Gas/Fire
(4 Deaths)

41. Date - 05.05.18 Mine - DUDHICHUA PROJECT
Time - 10.30 Owner - Northern Coalfields Ltd.
Dist. - Singrauli, State - Madhya Pradesh
Person(s) Killed :
1. L. Gupta, mechanical Fitter, Male, 59
Years

While reversing, a dozer rolled over an oxygen cylinder kept on the surface near coal heap and caused explosion inflicting serious burn injuries to in fitter the vicinity, to which he succumbed after 24 hours during treatment in hospital.

The accident could have been averted,

Had,

i) the operator been more vigilant and been ensured that the place for movement of dozer should be free from any object thus negligently or wilfully did thing likely to endanger life or, negligently or wilfully omitted to do thing necessary for the safety of the persons employed therein in contravention of the provision of Regulation 239 of coal Mines Regulation 2017.

ii) oxygen cylinders when not in use been kept in trolley or inside fenced area where there is no movement of HEMM as to obviate any risk of fire, bursting or explosion in contraventions of the provision of Regulation 210(1) of Coal Mines Regulation 2017.

42. Date - 16.12.18 Mine - BAGDEWA U/G MINE
Time - 17.00 Owner - South Eastern Coalfields Ltd.
Dist. - Korba, State - Chhattisgarh
Person(s) Killed :
1. Laxmikant Prasad, Sirdar, Male, 41 Years
2. Ramadhar Yadav, Crew Man, Male, 33 Years
3. Ajay Kumar, Gen. Mazdoor, Male, 34 Years

While two persons entered in bye of a development connection to an adjacent sealed-off area made by the preceding relay by conventional drilling and blasting, they were asphyxiated by an irrespirable atmosphere to which they collapsed, of whom one person was rescued by the co-workers and sent to surface in unconscious state where he was declared brought dead, and a third person who attempted to rescue the second fallen person by entering into same area also got asphyxiated and collapsed after which, both the remaining persons were rescued by a rescue team in unconscious state who were declared dead during their transport to surface.

Had,

i) in been ensured that the air at the connection place where persons were required to work or pass did not contain less than 19% oxygen or more than 0.5% carbon dioxide or any noxious gas in quantity likely to affect the health of any person,

ii) making connection into an area with irrespirable atmosphere without following proper procedure been avoided or stopped .

iii) there been a system of regular monitoring and inspection of mine workings of assistant managers or other senior officials, and

iv) there been a regular practice of using approved flame safety lamp or other approved apparatus for determining deficiency of oxygen into belowground workings of the mine; and the place of connection with irrespirable atmosphere been examined with such lamp or apparatus and fenced off to prevent any person from inadvertently entering there,

this accident could have been averted.

Code : 0800 Falls(Other than Falls of Ground)

Code : 0881 Fall of Person from Height/into Depth
(3 Deaths)

43. Date - 10.02.18 Mine - GOURI EXPANSION AMALGAMATED MINE
Time - 9.45 Owner - Western Coalfields Ltd.
Dist. - Chandrapur, State - Maharashtra
Person(s) Killed :
1. Maroti B. Atram, Helper, Male, 24 Years

While an operator/helper was descending from an elevated working platform of a Crushing Plant in an Open Cast Coal Mine, he lost his balance and fell on ground, hitting metal structures of the Plant, thereby sustaining serious bodily injury, to which he succumbed after about three hours.

Had

the proper approach way to and from working platform of crushing plant for persons to ascend or descend been provided, as required under Regulation 131(5) of the Coal Mines Regulations 2017,

a system of check list and issuing work permit been maintained for working at heights and the dangers associated therewith was undertaken in the Crushing plant, as required under Regulation 131(9) of the Coal Mines Regulations 2017,

the Safe code of practices for operation, repairs and maintenance of Crushing plant been framed and implemented as required under Regulations 110(1),110(2),110(3),110(4) and 208(8) of the Coal Mines Regulations 2017,

the competent persons including officials and technicians as is sufficient to secure, during each of working shifts been appointed for running and maintenance, in safe working order, of the Crushing Plant, as required under Regulation 35(1)(iii) of the Coal Mines Regulations 2017 and

an experienced worker been employed in the Crushing Plant for maintenance activities under supervision and guidance of an experience person, as required under Regulation 132(10) of the Coal Mines Regulations 2017,

the accident could have been averted.

44. Date - 24.08.18 Mine - BHARATPUR PROJECT
Time - 12.00 Owner - Mahanadi Coalfields Ltd.
Dist. - Angul, State - Orissa
Person(s) Killed :
1. S.C.Barik, Contractor Worker, Male, 43
Years

While a contractor worker was engaged to replace light fitting on a 8m height tubular pole in an opencast coal mine without ensuring provision of safety devices such as ladder, and personal protective equipments like helmet and safety belt, fell down from a height of about 8m and sustained serious bodily injuries which proved fatal after 45 minutes while being shifted to hospital.

Had,

adequate precautions such as provision of ladder and personal protective equipments like helmet and safety belt been ensured before engaging the person to work on a lighting pole and deployment of only trained contractor's worker for electrical repair and maintenance job on height and electrical pole as required under Regulation 19(2) and Regulation 7(4) of Central Electricity Authority (Measures relating to Safety and Electric Supply) Regulation 2010 this accident could have been averted.

45. Date - 01.11.18 Mine - VENKATESH KHANI NO.7
 Time - 12.05 Owner - Singareni Collieries Company Ltd.
 Dist. - Khammam, State - Telangana
 Person(s) Killed :
 1. B. Prabhakar, Cont. Worker, Male, 20
 Years

While a contractor's work person was engaged for cleaning accumulated coal slush, deposited over the roof (made of iron sheet) of abandoned switch room, built beneath the gantry of a coal handling plant, the iron sheet broke down as a result he fell down on ground from a height of 2.9m and got buried beneath the coal slush, inflicting serious bodily injuries to which he succumbed on the way to hospital.

Had,

i) the work person been not allowed to work without using safety belt as required under the provisions of Regulation 131 read with 239 of the Coal Mines Regulations, 2017;

ii) the competent person/mine official been present during the cleaning of coal slush over the old and abandoned switch room as required under the provisions of Regulation 41 of the Coal Mines Regulations, 2017;

this accident could have been averted.

```

-----
      Code : 0900      Other Causes
-----
      Code : 0991      Irruption of Water
                      (1 Death)
-----
  
```

46. Date - 26.12.18 Mine - KAKATIYA KHANI NO 1 &1A INCLINE
 Time - 12.30 Owner - Singareni Collieries Company Ltd.
 Dist. - Warangal, State - Telangana
 Person(s) Killed :
 1. R. Sathyanarayana, Supportman, Male, 43
 Years

While a person was cleaning chocked drain in the outbye dip gallery of a stowing panel, where stowing was in progress, suddenly one of the stowing barricade in the rise side got punctured causing sudden flow of water and sand along the dip due to which the person cleaning the drain was carried away along with sand and water and got buried at bottom level resulting in his death.

Had,

i) the general shift Sirdar not allowed the person to work who was not under his control without ensuring proper supervision of the work as required under Regulation 41(a) and Regulation 129(1) of the Coal Mines Regulations, 2017,

ii) the shift Sirdar ensured by proper supervision, the safety of the person when he came to know that the person was diverted for the work other than that for which he was deployed by him as required under Regulation 42(2) and Regulation 239 of the Coal Mines Regulations, 2017,

iii) the overman ensured that the barricade Mazdoor under his control had not been diverted from his work and allowed to work in isolation without proper supervision as required under Regulation 47(2)(c) and Regulation 239 of the Coal Mines Regulations, 2017 and

iv) the Assistant Manager ensured safety of person under his control by Sirdar and overman and himself and not allowed any person to work alone in isolation as required under Regulation 42(2) and Regulation 45(1) of the Coal Mines Regulations, 2017

this accident could have been averted.

Code : 0993 Drowning in Water
(2 Deaths)

47. Date - 02.03.18 Mine - NEYVELI NO 2
Time - 11.15 Owner - Neyveli Lignite Corporation Ltd.
Dist. - Cuddalore, State - Tamil Nadu
Person(s) Killed :
1. S.Ramar, Chief Technician, Male, 52 Years

While a person was connecting cable to SCEH-6 kiosk unit, which was installed near the edge of M-28 sump, fell down into the sump from a height of 7m and got drowned.

Had

(i) the Engineer-in-charge ensured the installation of electrical equipments been installed properly in safe working condition by putting on firm ground and at least 3m away from the edge of the sump, thus negligently omitted to take necessary steps for the safety of persons employed therein as required under Regulation 239 of the Coal Mines Regulations, 2017 read with Regulation 54(a) of the Coal Mines Regulations, 2017,

(ii) the Engineer and Supervisor been present throughout the work of changing of faulty cable which was being carried out and ensured the safety of the workmen by all means as required under Regulation 54(a) & (c), Regulation 42(2) read with Regulation 239 of the Coal Mines Regulation, 2017,

(iii) the Manager of the Mine been more vigilant and made daily supervision to ensure safety in every respect to the workers employed therein and followed the SOP been framed for the purpose and had been implemented in respect of safety of the persons employed in the mine as required under Regulation 43(1) of the Coal Mines Regulations, 2017 read with Section 18, sub-section 4 & 5 of the Mines Act, 1952,

(iv) the arrangements been made by Owner & Agent of the Mine for regular assessment of the risk and dealing with it to eliminate the risk on priority basis and ensure that the machine is commissioned, operated, maintained in such a way that workers can perform the work assigned to them without endangering their safety as required under Regulation 37(1)(a) & 2(b) of the Coal Mines Regulations, 2017 and ensured monitoring, assessment and regular inspection of the workings to identify the various hazards to which the workers may be exposed and take necessary measures to eliminate the risk as required under Regulation 37(2)(e) and Regulation 239 of the Coal Mines Regulations, 2017, read with Section 18, sub-section 4, 5 & 6 of the Mines Act, 1952,

this accident could have been averted.

48. Date - 01.09.18 Mine - GARJANBAHAL OCP MINE
Time - 11.50 Owner - Mahanadi Coalfields Ltd.
 Dist. - Sundergarh, State - Orissa
 Person(s) Killed :
 1. G.Kutuan, Shovel Optr., Male, 37 Years

While one shovel was engaged in shifting of pump in a sump of an opencast mine, it toppled into water submerging the operator's cabin resulting into the death of the shovel operator on the spot due to asphyxia.

Had,

i) the 'Code of practice' been framed and enforced for the sump preparation and pump shifting operation as required under Regulation 110(1), (3) &(4) of Coal Mines Regulations, 2017 and;

ii) the shovel not been negligently allowed to march along the edge of the sum p filled with water thereby endangering safety of the shovel operator employed in the mine thus contravening Regulation 239 of the Coal Mines Regulations, 2017.

this accident could have been averted.

Code : 0999 Unclassified
 (1 Death)

49. Date - 01.10.18 Mine - MAHAKALI
Time - 15.10 Owner - Western Coalfields Ltd.
 Dist. - Chandrapur, State - Maharashtra
 Person(s) Killed :
 1. H.Z. Awari, Bolting Crew, Male, 55 Years

While loading wooden sleepers from the sawmill to a truck, a person deployed as carpenter helper on surface, felt uneasiness and high fever, sent to the hospital for treatment and during the treatment at the hospital he died.

2019



6. ACCIDENT ANALYSIS IN COAL MINES: 2019

- The number of fatal accidents in coal mines in the year 2019 stands at 51 with 56 fatalities and 6 seriously injured in these fatal accidents. The number of fatal accidents has increased as compared to previous year 2018.
- The number of serious accidents in the year 2019 stands at 193 with 198 seriously injured persons. The number of serious accidents has decreased as compared to previous year 2018.
- Among the broad category of causes, most number of fatal accident occurred due to “Transportation Machinery (non-winding)”. Details can be seen in the tables.
- Among the broad category of causes, most number of serious accident occurred due to “Falls (other than fall of ground)”. Details can be seen in the tables.
- Maximum number of fatal accident occurred in Singareni Collieries Company Limited and Eastern Coalfields Limited. Maximum number of serious accident occurred in Singareni Collieries Company Limited. Details can be seen in the tables.
- Maximum number of fatal accident occurred in the mines under South Eastern Zone of this Directorate and maximum number of serious accident occurred in the mines under South Central Zone of this Directorate.
- Major Accident 1:
 - Date of Accident: 23 July 2019; Mine Name: BHARATPUR PROJECT; Mine Owner: Mahanadi Coalfields Ltd.; Number of Persons Killed: 4; Number of Persons Seriously Injured: 0
 - Cause of the Accident: While men & machinery were deployed for extraction of coal in an area dip-side of a left out rib of coal and overburden having width of about 03 m at top and of height of about 39m against which backfilling was done up to a height of about 100m, suddenly the rib failed, causing flow of debris including broken rib, dumped material and slush spreading over an area measuring about 210m (L) X 270m (W), burying men and machinery and inflicting fatal injuries to four persons and nine persons escaped with minor injuries.
 - What could have averted this accident: Had,
 1. persons not been engaged in an area on the dip side of the rib having prominent cracks and fire, thereby not endangering their life and safety, as required under Regulation 239 of the Coal Mines Regulations, 2017
 2. the hazard of failure of the rib against which overburden was kept dumped, been identified and risks due to failure of the rib been assessed and implemented as required under the Regulation 104(1) of the Coal Mines Regulations, 2017
 3. the method of working, dump slope and monitoring of slope stability been planned, designed and worked as determined by a scientific study

as required under Regulation 106(2) of the Coal Mines Regulations, 2017

4. Precautions been taken to prevent failure of slope of the overburden dump as required under Regulation 108 of the Coal Mines Regulations, 2017

➤ Recommendations:

1. It is time to tread towards self-regulation to shift the onus of hazard identification on to the "Hazard owners". It is now required that the mine management should focus on self-regulation and take up proactive measures to eliminate unsafe conditions and eradicate unsafe practices, to ensure a safe and hazard-free work environment.
2. The presence of the rib on dip-side the dump acts as a barrier. It checks the flow of the collected water, near the dump toe and the natural flow of dumped material, thereby exerting the pressure on the rib, ultimately leading to the failure of the rib. The presence of coal pillars in the workings leads to spontaneous heating of the coal and thereby fire in the coal pillar and causing failures. There are number of occasions when in-situ block of coal(rib) is left un-extracted have failed and collapsed causing flow of debris causing fatal accidents thus management shall not leave in-situ block of coal(rib) un-extracted.
3. The top soil should not be mixed with Overburden (OB) and dumped at the bottom or middle of the dump. It should be stacked separately and spread at the top of the dump for plantation as prescribed in Reg. 108(1) of CMR, 2017.
4. The dumped material shall be allowed to settle at not exceeding the natural angle of repose of the material as prescribed in Reg. 108(2) of CMR, 2017. The spoil bank face shall not be retained by artificial means at an angle in excess of its natural angle of repose.
5. The OB should not be dumped in the sump. In unavoidable circumstances, the water and slush in the sump shall be cleared up to the hard floor of the pit. The hard floor of the pit which forms the base of in-pit dump shall be ripped or broken to a depth of 1 to 2m to improve the frictional resistance at the base of the dump before starting of the dumping. It should be filled with OB consisting coarse grained sandstone. It will also facilitate the passage of water through the dump floor, thus preventing accumulation of water at the base of dump.
6. It is advised to complete the scientific study at all opencast mines in respect of method of working, ultimate pit slope, dump slope and monitoring of slope stability forthwith and work the mines accordingly.
7. A Code of practice for method of in-pit dumping, stability and real-time monitoring of dumps including dump yard management and control shall be prepared and implemented.

8. The real-time monitoring of dumps shall be carried out. Carefully designed real-time monitoring programs should be integrated part of Safety Management Plan (SMP) which is legal binding, and very useful for supplementing safe scientific design methods to detect instability well in advance during progress of the mine so that men and machines can be withdrawn well in advance.
9. As far as practicable, the carbonaceous matter shall not be dumped in OB dump.
10. A code of practice shall be drawn up for dealing with fires in OB dumps.
11. The water shall not be allowed to accumulate over the dumps. Proper levelling of the dumped material should be done.
12. The back filled area shall be kept benched and the distance of any active mine workings (faces) from the toe of the bottom-most back filled face (bench) shall not be less than 100 m or height of the OB dump whichever is higher without prior permission from this directorate based on scientific study.
13. The ultimate high wall should be formed by controlled blasting. The weak strata should be stabilized and secured adequately.
14. In case of failed slopes, the new benches should always be formed, in the failed zone, by pushing back the existing pit crest from top downwards. The toe of the failed material should not be touched before reforming the benches from top downwards. The fresh benches should be formed in undisturbed slope material.
15. Most of the high walls and dumps were failed in rainy season. The mine management should increase the mine inspections in and around the mine during pre-monsoon period and focus on measures taken for diverting of rain water, drainage system, abnormal flow of water, development of any tension cracks on surface, displacement of benches, etc. There should not be any flow of water over the slopes which increases density and reduces the cohesion and angle of internal friction of the friable strata leading to the slope failure. Additionally, dewatering of potentially unstable zones is also important to minimize hazards related to high wall failures. It is recommended to carry out geo-resistivity or any other survey of the mine to locate potential source of ground water around the high wall and use a combination of vertical bore wells and horizontal drain holes for depressurization. Otherwise the dump would once again get saturated and may lead to a failure. It is recommended to provide adequate & well-planned drainage system in and around the pit in high wall and dump benches to maintain the pit/dump slope stable. Proper cleaning/ desilting and levelling of the drains would be necessary to keep the drains effective.
16. The discontinuous dumping shall be avoided to check water accumulation between heaps as far as practicable. The open cracks

developed in the partially developed dump shall be filled and consolidated with the proper levelling of the benches with the help of dozer. It will help to consolidate the dumped material and will minimise the infiltration of water inside the dumps. Proper gradient along the benches, top and floor of the dump shall be ensured. It will facilitate an effective seepage/ flow of water retained in dumps as well as run-off of rainwater to the drains to take the same away from the dump. The drains should be effectively maintained to divert the drained water away from the dump.

17. Afforestation by planting trees on dumps shall be carried out to improve the stability of dumps by preventing erosion.
18. No person shall, or shall be permitted to approach the toe of an active spoil bank where he may be endangered from material rolling down the face. Suitable warning signs at conspicuous places shall also be displayed.
19. No coal or carbonaceous matter or debris or overburden shall be stacked within 100m around the active faces and periphery of the opencast workings.
20. All the persons employed beyond day-light hours in opencast workings, dump yard, CHP, etc. shall be provided with, and shall use, fluorescent jacket and helmet with fluorescent band.

Statement 6.1
Casualty/serious injury rates in coal mines for different companies in 2019

Sl.	Mineral/State/ District	Number of Accidents		No. of Persons Killed						No. of Persons Seriously Injured					
		----- Fatal	Serious	Below Ground	Opencast		Above Ground		Total	Below Ground	Opencast		Above Ground		Total
					----- M	----- F	----- M	----- F			----- M	----- F	----- M	----- F	
				M					F	M					F
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1.	Coal														
	Chhattisgarh														
	Raigarh	2	0	0	2	0	0	0	2	0	0	0	0	0	0
	Surguja	1	1	0	1	0	0	0	1	1	0	0	0	0	1
	Korea	1	1	2	0	0	0	0	2	0	1	0	0	0	1
	Korba	3	6	1	2	0	0	0	3	2	3	0	1	0	6
	Surajpur	0	2	0	0	0	0	0	0	1	0	0	1	0	2
TOTAL : CHHATTISGARH		7	10	3	5	0	0	0	8	4	4	0	2	0	10
	Jharkhand														
	Dhanbad	9	6	4	2	0	3	0	9	7	3	0	1	0	11
	Bokaro	0	1	0	0	0	0	0	0	1	0	0	0	0	1
	Chatra	1	0	0	1	0	0	0	1	0	0	0	0	0	0
	Ramgarh	1	0	1	0	0	0	0	1	0	0	0	0	0	0
TOTAL : JHARKHAND		11	7	5	3	0	3	0	11	8	3	0	1	0	12
	Madhya Pradesh														
	Betul	0	1	0	0	0	0	0	0	0	0	0	1	0	1
	Chhindwara	0	1	0	0	0	0	0	0	1	0	0	0	0	1
	Shahdol	1	1	0	1	0	0	0	1	1	0	0	0	0	1
	Anuppur	1	3	0	0	0	1	0	1	3	0	0	0	0	3
	Singrauli	1	2	0	1	0	0	0	1	0	2	0	0	0	2
TOTAL : MADHYA PRADESH		3	8	0	2	0	1	0	3	5	2	0	1	0	8
	Maharashtra														

Chandrapur	1	4	1	0	0	0	0	1	1	2	0	1	0	4
Nagpur	0	4	0	0	0	0	0	0	3	0	0	2	0	5
Yavatmal	2	4	2	1	0	0	0	3	0	3	0	1	0	4
TOTAL : MAHARASHTRA	3	12	3	1	0	0	0	4	4	5	0	4	0	13
Orissa														
Angul	6	1	0	7	0	2	0	9	0	1	0	0	0	1
Sundergarh	1	0	0	1	0	0	0	1	0	0	0	0	0	0
Jharsuguda	0	1	0	0	0	0	0	0	0	1	0	0	0	1
TOTAL : ORISSA	7	2	0	8	0	2	0	10	0	2	0	0	0	2
Telangana														
Adilabad	3	54	1	0	0	2	0	3	43	5	0	6	0	54
Karimnagar	4	51	2	2	0	0	0	4	36	4	0	11	0	51
Khammam	0	15	0	0	0	0	0	0	5	6	0	4	0	15
Warangal	0	20	0	0	0	0	0	0	16	0	0	4	0	20
Kalaburagi	1	3	1	0	0	0	0	1	0	2	0	1	0	3
TOTAL : TELANGANA	8	143	4	2	0	2	0	8	100	17	0	26	0	143
Uttar Pradesh														
Sonebhadra	2	0	0	1	0	1	0	2	0	1	0	0	0	1
TOTAL : UTTAR PRADESH	2	0	0	1	0	1	0	2	0	1	0	0	0	1
West Bengal														
Burdwan	8	11	6	1	0	1	0	8	8	0	0	7	0	15
TOTAL : WEST BENGAL	8	11	6	1	0	1	0	8	8	0	0	7	0	15
ALL INDIA : COAL	49	193	21	23	0	10	0	54	129	34	0	41	0	204
2. Lignite														
Bikaner	1	0	0	1	0	0	0	1	0	0	0	0	0	0
TOTAL : RAJASTHAN	1	0	0	1	0	0	0	1	0	0	0	0	0	0
Tamil Nadu														
Cuddalore	1	0	0	1	0	0	0	1	0	0	0	0	0	0

TOTAL : TAMIL NADU	1	0	0	1	0	0	0	1	0	0	0	0	0	0
ALL INDIA : LIGNITE	2	0	0	2	0	0	0	2	0	0	0	0	0	0
ALL INDIA : ALL COAL	51	193	21	25	0	10	0	56	129	34	0	41	0	204

Note 1 : M:Male, F:Female

Note 2 : Fatal as well as serious accidents are considered in computing the figures of number of persons seriously injured in this statement.

Statement 6.2
Casualty/serious injury rates in coal mines for different companies in 2019

Company	Number of Accidents		Number of Persons Killed						Number of Persons Seriously Injured					
			Below Ground	Opencast		Above Ground		Total	Below Ground	Opencast		Above Ground		Total
	Fatal	Serious		Male	Male	Female	Male			Female	Male	Male	Female	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
BCCL	7	4	2	2	0	3	0	7	4	3	0	1	0	8
CCL	2	1	1	1	0	0	0	2	1	0	0	0	0	1
ECL	8	11	6	1	0	1	0	8	8	0	0	7	0	15
MCL	7	2	0	8	0	2	0	10	0	2	0	0	0	2
NCL	3	2	0	2	0	1	0	3	0	3	0	0	0	3
SECL	7	14	3	4	0	1	0	8	8	4	0	2	0	14
WCL	3	14	3	1	0	0	0	4	5	5	0	5	0	15
TOTAL : CIL	37	48	15	19	0	8	0	42	26	17	0	15	0	58
IISCO	1	0	1	0	0	0	0	1	0	0	0	0	0	0
NLC	2	0	0	2	0	0	0	2	0	0	0	0	0	0
SCCL	8	143	4	2	0	2	0	8	100	17	0	26	0	143
TISCO	1	2	1	0	0	0	0	1	3	0	0	0	0	3
HINDALCO	1	0	0	1	0	0	0	1	0	0	0	0	0	0
BALCO	1	0	0	1	0	0	0	1	0	0	0	0	0	0
TOTAL : NON-CIL	14	145	6	6	0	2	0	14	103	17	0	26	0	146
TOTAL : ALL INDIA	51	193	21	25	0	10	0	56	129	34	0	41	0	204

STATEMENT NO. 6.3

Number of accidents and casualties/seriously injured persons in coal mines by place and detailed cause in 2019

CAUSE OF ACCIDENT	BELOW GROUND					OPENCAST					ABOVE GROUND					TOTAL				
	Fatal		S/Accident			Fatal		S/Accident			Fatal		S/Accident			Fatal		S/Accident		
	ACC	KILL	INJ	ACC	INJ	ACC	KILL	INJ	ACC	INJ	ACC	KILL	INJ	ACC	INJ	ACC	KILL	INJ	ACC	INJ
	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
Fall of Roof	2	3	0	5	5	0	0	0	0	0	0	0	0	0	0	2	3	0	5	5
Fall of Sides (Other than Overhangs)	1	1	0	9	9	1	1	0	0	0	0	0	0	0	0	2	2	0	9	9
Fall of Overhangs	2	2	1	0	0	0	0	0	0	0	0	0	0	0	0	2	2	1	0	0
Landslide	0	0	0	0	0	1	4	0	0	0	0	0	0	0	0	1	4	0	0	0
TOTAL : GROUND MOVEMENT	5	6	1	14	14	2	5	0	0	0	0	0	0	0	0	7	11	1	14	14
Breakage of Rope,Chain,Craw/Suspn. Gear	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	1	1	1	0	0
Falls of Persons from Cages, Skip etc.	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0
Hit by Cages, Skip etc.	0	0	0	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3
TOTAL : TRANSPORTATION MACHINERY (WINDING)	1	1	0	3	3	0	0	0	0	0	1	1	1	0	0	2	2	1	3	3
Rope Haulage	1	1	0	15	15	0	0	0	0	0	0	0	0	3	3	1	1	0	18	18
Conveyors	0	0	0	0	0	0	0	0	0	0	2	2	0	4	4	2	2	0	4	4
Dumpers	0	0	0	1	2	5	5	0	2	2	1	1	0	0	0	6	6	0	3	4
Wagon Movements	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	2	2	0	0	0
Wheeled Trackless (Truck,Tanker,etc.)	0	0	0	2	2	4	4	0	1	1	2	2	0	0	0	6	6	0	3	3
TOTAL : TRANSPORTATION MACHINERY (NON-WINDING)	1	1	0	18	19	9	9	0	3	3	7	7	0	7	7	17	17	0	28	29
Drilling Machines	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
Loading Machines	2	2	0	3	3	0	0	0	1	1	0	0	0	1	1	2	2	0	5	5
Shovel, Draglines, Frontend Loader, etc.	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1	1
Other Heavy Earth Moving Machinery	0	0	0	0	0	5	5	0	5	5	0	0	0	0	0	5	5	0	5	5
Other Non-Transportation Machinery	0	0	0	14	14	1	1	0	0	0	0	0	0	2	2	1	1	0	16	16
TOTAL : MACHINERY OTHER THAN TRANSP. MACHINERY	2	2	0	18	18	6	6	0	7	7	0	0	0	3	3	8	8	0	28	28
Deep Hole Blasting Projectiles	0	0	0	0	0	1	1	3	0	0	0	0	0	0	0	1	1	3	0	0
Misfires/Sockets(While Drilling into)	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1	1
Other Explosive Accidents	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1	1
TOTAL : EXPLOSIVES	0	0	0	0	0	1	1	3	2	2	0	0	0	0	0	1	1	3	2	2

Overhead Lines	0	0	0	0	0	0	0	0	1	1	1	1	0	0	0	1	1	0	1	1
Switch Gears, Gate End Boxes, Pommel, etc.	0	0	0	0	0	0	0	0	0	0	1	1	0	1	1	1	1	0	1	1
Other Electrical Accidents	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	2	2
TOTAL : ELECTRICITY	0	0	0	0	0	0	0	0	1	1	2	2	0	3	3	2	2	0	4	4
Fall of Person from Height/into Depth	2	2	0	36	36	2	2	1	5	5	0	0	0	9	9	4	4	1	50	50
Fall of Persons on the Same Level	1	1	0	1	1	0	0	0	0	0	0	0	0	1	1	1	1	0	2	2
Fall of Objects incl. Rolling Objects	2	2	0	20	20	1	1	0	3	3	0	0	0	4	4	3	3	0	27	27
Other Accidents due to Falls	0	0	0	0	0	0	0	0	1	1	0	0	0	1	1	0	0	0	2	2
TOTAL : FALLS (OTHER THAN FALL OF GROUND)	5	5	0	57	57	3	3	1	9	9	0	0	0	15	15	8	8	1	81	81
Irruption of Water	0	0	0	0	0	0	0	0	0	0	0	0	0	1	5	0	0	0	1	5
Drowning in Water	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1	1	0	0	0
Buried in Sands, etc.	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0
Unclassified	4	5	0	17	17	0	0	0	8	8	0	0	0	7	7	4	5	0	32	32
TOTAL : OTHER CAUSES	5	6	0	17	17	1	1	0	8	8	0	0	0	8	12	6	7	0	33	37
ALL INDIA : ALL COAL	19	21	1	127	128	22	25	4	30	30	10	10	1	36	40	51	56	6	193	198

STATEMENT 6.4**Number of fatal accidents in coal mines by major cause and responsibility during the year 2019**

Responsibility / Major Cause Group	1	2	3	4	5	6	7	8	9	Total
Misadventure	0	0	0	0	0	0	0	1	1	2
Management	2	1	1	0	0	0	0	0	0	4
Management & Sub. Sup. Staff(SSS)	3	0	1	1	1	0	0	3	1	10
Management, SSS & Coworker	1	0	2	2	0	0	0	0	0	5
Management, SSS & Deceased	0	0	1	0	0	0	0	0	1	2
Management, SSS & Injured	0	0	0	0	0	0	0	1	0	1
Management, SSS & Others	0	0	1	0	0	0	0	0	0	1
Management & Coworker	0	0	1	0	0	0	0	0	0	1
Management,Coworker,Deceased & Others	0	0	1	0	0	0	0	0	0	1
Management,Deceased & Others	0	0	1	0	0	0	0	0	0	1
Management & Contractor's Worker	0	0	4	0	0	0	0	0	0	4
Sub. Sup. Staff & Coworker	0	0	1	1	0	1	0	0	1	4
Sub. Sup. Staff & Deceased	1	0	0	0	0	1	0	1	0	3
Sub.Sup.Staff & Others	0	0	0	1	0	0	0	0	0	1
Coworker & Deceased	0	0	0	1	0	0	0	0	0	1
Deceased	0	1	2	0	0	0	0	2	0	5
Others	0	0	1	2	0	0	0	0	2	5
Total	7	2	17	8	1	2	0	8	6	51

STATEMENT NO. 6.5

Causewise number of fatal accidents in Coal Mines for different companies in 2019

Cause/Company	BCCL	CCL	ECL	MCL	NCL	NEC	SECL	WCL	CIL	SCCL	IISCO	NLC	TISCO	OTHERS	TOTAL
Fall of Roof	0	0	0	0	0	0	1	0	1	1	0	0	0	0	2
Killed-S/Injured :	0-0	0-0	0-0	0-0	0-0	0-0	2-0	0-0	2-0	1-0	0-0	0-0	0-0	0-0	3-0
Fall of Sides	0	0	1	0	0	0	1	0	2	0	1	0	1	0	4
Killed-S/Injured :	0-0	0-0	1-0	0-0	0-0	0-0	1-0	0-0	2-0	0-0	1-0	0-0	1-1	0-0	4-1
Rope Haulage	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
Killed-S/Injured :	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	1-0	0-0	0-0	0-0	0-0	1-0
Dumpers	2	0	0	0	1	0	0	0	3	1	0	1	0	1	6
Killed-S/Injured :	2-0	0-0	0-0	0-0	1-0	0-0	0-0	0-0	3-0	1-0	0-0	1-0	0-0	1-0	6-0
Trucks	0	0	0	2	1	0	2	0	5	1	0	0	0	0	6
Killed-S/Injured :	0-0	0-0	0-0	2-0	1-0	0-0	2-0	0-0	5-0	1-0	0-0	0-0	0-0	0-0	6-0
Other Machinery	4	1	2	2	0	0	1	1	11	2	0	0	0	1	14
Killed-S/Injured :	4-1	1-0	2-0	2-0	0-0	0-0	1-0	1-0	11-1	2-0	0-0	0-0	0-0	1-0	14-1
Explosives	1	0	0	0	0	0	0	0	1	0	0	0	0	0	1
Killed-S/Injured :	1-3	0-0	0-0	0-0	0-0	0-0	0-0	0-0	1-3	0-0	0-0	0-0	0-0	0-0	1-3
Fall of Persons	0	0	3	0	1	0	1	0	5	0	0	0	0	0	5
Killed-S/Injured :	0-0	0-0	3-0	0-0	1-1	0-0	1-0	0-0	5-1	0-0	0-0	0-0	0-0	0-0	5-1
Fall of Objects	0	0	1	1	0	0	0	0	2	1	0	0	0	0	3
Killed-S/Injured :	0-0	0-0	1-0	1-0	0-0	0-0	0-0	0-0	2-0	1-0	0-0	0-0	0-0	0-0	3-0
Other causes	0	1	1	2	0	0	1	2	7	1	0	1	0	0	9
Killed-S/Injured :	0-0	1-0	1-0	5-0	0-0	0-0	1-0	3-0	11-0	1-0	0-0	1-0	0-0	0-0	13-0
Belowground	2	1	6	0	0	0	2	2	13	4	1	0	1	0	19
Killed-S/Injured :	2-0	1-0	6-0	0-0	0-0	0-0	3-0	3-0	15-0	4-0	1-0	0-0	1-1	0-0	21-1
Opencast	2	1	1	5	2	0	4	1	16	2	0	2	0	2	22
Killed-S/Injured :	2-3	1-0	1-0	8-0	2-1	0-0	4-0	1-0	19-4	2-0	0-0	2-0	0-0	2-0	25-4
Aboveground	3	0	1	2	1	0	1	0	8	2	0	0	0	0	10
Killed-S/Injured :	3-1	0-0	1-0	2-0	1-0	0-0	1-0	0-0	8-1	2-0	0-0	0-0	0-0	0-0	10-1
TOTAL	7	2	8	7	3	0	7	3	37	8	1	2	1	2	51
Killed-S/Injured :	7-4	2-0	8-0	10-0	3-1	0-0	8-0	4-0	42-5	8-0	1-0	2-0	1-1	2-0	56-6

STATEMENT NO. 6.6

Causewise number of serious accidents in Coal Mines for different companies in 2019

Cause/Company	BCCL	CCL	ECL	MCL	NCL	NEC	SECL	WCL	CIL	SCCL	IISCO	NLC	TISCO	OTHERS	TOTAL
Fall of Roof	0	0	0	0	0	0	0	1	1	4	0	0	0	0	5
S/Injured :	0	0	0	0	0	0	0	1	1	4	0	0	0	0	5
Fall of Sides	0	0	0	0	0	0	0	1	1	8	0	0	0	0	9
S/Injured :	0	0	0	0	0	0	0	1	1	8	0	0	0	0	9
Rope Haulage	0	0	0	0	0	0	0	0	0	18	0	0	0	0	18
S/Injured :	0	0	0	0	0	0	0	0	0	18	0	0	0	0	18
Dumpers	0	0	0	0	0	0	0	2	2	1	0	0	0	0	3
S/Injured :	0	0	0	0	0	0	0	3	3	1	0	0	0	0	4
Trucks	0	0	0	0	0	0	0	0	0	3	0	0	0	0	3
S/Injured :	0	0	0	0	0	0	0	0	0	3	0	0	0	0	3
Other Machinery	1	0	3	1	0	0	6	2	13	21	0	0	1	0	35
S/Injured :	1	0	3	1	0	0	6	2	13	21	0	0	1	0	35
Explosives	0	0	0	0	0	0	1	1	2	0	0	0	0	0	2
S/Injured :	0	0	0	0	0	0	1	1	2	0	0	0	0	0	2
Fall of Persons	2	0	5	0	0	0	3	3	13	38	0	0	1	0	52
S/Injured :	2	0	5	0	0	0	3	3	13	38	0	0	1	0	52
Fall of Objects	0	1	1	0	1	0	1	1	5	22	0	0	0	0	27
S/Injured :	0	1	1	0	1	0	1	1	5	22	0	0	0	0	27
Other causes	1	0	2	1	1	0	3	3	11	28	0	0	0	0	39
S/Injured :	1	0	6	1	1	0	3	3	15	28	0	0	0	0	43
Belowground	4	1	8	0	0	0	8	4	25	100	0	0	2	0	127
S/Injured :	4	1	8	0	0	0	8	5	26	100	0	0	2	0	128
Opencast	0	0	0	2	2	0	4	5	13	17	0	0	0	0	30
S/Injured :	0	0	0	2	2	0	4	5	13	17	0	0	0	0	30
Aboveground	0	0	3	0	0	0	2	5	10	26	0	0	0	0	36
S/Injured :	0	0	7	0	0	0	2	5	14	26	0	0	0	0	40
TOTAL	4	1	11	2	2	0	14	14	48	143	0	0	2	0	193
S/Injured :	4	1	15	2	2	0	14	15	53	143	0	0	2	0	198

STATEMENT NO. 6.7**Regionwise/zonewise number of accidents and resultant casualties/seriously injured persons in coal mines in 2019**

Region/Zone	Fatal Accidents			Serious Accidents	
	No. of Accidents	Fatalities	S/Injured	No. of Accidents	S/Injured
Dhanbad I	4	4	4	0	0
Dhanbad II	2	2	0	0	0
Dhanbad III	3	3	1	6	6
Koderma	0	0	0	1	1
Central Zone	9	9	5	7	7
Sitarampur I	5	5	0	9	13
Sitarampur II	1	1	0	2	2
Sitarampur III	2	2	0	0	0
Eastern Zone	8	8	0	11	15
Ajmer	1	1	0	0	0
Varanasi	3	3	1	2	2
Northern Zone	4	4	1	2	2
Hyderabad I	4	4	0	86	86
Hyderabad II	4	4	0	57	57
South-Central Zone	8	8	0	143	143
Bhubaneswar	6	9	0	2	2
Chaibasa	1	1	0	0	0
Raigarh	3	3	0	0	0
Ranchi	2	2	0	0	0
South-Eastern Zone	12	15	0	2	2
Chennai	1	1	0	0	0
Southern Zone	1	1	0	0	0
Bilaspur	4	5	0	10	10
Jabalpur	2	2	0	4	4
Nagpur I	0	0	0	6	7
Nagpur II	3	4	0	8	8
Western Zone	9	11	0	28	29
ALL INDIA	51	56	6	193	198

STATEMENT NO. 6.8**Summary of Findings of Fatal Accidents during the year 2019**

Code : 0100 Ground Movement

Code : 0111 Fall of Roof
 (3 Deaths)

1. Date - 04.06.19 Mine - RAVINDRA KHANI NO.5
 Time - 3.05 Owner - Singareni Collieries Company Ltd.
 Dist. - Adilabad, State - Telangana
 Person(s) Killed :
 1. K. Ramulu, Support Man, Male, 53 Years

While a crew of three persons were withdrawing support in a slice gallery of a depillaring district in an underground coal mine, one person got struck by a mass of roof stone measuring about 1.2m x 3.25m and 0.7m thickness which fell from a height of 2.4m, inflicting fatal injuries to him and the other two persons of crew escaped unhurt.

Had,

the supports being withdrawn by means of safety prop-withdrawer as required under the provisions of Regulation 125(2) and Regulation 123(6) read with Regulation 48(2)(j) of Coal Mines Regulations, 2017

this accident could have been averted.

2. Date - 20.08.19 Mine - JHILIMILI
 Time - 3.40 Owner - South Eastern Coalfields Ltd.
 Dist. - Korea, State - Chhattisgarh
 Person(s) Killed :
 1. Roop Narayan, UDM Optr., Male, 34 Years
 2. Md. Akhtar Hussain, Dresser, Male, 59

Years

While an UDM operator and a roof dresser were placing an UDM to drill holes in a slice of a depillaring panel with caving in a coal mine, a roof fall which occurred in the adjacent goaf extended up to the slice in which they got trapped under a block of fallen stone measuring about 3.2m X 2.4m X 0.36m, who were recovered dead after about 7 hours.

Had,

i) 2nd slice of 79 1/2 LW/18D been stopped in 3rd shift based on the information of 2nd shift and thus the lives of persons been not negligently endangered as required under Regulation 239 of the CMR 2017;

ii) the roof of 2nd slice of 79 1/2 LW/18D been made secured with support as per the support plan as required under Regulation 123(5) and the permission issued vide letter No. BSP/1725 dated 27.03.2018 under Regulation 112(1) of the CMR 2017; and

iii) the strata monitoring in the panel been done in a systematic manner for prediction of roof movement as required under Condition No. 6.0 of Permission issued vide letter No. BSP/1725 dated 27.03.2018 under Regulation 112(1) of the CMR 2017,

this accident could have been averted.

Code : 0112 Fall of Sides (Other than Overhangs)
(2 Deaths)

3. Date - 20.06.19 Mine - NOONODIH JITPUR
 Time - 5.30 Owner - Indian Iron & Steel Company Ltd.
 Dist. - Dhanbad, State - Jharkhand
 Person(s) Killed :
 1. Ranjit Singh, Cont. Emp., Male, 42 Years

While a contractor person deployed as general mazdoor was cleaning floor at the longwall face for snaking of Armoured Face Conveyor in an underground coal mine, suddenly a mass of coal measuring 2.6m x 1.3m x 0.7m spall from the face from a height of about 1.3m hit him and he fell with back down causing serious bodily injuries to which he succumbed during treatment at the hospital after about four hours.

Had,

the longwall face been properly dressed to prevent spalling of coal before deploying person for cleaning of floor close to the face as required under Regulation 115(1) read with Regulation 40(4) (a), 48(2) (f), 47(2) (c) and 45(1) of the Coal Mines Regulations, 2017,

this accident could have been averted.

4. Date - 29.08.19 Mine - GARE PALMA IV/1 COAL MINE
 Time - 16.45 Owner - South Eastern Coalfields Ltd.
 Dist. - Raigarh, State - Chhattisgarh
 Person(s) Killed :
 1. N.K. Patel, Overman, Male, 33 Years

While the previously dumped fly ash over a overburden bench side was being side casted by deployment of an excavator at the bench side in an opencast coal mine; portion of the bench side consisting of fly ash, measuring about 35m (L) x 11.5m (H) x 5m (D), failed resulting burying of the person, engaged there to supervise the operations/work place who was declared dead at the hospital after one hour and fifteen minute of the accident.

Had,

i) the height of the bench in overburden consisting of fly ash not been exceeded three meters as required under the provision of regulation 106(4) of the Coal Mines Regulations, 2017; and

ii) the slope of the fly ash bench not been exceeded 37.5 degrees from the horizontal as required under the provision of Regulation 108(2) of the Coal Mines Regulations, 2017;

this accident could have been averted.

Code : 0113 Fall of Overhangs
(2 Deaths)

5. Date - 14.06.19 Mine - KUNUSTORIA
 Time - 14.45 Owner - Eastern Coalfields Ltd.
 Dist. - Burdwan, State - West Bengal
 Person(s) Killed :
 1. Pravakar Mallick, Gen. Mazdoor, Male, 22
Years

While a general Mazdoor (engaged as SDL cable men) after handling SDL cable near an overhang of the pillar in underground workings, suddenly a piece of coal block measuring 1.0m length x 0.6m wide x 0.2m thickness fell on him from a height of 2.5m, causing serious bodily injuries to head and was immediately shifted to hospital, where he was declared 'brought dead' after about forty five minutes.

Had,

the support plan was implemented to secure the roof and sides of belowground workings and given prompt attention to remove danger of overhangs and seen the sides of the pillar was made and kept secure for ensuring safety of the persons employed in the mine as required under the provisions of Regulation 123(1)(a) & 123(5) read with Regulation 115(1), 48(2)(f), 47(5)(i) and Regulation 43(11) of the Coal Mines Regulations, 2017.

this accident could have been averted.

6.	Date - 02.08.19	Mine - BHELATAND AMALGAMATED
	Time - 13.00	Owner - Tata Iron & Steel Co. Ltd.
		Dist. - Dhanbad, State - Jharkhand
		Person(s) Killed :
		1. Rafique Ansari, LHD, Male, 50 Years

While a LHD Crewman (multi-task crew member) was dressing the roof by standing on fallen material (stone & coal), to dress down the hanging layer of stone in roof for fresh supporting in a rise gallery of sizes 4.74m (H) x 5.40m (W) developed in the past in a belowground coal mine, a layer of sandstone-shale in the roof measuring about 3.65m (L) x 3.04m (W) x 0.10m (T) parted from a height of about 2.0m (measured above the fallen material) and fell on him, inflicting serious bodily injuries, to which he succumbed almost instantly and subsequently two other co-workers got serious and minor injuries respectively during rescue operation of LHD Crewman.

Had,

i) the dresser not been deployed for dressing the roof in unsupported area, thus negligently not endangering the life of a person,

ii) the temporary supports been provided in unsupported area before dressing down the loose layers of the roof,

iii) the proper mechanism been adapted for dressing and supporting the roof of height about 4.74m,

iv) the adequate supervision been ensured at the workings belowground,

this accident could have been averted.

Code : 0118 Landslide
(4 Deaths)

7.	Date - 23.07.19	Mine - BHARATPUR PROJECT
	Time - 22.30	Owner - Mahanadi Coalfields Ltd.
		Dist. - Angul, State - Orissa
		Person(s) Killed :
		1. Papun Biswal, Cont. Emp, Male, 32 Years
		2. R. Behera, Cont. Emp, Male, 26 Years
		3. R. Mahapatra, Cont. Emp, Male, 40 Years
		4. Ramesh Das, Cont. Emp, Male, 54 Years

While men & machinery were deployed for extraction of coal in an area dip-side of a left out rib of coal and overburden having width of about 03 m at top and of height

of about 39m against which backfilling was done up to a height of about 100m, suddenly the rib failed, causing flow of debris including broken rib, dumped material and slush spreading over an area measuring about 210m (L) X 270m (W), burying men and machinery and inflicting fatal injuries to four persons and nine persons escaped with minor injuries.

Had,

i) persons not been engaged in an area on the dip side of the rib having prominent cracks and fire, thereby not endangering their life and safety, as required under Regulation 239 of the Coal Mines Regulations, 2017

ii) the hazard of failure of the rib against which overburden was kept dumped, been identified and risks due to failure of the rib been assessed and implemented as required under the Regulation 104(1) of the Coal Mines Regulations, 2017

iii) the method of working, dump slope and monitoring of slope stability been planned, designed and worked as determined by a scientific study as required under Regulation 106(2) of the Coal Mines Regulations, 2017

iv) Precautions been taken to prevent failure of slope of the overburden dump as required under Regulation 108 of the Coal Mines Regulations, 2017

this accident could have been averted.

Code : 0200 Transportation Machinery(Winding)

Code : 0222 Breakage of Rope,Chain,Craw/Suspns. Gear
 (1 Death)

8. Date - 29.10.19 Mine - BHAGABAND
 Time - 20.30 Owner - Bharat Coking Coal Ltd.
 Dist. - Dhanbad, State - Jharkhand
 Person(s) Killed :
 1. R. Paswan, Helper, Male, 50 Years

While hoisting the submersible pump & pipe range from the shaft of an Underground Coal Mine with the help of Power winch & Hand winch installed at surface, the diversion pulley of power winch fell down inflicting serious bodily injury to a fitter and the operator of hand winch received fatal injury to which he succumbed while being treated in the hospital.

Had,

i) the power winch been installed with proper alignment extending fleet angle of less than 1.5 degree with the pulley & proper locking of pin supporting the pulley been done as required under Regulation 78(3)&78(1),

ii) the locking of hand winch to prevent rotation in reverse direction under load been provided and hand winch been mounted on a proper foundation as required under Regulation 78(1)&78(2) read with Regulation 239,

iii) the proper safe code of practice for hoisting of submersible pump been framed and enforced or implemented as required under Regulation 110(1) and 208(7) of the Coal Mines Regulations 2017.

this accident could have been averted.

Code : 0223 Falls of Persons from Cages, Skip etc.
(1 Death)

9. Date - 26.08.19 Mine - BASTACOLA
Time - 12.45 Owner - Bharat Coking Coal Ltd.
Dist. - Dhanbad, State - Jharkhand
Person(s) Killed :
1. Arun Das, Pump Optr., Male, 55 Years

While a pump operator was ascending alone in a cage, jumped in to the shaft bottom from cage by lifting the fencing oneself, from a height of 70m, inflicting injuries on his head to which he succumbed almost instantly.

Had,

The person employed in mine not failed in taking reasonable care for his own safety and not removed or passed through fence or gate of a cage until it has reached the appointed stopping place (pit top) as required under the provisions of Regulation 40(4) (a)&(5) and Regulation 90(1) of the Coal Mines Regulations 2017

the accident could have been averted.

Code : 0300 Transportation Machinery(Non-Winding)

Code : 0332 Rope Haulage
(1 Death)

10. Date - 16.12.19 Mine - RAVINDRAKHANI NO.6 INCLINE MINE
Time - 15.25 Owner - Singareni Collieries Company Ltd.
Dist. - Kalaburagi(Formely-GULBERGA), State -
Telangana
Person(s) Killed :
1. C. Mallaiah, Mazdoor, Male, 59 Years

While a person was standing near the direct rope haulage road way to guide tubs in level gallery in a development district of an underground coal mine, suddenly a set of derailed empty tubs being lowered attached to the haulage rope hit him; inflicting fatal injuries.

Had,

i) the person who is responsible for the attachment to the haulage rope, of any tub or set of tubs on haulage plane been ensured that no person remains in a position of danger at stopping place (i.e. Junction of dip and level gallery) while the rope is in motion as required under the provisions of Regulation 57(9) of the Coal Mines Regulations, 2017

ii) every persons likely to be endangered been warned when the tubs were about to be moved as required under the provisions of Regulation 94(6) of the Coal Mines Regulations, 2017

iii) the code of practices on the movement of tubs prepared by manager been followed as required under the provisions of Regulation 110 of the Coal Mines Regulations, 2017,

this accident could have been averted.

Code : 0334 Conveyors
(2 Deaths)

11. Date - 21.05.19 Mine - KHAIRAGURA OC
Time - 12.45 Owner - Singareni Collieries Company Ltd.
Dist. - Adilabad, State - Telangana
Person(s) Killed :
1. S. Paul, Fitter, Male, 54 Years

While adjusting a conveyor belt in running condition by standing on a platform at a height of about 1.5m, deceased got stuck up with belt, moved forward upon the belt, hit a roller frame above the belt in front of him and fell down on a concrete pillar base before falling on the ground causing serious bodily injuries to which he was succumbed on the way to hospital.

Had,

i) the deceased not adjusted the conveyor belt while in running condition at a height as required under Regulation 211(5);

ii) the foreman not operated the belt when a person was working on the belt or not allowed the deceased to adjust the moving conveyor belt as required under Regulation 211(4), took care of his subordinate's safety as required under Regulation 40(4)(a) and deputed another person to operate the belt as required under Regulation 41 of the Coal Mines Regulations, 2017;

iii) the co-workers warned or guided him while doing the job as required under the Regulation 40(4)(a)&(b);

iv) the engineer ensured the provisions of the Mines Act, 1952 and of the regulations and orders made there under relating to the installation, maintenance, operation or examination of machinery are properly carried out by himself and by subordinate officials, competent persons or work persons, as required under the Regulation 54(d) and ensured practising of LOTO (Loc Out- Tag Out) system in the CHP as required under Regulation 211(4);

v) the Manager framed Proper Safe Operating Procedure and implemented the same for specific maintenance work of spill plate changing, as required under Regulation 97(6) and ensured training to the deceased in the new work place as required under Regulation 43(6) and 217(2) of the Coal Mines Regulations, 2017;

this accident could have been averted.

12. Date - 30.09.19 Mine - ROCP/SOUTH JHARIA
Time - 14.00 Owner - Bharat Coking Coal Ltd.
Dist. - Dhanbad, State - Jharkhand
Person(s) Killed :
1. Baidyanath Ram, Fitter, Male, 53 Years

While a fitter was working alone in the discharge end drum of a running conveyor belt of coal handling plant, he fell down and received serious head injury to which he succumbed after four days while being treated in the hospital.

Had,

i) the person not been allowed to work in the running conveyor belt where there was risk of injury and discharge end motor coupling guard been provided in contravention of Regulation 211(4) and (2),

ii) the code of practice been framed & implemented for carrying out the maintenance work in the Conveyor Belt as per Regulation 110(2)&(3) and 208(8) of Coal Mines Regulations, 2017

this accident could have been averted.

Code : 0335 Dumpers
(6 Deaths)

13. Date - 25.01.19 Mine - AMALGAMATED BLOCK II OCP
Time - 4.45 Owner - Bharat Coking Coal Ltd.
Dist. - Dhanbad, State - Jharkhand
Person(s) Killed :
1. Shahid Ansari, Contractor Emp., Male, 24
Years

While parking a tipper in reverse direction into the contractors camp premises, it ran over a helper who was slept there, causing serious bodily injuries to which he succumbed almost instantaneously.

Had,

i) the person not slept while on duty, in the Open area of contractors camp premises, thus negligently not endangered his own safety in contravention of Regulation 40(4)(a) & (7) of the Coal Mine Regulation, 2017,

ii) the tipper been operated carefully, cautiously and defensively by ensuring safety of the work persons employed in the mine as required under provision of Regulation 63(d) of the Coal Mine Regulation, 2017,

iii) the helper been trained for relevant workplace safety and health hazards awareness prior to commencing the work as required under provision of Regulation 39(1)(c) & 39(2)(a) of the Coal Mine Regulation, 2017 read with Mines Vocational Tanning Rule 6(1) of 1966.

This accident could have been averted.

14. Date - 01.02.19 Mine - NIGAHI PROJECT
Time - . 5 Owner - Northern Coalfields Ltd.
Dist. - Singrauli, State - Madhya Pradesh
Person(s) Killed :
1. S.S. Shah, Cont. Employee, Male, 26 Years

While an 18.8 m3 empty tipper was on way to loading face it crashed into right side dump body of OB loaded tipper coming from the opposite direction at haul road junction thus punctured the fuel tank of loaded tipper resulting in diesel spill out to catch fire in both the tippers and empty tipper driver unable to escape as was being entrapped in damaged cabin was burned to death.

Had,

the empty tipper not been driven unmindfully without paying attention to signals like horn & dipper given by driver of loaded tipper coming from opposite direction to crash into it, thus not negligently endangering his own life and safety of persons employed in the mine, as called for by the provisions of Regulation 239 of the Coal Mines Regulations, 2017,

this accident could have been averted.

15. Date - 11.02.19 Mine - GARE PALMA IV/4 COAL MINE
Time - 7.40 Owner - M/S HINDALCO INDUSTRIES LTD.
Dist. - Raigarh, State - Chhattisgarh
Person(s) Killed :
1. Kashinath Kumar, Dozer Optr, Male, 34
Years

While a tipper with its tipping body in full raised state having considerable amount of alluvium overburden material stuck inside was driven in forward direction and suddenly brake was applied just after moving about two meters from the position where it was dumping the overburden in the dump yard of an opencast coal mine, it became imbalance & toppled to one side up to the ground and it's canopy pressed the cabin of the dozer, being operated at a close proximity of it, inflicting serious bodily injuries to the dozer operator who succumbed to his injuries instantly.

Had,

i) the tipper not been moved ahead with its tipping body in fully raised state causing imbalance and toppling of it in contravention of the code of practice framed and implemented in the mine for operation of tippers as required under Regulation 40(1) read with Regulation 63(j) of the Coal Mines Regulations, 2017; and

ii) the implementation of the code of practice framed for operation of tippers been ensured as required under Regulation 45(1) and 47(2)(c) & (d) of the Coal Mines Regulations,

this accident could have been averted.

16. Date - 04.06.19
Time - 2.00

Mine - BARSINGAR LIGNITE MINE
Owner - Neyveli Lignite Corporation Ltd.
Dist. - Bikaner, State - Rajasthan
Person(s) Killed :
1. Dalpat Singh, Dumper Optr., Male, 36
Years

While an operator was driving a water tanker down along haul road having a gradient of 1:17 at lignite opencast mine, suddenly he lost control over vehicle along a curve and fell down on lower bench at a depth of 5m after breaching berm constructed along edge of haul road, resulting in throwing of operator out of vehicle cabin and sustained serious bodily injuries to which he succumbed after eight days of treatment in hospital.

Had,

i) the berm/parapet wall been constructed along edge of haul road of adequate strength & dimensions to prevent the tanker to cross and fell down to lower bench,

ii) the brakes of the water tanker been maintained fit and good working conditions to control the over speeding of vehicle,

as required under Regulation 101 read with Gazette Notification G.S.R. 976(E) dated 01.10.2018, Regulation 216(2) read with DGMS(Tech)/Circular 09 of 2008 dated 02.12.2008, Regulation 43(11), Regulation 54(d) of the Coal Mines Regulations, 2017 and Section 18(1) & (4) of the Mines Act, 1952,

this accident could have been averted.

17. Date - 11.11.19
Time - 5.40

Mine - RAMAGUNDAM OC-III
Owner - Singareni Collieries Company Ltd.
Dist. - Karimnagar, State - Telangana
Person(s) Killed :
1. P. Ramesh, Dumper Opt., Male, 50 Years

While, a dumper was overtaking another standing dumper on a haul road in an opencast coal mine, operator's cabin of the running dumper hit the rear right side of the body of the standing dumper, resulting into death of the operator of the running dumper almost instantaneously.

Had,

i) the Assistant Manager inspected and examined the working/dump yard under his charge and accordingly fixed the optimum number of dumpers along the haul road leading to the dump yard, thereby preventing overcrowding of the machinery as required under Section 72(h) of the Mines Act, 1952 read with Regulation 45(2) & 45(3) of the Coal Mines Regulations, 2017,

the Overman ensured that there was no overcrowding at the dump yard which resulted in congestion and standing of loaded dumpers along the haul road leading to the dump yard as required under Regulation 47(6)(e) read with Regulation 239 of the Coal Mines Regulations, 2017 and

the dumper operator been careful enough and not made an attempt to overtake another dumper ahead of his dumper along one way traffic lane as required under provisions of Regulation 63(d) and transport rules framed by the manager under Regulation 109 of the Coal Mines Regulations, 2017

this accident could have been averted.

18. Date - 12.12.19	Mine - NEW AKASHKINAREE COLLIERY
Time - 7.30	Owner - Bharat Coking Coal Ltd.
	Dist. - Dhanbad, State - Jharkhand
	Person(s) Killed :
	1. S.K. Sinha, Cont. Worker, Male, 50 Years

While an overburden loaded volvo-tipper was moving up on a haul road in an opencast coal mine, it suddenly stopped and moved in reverse direction and subsequently run over a contractor supervisor (Munshi) standing beside the haul road for counting of coal trips by the rear left wheels of the tipper, to which he received serious bodily injuries and succumbed after about 3 hours whilst on way to referral hospital.

Had,

i) the tipper not been reversed unless there was clear view of the area behind it, thus negligently not endangering the life of a person as per Reg. 63(h),

ii) it been ensured that audio-visual alarm fitted in the tipper functioning properly before deploying in mining operation, as required under Reg. 216 of the CMR, 2017 read with Gazette Notification No. 705 New Delhi, 4th Oct, 2018, GSR 987(E) Dhanbad dt. 1st Oct, 2018

iii) it been ensured that rear vision camera was fitted in the tipper, as required under Regulation Reg. 216 of the CMR, 2017 read with Gazetteer Notification No. 705 New Delhi, 4th Oct, 2018, GSR 987(E) Dhanbad Dt. 1st Oct, 2018,

this accident could have been averted.

Code : 0336 Wagon Movements
(2 Deaths)

19. Date - 04.02.19	Mine - RAVINDRA KHANI NO.1A
Time - 17.30	Owner - Singareni Collieries Company Ltd.
	Dist. - Adilabad, State - Telangana
	Person(s) Killed :
	1. Bandi Ravinder, Shale Mazdoor, Male, 54 Years

While two wagon shunting mazdoors were closing the door of a loco wagon in a Coal handling plant, the loco moved forward suddenly, one of the wagon shunting mazdoors got crushed between door of a loco wagon and girder resulting fatal injuries, while other escaped unhurt.

Had,

i) work been done under the supervision of a competent person appointed under Regulation 102(1), 129 of the Coal Mines Regulations, 2017

ii) track been maintained with 1.2m clearance on either side of a track of rails as required under Regulation 102(11) of the Coal Mines Regulations, 2017

iii) code of practice and safe operating procedure been framed and implemented considering team of persons, tools and tackles for the operations on railway wagons as required under Regulation 110 of the Coal Mines Regulations, 2017

this accident could have been averted.

20. Date - 23.11.19
Time - 8.40

Mine - RAJNAGAR R.O.
Owner - South Eastern Coalfields Ltd.
Dist. - Anuppur, State - Madhya Pradesh
Person(s) Killed :
1. H. Dubey, Loading Inspector, Male, 57

Years

While a loading inspector engaged in road weigh bridge of the siding of an underground coal mine had gone to cross the rail line of the siding, when a set of wagons were under intermittent movement for coal loading, he was ran over by the wagon's wheel due to which he succumbed instantaneously.

Had,

i) the rail line not been crossed when a set of wagons were under intermittent movement for coal loading, thus wilfully omitted to take precautions for his own safety while crossing the rail line and thus endangered his own life as required under Regulation 239 of the Coal Mines Regulations, 2017 and

ii) the foot over-bridge provided to cross the rail line of the siding been used, as provided as per Para 15, 16 and 19 of the SOP read with Regulation 40(1), (4)(a) and (6) of the Coal Mines Regulations, 2017,

this accident could have been averted.

Code : 0339 Wheeled Trackless (Truck, Tanker, etc.)
(6 Deaths)

21. Date - 09.01.19
Time - 7.10

Mine - RAMAGUNDAM OC-III
Owner - Singareni Collieries Company Ltd.
Dist. - Karimnagar, State - Telangana
Person(s) Killed :
1. Raja Kumar, Electrician, Male, 54 Years

While a person of an opencast coal mine was crossing the coal transport road near CHP within the mine boundary, hit by a coal transportation truck, causing serious bodily injuries due to which he succumbed on the spot.

Had,

the coal transporting truck been not driven too fast at turning point/junction, contravening the provisions of Regulation 63(d), 110 and Reg. 239 of Coal Mines Regulations, 2017 read with condition No. 22 of the Safe Operating Procedure for tipper framed by the manager of the mine respectively,

this accident could have been averted.

22. Date - 29.01.19 Mine - KRISHNASHILA OCP
Time - 1.00 Owner - Northern Coalfields Ltd.
Dist. - Sonebhadra, State - Uttar Pradesh
Person(s) Killed :
1. S. Rawani, Tipper, Male, 30 Years

While an empty 25 Te. carrying capacity tipper was being reversed near mobile crusher plant area of 35m wide road having almost flat gradient, a tipper driver inadvertently entered in its close proximity area and was run over with his head crushed by its rear right wheels to which he succumbed almost instantaneously on the spot.

Had,

i) the tipper been not operated in reverse unless the operator had a clear view of the area behind and given an audible warning signal before reversing the tipper and complied with the provisions of transport rules as required under the provisions of 63(1)(h) & (j) read with Reg. 109 of the CMR, 2017

ii) it been ensured that none had inadvertently ventured in close proximity of the moving tipper, thus taking reasonably care for their own safety and not negligently endangering himself, in accordance with the provisions of Reg. 40(4)(a) read with Reg. 239 of the Coal Mine Regulation, 2017

iii) the fluorescent jacket been worn by every person engaged in coal transporting job so that one could be seen conspicuously by the tipper drivers in operational area as required by the provisions at Sl. no. 4 of standard operating procedures for coal loading from coal stock yard framed under the provisions of Regulation 104(5)(e) of the Coal Mines Regulation, 2017

the accident could have been averted.

23. Date - 03.04.19 Mine - AMERA OC MINE
Time - 12.25 Owner - South Eastern Coalfields Ltd.
Dist. - Surguja, State - Chhattisgarh
Person(s) Killed :
1. Yadnath Singh, Fitter, Male, 47 Years

While an ambulance carrying five persons, was being driven rashly at high speed exceeding 60 kilometres per hour against the permitted speed of 20 Km per hour in a down gradient transport road in an opencast coal mine by an unauthorised driver, who lost control of it resulting toppling of the ambulance, inflicting serious bodily injuries to three persons, out of which one, who got stuck beneath the toppled ambulance succumbed to his injuries on the way to the hospital.

Had,

i) the ambulance not been driven rashly at high speed exceeding 60 km\h against permitted speed of 20 km\h in a down gradient road and not negligently endangered the life of persons employed in the mine as required under the provisions of Regulations 40(4)(a) and 239 of the Coal Mines Regulations, 2017 read with the transport rules framed under the provisions of Regulation 109 of the Coal Mines Regulations, 2017 for plying of ambulance in the mine, and

ii) the particulars about the person driving the ambulance been checked & recorded and had he been imparted vocational training and authorized before engaging for driving the ambulance in the mine as required under the provisions of Section 48 of the Mines Act, 1952, Rule 6 of the Mines Vocational Training Rules, 1966, Regulation 35 of the Coal Mines Regulations, 2017 read with the transport rules framed under the provisions of Regulation 109 of the Coal Mines Regulations, 2017

this accident could have been averted.

24. Date - 26.04.19
Time - 2.30

Mine - KUSMUNDA OCP
Owner - South Eastern Coalfields Ltd.
Dist. - Korba, State - Chhattisgarh
Person(s) Killed :
1. J. Narayan, Guard, Male, 59 Years

While two home guards were deployed for guarding a breakdown shovel in a maintenance bay adjacent to the haul road on the first overburden bench of an opencast coal mine, one of the guards who was sleeping beside the haul road was trampled by a moving grader which in the process of grading the haul road was attempting to clean a old shovel rope stuck in its blade, inflicting serious injury on his neck and head to which he succumbed instantly, whereas the other guard escaped unhurt.

Had,

i) it been ensured by the Shift In charge Assistant Manager, that no person slept while on duty as required under Regulation 45(1) read with regulation 40(7) of the CMR 2017

ii) the grader operator checked the maintenance bay of the broken-down shovel before moving the grader machine onto the bay(a non-routine place) as required under the code of practice issued by the manager and thus negligently not endangering life of persons employed in the mine as required Reg. 40(1) & (4)(a) and Reg. 239 of the CMR 2017,

iii) the deceased not slept and remained cautious while on duty and thus negligently not endangered his own life as required under Regulations 40(7) and 239 of the Coal Mines Regulations, 2017,

this accident could have been averted.

25. Date - 28.05.19
Time - 2.30

Mine - BALRAM OCP
Owner - Mahanadi Coalfields Ltd.
Dist. - Angul, State - Orissa
Person(s) Killed :
1. K.C. Moharana, Cont. Emp., Male, 56 Years

While a worker was walking on the haul road from top OB bench to coal face, he was hit and run over by the loaded coal tipper plying on the same road, thereby inflicting serious bodily injuries to the person due to which he succumbed at the spot.

Had,

i) the management not allowed pedestrians on haul road made for trucks, tippers, dumpers or other mobile machinery under clause 8 of conditions for haul roads notified vide No. GSR. 976(E) dated 01.10.2018 under the provisions of Reg. 101 of The Coal Mines Regulations, 2017

ii) the tipper driver been vigilant, not operated carelessly and too fast omitting to ensure safety of the person walking on the haul road and provisions of transport rules been followed as required under the provisions of Regulations 63(1)(d), (g), (j), 109 & 239 of the Coal Mines Regulations, 2017.

iii) the person deployed as security guard in the mine been imparted initial training as required under Rule 6 of the Mine Vocational Training Rules, 1966, read with DGMS Circular 34/1970

iv) the person put on safety PPE (helmet, fluorescent jacket and protective footwear) and availed the light vehicle instead of going on foot, as required by the provisions of Regulations 40(1), 40(4)(a) & 239 of the Coal Mines Regulations 2017.

this accident could have been averted.

26. Date - 20.12.19 Mine - ANANTA O/C
Time - 9.30 Owner - Mahanadi Coalfields Ltd.
Dist. - Angul, State - Orissa
Person(s) Killed :
1. S. Dehury, Cont. Driver, Male, 20 Years

While a tipper loaded with gravel and deployed in construction of coal transport road of an opencast coal mine was being reversed, it ran over a person inflicting fatal injuries to him.

Had,

i) the person not been entered into the traverse path of the tipper while reversing, thereby not negligently endangered his life as required under the provisions of Regulation 40(4) (a) of the Coal Mines Regulations, 2017;

ii) the tipper been operated defensively in reverse direction ensuring a clear view of area behind and presence of person along its traverse path, thereby not endangering the life of persons employed therein, as required under the provisions of Regulation 63(h) read with Regulation 239 of the Coal Mines Regulations, 2017;

the accident could have been averted.

Code : 0400 Machinery Other than Transp. Machinery

Code : 0443 Loading Machines
(2 Deaths)

27. Date - 04.02.19 Mine - KHOTTADIH
Time - 14.45 Owner - Eastern Coalfields Ltd.
Dist. - Burdwan, State - West Bengal
Person(s) Killed :
1. Kapil Dusad, Trammer, Male, 45 Years

While an Explosive Carrier was travelling on path of a Load Haul Dumper (LHD) machine in a development district of an underground coal mine, he was run over by the moving LHD machine inflicting serious bodily injuries that proved fatal instantly.

Had,

i) the Load Haul Dumper (LHD) machine been operated safely by LHD Operator as required under the provision of Code of practice framed and enforced by the manager under Regulation 110(2) & 110(3) (a) of the Coal Mines Regulations, 2017; and

ii) nobody been allowed to be present on path of moving LHD machine by maintaining proper discipline and thereby not wilfully or negligently omitted to do things to endanger life or limb of persons in the mine as required under Regulation 239 of the Coal Mines Regulations, 2017;

this accident could have been averted.

28. Date - 22.05.19 Mine - MUDIDIH
Time - 20.30 Owner - Bharat Coking Coal Ltd.
Dist. - Dhanbad, State - Jharkhand
Person(s) Killed :
1. M.K. Bhuia, Cableman, Male, 45 Years

While a Side Discharge Loading Machine(SDL) was being operated on rising gradient of about 1 in 7 in reverse direction to unload the coal into tubs in a belowground coal mine, a Cableman deployed for handling of trailing cable of SDL trying to pull the trailing cable aside of the path of the SDL, slipped and fell down subsequently run over by the SDL inflicting him serious injuries, to which he succumbed almost instantly.

Had,

i) the SDL not been reversed unless there was a clear view of the area behind it, thus negligently not endangering the life of a person deployed with SDL

ii) the slush in haulage roadway of SDL been cleaned properly to avoid the slippage of person,

iii) the cableman worn fluorescent jacket during handling of trailing cable, to distinguish itself in head/back light of SDL

this accident could have been averted.

Code : 0448 Other Heavy Earth Moving Machinery
(5 Deaths)

29. Date - 09.02.19 Mine - KALIPAHARI
 Time - 17.30 Owner - Eastern Coalfields Ltd.
 Dist. - Burdwan, State - West Bengal
 Person(s) Killed :
 1. Laxman Roy, Dozer Optr., Male, 55 Years

While in the dump yard of an open cast mine a Dozer Operator, squatting on the track pad, started the dozer directly by short-circuiting the self-starter, keeping the dozer in forward-first gear, the dozer started moving forward, dislodging the Operator and in the process he was run over by the dozer, inflicting serious bodily injuries that proved fatal instantly.

Had,

the self-starter switch not been bypassed and kept in safe working order, thereby not negligently or wilfully omitting to do anything to endanger life of the persons employed therein, by contravening the provisions of Regulation 239 of the Coal Mines Regulations, 2017;

this accident could have been averted.

30. Date - 23.02.19 Mine - MAGADH OCP
 Time - 11.45 Owner - Central Coalfields Ltd.
 Dist. - Chatra, State - Jharkhand
 Person(s) Killed :
 1. L.K. Saw, Gen. Mazdoor, Male, 36 Years

While a dozer was deployed for making ramp with its blade in raised position in close proximity of another worker, hit a mazdoor present in the working area of dozer thereby causing to serious bodily injury in both leg by chain of dozer, to which he succumbed to injuries in the hospital.

Had,

i) the dozer not operated in close proximity of a worker in contravention of Regulation 62(g) & (j) of the CMR 2017

ii) operator followed the SOP framed by the manager as required by Reg. 110 of CMR 2017.

iii) Reg. 239 of CMR 2017 is complied.

this accident could have been averted.

31. Date - 14.03.19
Time - 9.30

Mine - BALRAM OCP
Owner - Mahanadi Coalfields Ltd.
Dist. - Angul, State - Orissa
Person(s) Killed :
1. K.C. Naik, Fitter, Male, 51 Years

While a Motor Grader was being operated at a workshop of opencast coal mine, its operator fell down from the operator cabin and run over by the first rear wheels of the same motor grader, thereby inflicting serious bodily injuries to him, which later on proved fatal.

Had,

i) the grader not been allowed to operate in open door condition and without seat belt to prevent the falling of person from the Motor Grader operator cabin and proper maintenance and safe working of machinery been ensured by contravening the provision of Regulation 216(2) read with para B(iii) and para D(iii) of GSR 987(E) and Regulation 54(a) of CRM, 2017.

ii) the cabin door been not made inoperative by welding it to the side of the machine body and proper S.O.P been followed strictly in contravention of condition no. 4 and 19 of S.O.P read with Regulations 104(5), 104(8) & 40(1) of CMR, 2017.

the accident could have been averted.

32. Date - 31.08.19
Time - 23.30

Mine - BALRAM OCP
Owner - Mahanadi Coalfields Ltd.
Dist. - Angul, State - Orissa
Person(s) Killed :
1. S.K. Mahakud, Cont. Emp, Male, 34 Years

While a bus driver alighted from parked bus and slept aside bus in an opencast coal mine, run over by front right tyre of the motor grader, inflicting him serious bodily injuries to which he succumbed after 9 days while being treated at hospital.

Had,

i) the bus driver not been alighted from the parked bus and slept on duty at a place where there is possibility of movement of the HEMM, thereby negligently endangering his own life by contravening condition No. 6 in the SOP made under the provisions of Regulation 40(4) (a) and Regulation 40(7) of CMR, 2017;

ii) the motor grader been operated vigilantly and the framed SOP been followed, thus negligently omitted to ensure safety of persons employed therein, by contravening condition No. 16 in the SOP made under the provisions of Regulation 62(g), 62(j) and Regulation 40(4) (a) of CMR, 2017;

the accident could have been averted.

33. Date - 26.10.19
Time - 6.45

Mine - CHOTIA II OC COAL MINE
Owner - BHARAT ALLUMINIUM CO. LTD.
Dist. - Korba, State - Chhattisgarh
Person(s) Killed :
1. R.K. Yadav, Helper, Male, 30 Years

While a maintenance crew was greasing the centre pin of a motor grader in an opencast coal mine, the motor grader was operated negligently, thus a member of maintenance crew was caught beneath its middle tyre, thereby inflicting serious bodily injuries to him, to which he succumbed on the way to hospital.

Had,

motor grader not been operated negligently during maintenance, thus negligently or wilfully omitting safety of persons employed therein, thereby contravening the provisions of Regulation 62(g) read with Regulation 239 of the CMR 2017 and clause 6.9 of SOP framed under the provision of Regulation 110 of CMR, 2017 for breakdown maintenance and periodic servicing of motor grader.

Adequate mechanism such as removing key & placing stopper against tyre of motor grader been ensured by the maintenance crew during maintenance of a motor grader to restrict its movement, thus not negligently or wilfully endangering the life of persons working there at, thereby contravening the provisions of Regulation 239 of the CMR 2017 read with clause 7.3 & 7.4 of SOP framed under the provision of Regulation 110 of CMR, 2017 for breakdown maintenance and periodic servicing of motor grader.

the crew member not positioned himself in front of the middle tyre of a motor grader during its maintenance, thus negligently or wilfully endangering his life, thereby contravening the provisions of Regulation 239 of the CMR 2017.

Effective supervision been ensured while undertaking maintenance of motor grader, thus not negligently or wilfully omitting safety of persons employed therein, thereby contravening the provisions of Regulation 42(2) and Regulation 54(d) read with Regulation 239 of the CMR 2017.

this accident could have been averted.

Code : 0449 Other Non-Transportation Machinery
(1 Death)

34. Date - 11.06.19 Mine - MUNGOLI O.C
 Time - 17.20 Owner - Western Coalfields Ltd.
 Dist. - Yavatmal, State - Maharashtra
 Person(s) Killed :
 1. G. Mahto, Manager, Male, 51 Years

While a wheel dozer was levelling the approach road from coal stock to coal handling plant (CHP), an officer standing on the left side berm of approach road and was giving instructions to wheel dozer operator, fell down in between front and rear wheels and hit by the rear left wheel of wheel dozer causing fatality to the official.

Had,

i) the official placed himself at a safe distance from the operating area of the machine and used a whistle or similar device to communicate with the operator during the operation of the wheel dozer,

ii) the wheel dozer operator followed the safe operating procedure given to him.

this accident could have been averted.

Code : 0500 Explosives

Code : 0552 Deep Hole Blasting Projectiles
(1 Death)

35. Date - 12.09.19 Mine - AMALGAMATED KESHALPUR-WEST MUDIDIH
 Time - 11.25 Owner - Bharat Coking Coal Ltd.
 Dist. - Dhanbad, State - Jharkhand
 Person(s) Killed :
 1. D.D. Mahto, Exp. Carrier, Male, 38 Years

While charging of deep holes with SME explosive and Detonating cord was being carried out in an overburden bench immediately above the other overburden bench already charged with SME Explosive and interconnected with the detonating cord in view of blasting the two patches simultaneously with initiation at lower patch in an opencast coal mine, the lower patch was initiated for blasting without ensuring for withdrawal of persons at upper OB patch due to some miscommunication causing the explosion in both the charged patches, in which one person succumbed on the spot and three persons including the Overman got serious injuries and another two persons got reportable injuries at the upper patch.

Had,

i) the upper patch been not connected with lower patch by detonating cord and also the detonator & blasting cable not connected to shot-firing apparatus in lower patch, before withdrawal of persons working at upper patch, thus negligently not endangering the life of persons, as required under Reg. 195(8)(c)&(d) of the CMR, 2017

ii) the warning Siren been not blown before the withdrawal of persons at upper patch being charged, to avoid the miscommunication, as required under Reg. 196(2)(b) of the CMR, 2017,

iii) the key of the exploder been retained in possession of Overman at lower patch throughout the charging and blasting activities, thus negligently not endangering the life of persons working at upper patch, as required under Reg. 195(7)(c) of the CMR, 2017;

this accident could have been averted.

Code : 0600 Electricity

Code : 0661 Overhead Lines
(1 Death)

36. Date - 20.06.19 Mine - BHUBANESWARI OPENCAST PROJECT
 Time - 12.00 Owner - Mahanadi Coalfields Ltd.
 Dist. - Angul, State - Orissa
 Person(s) Killed :
 1. Mitu Bhukta, Cont. Worker, Male, 44 Years

While a contractor worker was climbed upon the live 230V tubular lighting pole in an opencast coal mine for checking the connections, received electric shock and got electrocuted. His body was hanged on the tubular lighting pole due to intent of electric shock.

Had,

Shutdown procedure of power supply been ensured before engaging the person to work on supply lines of tubular lighting pole as required under Regulation 19(1) of

Central Electricity Authority (Measures relating to Safety and Electric Supply) Regulations 2010,

this accident could have been averted.

Code : 0663 Switch Gears, Gate End Boxes, Pommel, etc.
(1 Death)

37. Date - 30.04.19 Mine - SATGRAM PROJECT
 Time - 21.20 Owner - Eastern Coalfields Ltd.
 Dist. - Burdwan, State - West Bengal
 Person(s) Killed :
 1. Nitimoy Kora, Ele. Helper, Male, 31 Years

While an electrical helper was about to change the sequence of 3 phase 3 wire system in a 3.3KV electrical control panel installed at 10MVA surface main receiving substation of the mine, he inadvertently came in contact with live conductors and got electrocuted and immediately shifted to hospital where he was declared brought dead.

Had,

the live 3.3KV terminal in the electrical panel not been kept exposed as required under Regulation 19(1) of Central Electricity Authority Regulations, 2010

the accident could have been averted.

Code : 0800 Falls (Other than Falls of Ground)

Code : 0881 Fall of Person from Height/into Depth
(4 Deaths)

38. Date - 25.03.19 Mine - BINA PROJECT
 Time - 17.15 Owner - Northern Coalfields Ltd.
 Dist. - Sonbhadra, State - Uttar Pradesh
 Person(s) Killed :
 1. Chotelal, Cont. Worker, Male, 24 Years

While turning a truck on 20.0m wide high wall corridor level of a dragline having almost flat gradient, the driver lost control over the truck and fell about 25m depth (approx.) on to the lower coal bench, truck driver received serious bodily injuries and another contractor worker who was in the truck also received serious bodily injuries to which he succumbed almost instantaneously on the spot.

Had,

i) the entry point of the high wall corridor level been blocked on either ends with strong parapet wall of adequate height and width and of proper shape across the corridor level as required under the provisions at Sl. no. -3 of standard operating procedures for dragline high wall corridor framed under the provision of Regulation 104(5) (e) of the Coal Mine Regulation, 2017.

ii) the high wall corridor level been provided with strong parapet wall of adequate height and width and of proper shape and strong enough to stop the truck while turning as required under the provisions at Sl. no.-2 of standard operating procedures for dragline high wall corridor framed under the provision of Regulation 104(5) (e) of the Coal Mine Regulation, 2017.

iii) the supervisors followed the approach road by walking and had not instructed truck driver to drive the truck through high wall corridor level as required under the provisions at Sl. no. -4 of standard operating procedures for dragline high wall corridor framed under the provision of Regulation 104(5) (e) of the Coal Mine Regulation, 2017.

iv) the truck driver not allowed any unauthorized person to ride on the vehicle as required under the provisions of Regulation 63(3) of the Coal Mine Regulation, 2017 read with rule 5(3) of code of transport rule framed under the provisions of Regulation 109 of the Coal Mines Regulations, 2017.

the accident could have been averted.

39. Date - 08.05.19 Mine - CENTRAL KAJORA
Time - 12.15 Owner - Eastern Coalfields Ltd.
Dist. - Burdwan, State - West Bengal
Person(s) Killed :
1. Sukanta Kora, Cont. Emp., Male, 34 Years

While a duggiman (recess cutting worker) was making holes in the sides of the pillar for fixing girder for roof support by standing on empty oil barrel, suddenly he lost his balance and fell down on the ground, causing multiple abrasions to his head, chest and hip and was immediately shifted to hospital, where he was declared 'brought dead' after about one hour and twenty five minutes.

Had,

the work person took reasonable care for his own safety by maintaining proper balance with making holes in the sides of the pillar by standing on empty oil barrel as required under the Provisions Regulation 239 read with Regulation 40(4) (a) of the Coal Mines Regulations, 2017,

this accident could have been averted.

40. Date - 08.08.19 Mine - DHANPURI OPENCAST MINE
Time - 16.25 Owner - South Eastern Coalfields Ltd.
Dist. - Shahdol, State - Madhya Pradesh
Person(s) Killed :
1. S.K. Shukla, Overman, Male, 40 Years

While an overman was making inspection of the blasted patch, after shot-firing at overburden bench of an opencast coal mine, he fell into the cavity of size 1.00m x 1.50m x 3.10m formed due to blasting and succumbed to death after 6.5 hrs, while under treatment at the hospital.

Had,

the statutory inspection and examination by shot-firer of the place after shot-firing at overburden bench been made with adequate attention and due care, thus not negligently endangered own life as required under the provisions of Regulation 239 read with Reg. 203(1) of the Coal Mines Regulations, 2017,

this accident could have been averted.

41. Date - 11.08.19 Mine - KHAS KAJORA
Time - 9.55 Owner - Eastern Coalfields Ltd.
Dist. - Burdwan, State - West Bengal
Person(s) Killed :
1. Apan Kumar, Fitter Helper, Male, 35 Years

While a fitter helper along with co-worker was tightening the cage guide rope wooden block bolt by standing at pit top (Bank head level) on surface, suddenly he lost balance and fell down in to the shaft to a depth of 275m, which resulted in to instantaneous death.

Had,

The fitter helper took reasonable care by wearing safety belt and the fitter not deputed his helper to perform his work without sanction of his superior officials and the engineer ensured that the maintenance of the cage guide ropes are properly carried out by his subordinate officials or competent persons as per the Mines Act and Regulations made there under, and a person not permitted to work to height without using safety belt of approved type and provided proper stage & suitable platform with fencing to prevent risk of person falling from height as required under the provisions of Regulations 40(4) (a), 41(a) & (b), 54(d) read with 131(3) & (4) of the Coal Mines Regulations, 2017,

this accident could have been averted.

Code : 0882 Fall of Persons on the Same Level
(1 Death)

42. Date - 21.03.19 Mine - MIC JHANJHRA PROJECT
 Time - 12.40 Owner - Eastern Coalfields Ltd.
 Dist. - Burdwan, State - West Bengal
 Person(s) Killed :
 1. S. Majhi, Cableman, Male, 55 Years

While a cableman was going to pull 95 sq.mm electric cable of Continuous Miner in an underground coal mine, suddenly he slipped/stumbled and fell on the pick of the cutter drum, inflicting serious bodily injuries in his left side of temporal region of head to which he succumbed on the way to hospital.

Had,

i) the cableman taken reasonable care for his own safety and not been negligent while walking in an underground gallery contravening the provisions of Regulations 40(4) (a) and 239 of the Coal Mines Regulations, 2017;

ii) the proper supervision been made for the operations connected with cable handling for providing safety of persons employed in the said operations as required under Regulation 48(2) (a) & 48(4) (g) of the Coal Mines Regulation 2017

this accident could have been averted.

Code : 0883 Fall of Objects incl. Rolling Objects
(3 Deaths)

43. Date - 21.02.19 Mine - GARJANBAHAL OCP MINE
 Time - 11.45 Owner - Mahanadi Coalfields Ltd.
 Dist. - Sundergarh, State - Orissa
 Person(s) Killed :
 1. Pitambar Pradhan, Mazdoor, Male, 40 Years

While cleaning of weighbridge was being carried out by water under pressure available from a fire tender, one worker inadvertently losses the grip of the nozzle used for water jet which directly hit on the head of another co-worker standing within a distance of 10m resulting into serious bodily injury of the co-worker which turned into fatal while treatment in a hospital after a period of six days. Misadventure.

44. Date - 02.05.19
Time - 11.15

Mine - GODAVARI KHANI NO.11 INCLINE MINE
Owner - Singareni Collieries Company Ltd.
Dist. - Karimnagar, State - Telangana
Person(s) Killed :

1. P. Sammaiah, Gen. Mazdoor, Male, 38 Years

While an Electrical Transwitch was being transported along a track line in an Electrical Sub-Station of an underground coal mine by a group of eight persons, it toppled and fell on a person causing seriously bodily injuries to which he succumbed to death almost instantly.

Had,

i) Code of Practices for "transportation of Heavy Machinery and equipment along an inclined track-line where mechanical means of haulage were not provided" been formulated and ensured effective enforcement of the same by the manager as required under provisions of Regulation 43(6) and Regulation 110 of the Coal Mines Regulations, 2017

ii) the work been commenced only after pre-inspection of the site by the engineer and executed accordingly with help of required tools, equipment, appliances, experienced and trained manpower as required under section 72(c) of the Mines Act, 1952 read with Regulation 54 and Regulation 239 of the Coal Mines Regulations, 2017 and

iii) the work been carried out properly after assessing the risk included and ensuring full safety of the persons employed by the Foreman as required under Section 72(c) of the Mines Act, 1952 read with Regulation 42 and Regulation 239 of the Coal Mines Regulations, 2017

this accident could have been averted.

45. Date - 09.11.19
Time - 10.45

Mine - BAHULA
Owner - Eastern Coalfields Ltd.
Dist. - Burdwan, State - West Bengal
Person(s) Killed :

1. R. Koiri, Tyndal, Male, 54 Years

While a crew of 08 tyndals transporting a liquid controller over a transporting trolley against gradient on undulating/uneven ground without securely fastening the liquid controller to the trolley but by pulling/pushing manually at about 20m distance of an endless hauler for replacement, the trolley became un-balanced due to undulating/uneven ground and suddenly liquid controller slid from the transporting trolley and fell on left leg of a crew member inflicting serious bodily injuries requiring amputation of left leg after 11 days to which injured succumbed after 92 days in the hospital.

Had,

the liquid controller been fastened securely to the transporting trolley before transporting against gradient on the undulating/uneven ground by pulling/pushing by omitting to do anything necessary for the safety of the persons employed therein, and risk assessment exercise been carried out for transport of heavy loads on ground and SOP been prepared and handed over to all persons as required under Regulation 104(1)(b) and Regulation 41(b) read with Regulation 54(a) & (d) of the Coal Mines Regulations, 2017.

this accident could have been averted.

Code : 0900 Other Causes

Code : 0993 Drowning in Water
 (1 Death)

46. Date - 30.01.19 Mine - NEYVELI NO 1
Time - 13.15 Owner - Neyveli Lignite Corporation Ltd.
 Dist. - Cuddalore, State - Tamil Nadu
 Person(s) Killed :
 1. K. Rasalingam, DGM, Male, 59 Years

While a Dy. General Manager (Operation) of an opencast lignite mine was inspecting the flow of water passing through a trench, excavated for connecting two sumps, by standing near it's edge, the ground underneath caved in due to which he fell down into the trench resulting in his death because of drowning in water.

Had,

he noticed the erosion in the lower portion of the trench occurred due to flowing water and not gone near the edge of the trench as mentioned in the SOP made for the purpose and thus, not negligently or wilfully omitted to have done anything likely to endanger his life, as required under Regulation 239 read with Regulation 40(a) of the Coal Mines Regulations, 2017,

this accident could have been averted.

Code : 0994 Buried in Sands, etc.
 (1 Death)

47. Date - 26.11.19 Mine - MAHAKALI
Time - 14.20 Owner - Western Coalfields Ltd.
 Dist. - Chandrapur, State - Maharashtra
 Person(s) Killed :
 1. M.S. Kopulwar, Driller, Male, 52 Years

While stowing operation was under progress, a stowing mazdoor went to examine the condition of barricade erected over partially stowed 7.5m high dinted dip gallery in a belowground coal mine, the stowed sand over which he was standing close to the barricade suddenly rushed through the damaged barricade at its bottom towards partially stowed dip gallery causing a void in which he fell down and got buried under the stowed sand resulting into his death due to asphyxia.

Had,

i) the extraction or reduction of pillars and heightening of galleries exceeding 3m in height not been carried out without obtaining previous permission in writing from Regional Inspector as required under the provisions of Regulation 112(1) and 112(4) of the Coal Mines Regulations 2017,

ii) persons not been employed to carry out hydraulic sand stowing operation in improper and unsafe manner in belowground workings and had not wilfully omitted to take adequate measures for ensuring safety of the persons as required under the provisions of Regulation 239 of the Coal Mines Regulations, 2017,

this accident could have been averted.

48. Date - 14.01.19 Mine - BHURKUNDA MINE-B
 Time - 14.45 Owner - Central Coalfields Ltd.
 Dist. - Ramgarh, State - Jharkhand
 Person(s) Killed :
 1. Bhagat, Trammer, Male, 58 Years

While a person was returning through haulage incline after completion to his work during the shift end, found an injured person was lying on side of the track at 2WL, later on he was identified as surface trammer of the mine, workings as banksman and declared dead. Misadventure.

49. Date - 31.01.19 Mine - SINGHALI PROJECT
 Time - 12.20 Owner - South Eastern Coalfields Ltd.
 Dist. - Korba, State - Chhattisgarh
 Person(s) Killed :
 1. Dukhu Ram, Haulage Khalashi, Male, 53
Years

While material loaded tubs were being pushed manually down a haulage track of gradient about 1 in 50 in a belowground coal mine, a trammer standing at other side of the track at next junction tried to cross the track, in which his left leg entrapped between the standing tub and tub being pushed manually, inflicting him serious in his left leg, to which he succumbed after about 52 hours while under treatment in hospital.

Had,

i) the person standing in front of the tubs being pushed down the track been properly warned to ensure the place to be free from any person, as required under Regulations 94(6) of the Coal Mines Regulations, 2017,

ii) the movement of the material loaded tubs being pushed down the track been controlled effectively by sprags or other contrivances as required under Regulations 94(9) of the Coal Mines Regulations, 2017,

this accident could have been averted.

50. Date - 18.07.19 Mine - KUMBHARKHANI U/G
 Time - 17.30 Owner - Western Coalfields Ltd.
 Dist. - Yavatmal, State - Maharashtra
 Person(s) Killed :
 1. G.K.Rameshwaram, Belt Opnr., Male, 35
Years
 2. R.K. Singh, Outsider, Male, 30 Years

While two persons entered inside the incline of a discontinued mine, without any authorization, crossing the partial fencing provided at the entrance of the incline and found dead at about 1730hrs on 18-07-2019 due to asphyxia.

Had,

i) Every walkable entrance from the surface to the workings belowground was provided with a substantial gate and also adequate fencing was provided inside the incline to prevent entry of unauthorized persons to the dangerous places in a mine as required under Regulations 73(2) and 237(1) of Coal Mines Regulations 2017.

ii) Notices regarding "unauthorized entry prohibited" were posted at conspicuous places at every entrance to the incline as required under Regulations 238 of Coal Mines Regulations 2017

iii) NO person passed through the fence provided at the incline no. 1, except with the authority of an official, as required under Regulation 40(5) of Coal Mines Regulations 2017

iv) all the unused workings which have not sealed off were inspected at least once in 7 days, by a competent person as required under Regulation 137(15) of Coal Mines Regulations 2017

v) the isolation stopping constructed, was maintained so as to prevent any leakage of air or gas through it as required under Regulation 142(4) of Coal Mines Regulations 2017

this accident could have been averted.

51. Date - 26.12.19
Time - 11.40

Mine - ADRIYALA LONGWALL PROJECT
Owner - Singareni Collieries Company Ltd.
Dist. - Karimnagar, State - Telangana
Person(s) Killed :

1. G.Dilip, Asst. Manager, Male, 32 Years

While six rescue trained persons, coupled with self-contained breathing apparatus, were returning back to Fresh Air Base after exploring the atmospheric conditions etc. of a part of disused tail gate roadway of an underground coal mine, suddenly two of them became unconscious and other two were at distress and one of the unconscious person was died after five days while undergoing treatment at hospital.

Had,

The life of others (rescue team members) not been endangered by exposing them to high temperature and very humid atmosphere after crossing massive roof fall at 80L/LC-6R junction and returned back with the whole team to fresh air base when two members felt distress as required under Rule 31(2) & 31(4) of the Mines Rescue Rules, 1985, & Regulation 239 of the Coal Mines Regulations, 2017

this accident could have been averted.



7. ACCIDENT ANALYSIS IN COAL MINES: 2020

- The number of fatal accidents in coal mines in the year 2020 stands at 48 with 53 fatalities and 18 seriously injured in these fatal accidents. The number of fatal accidents has decreased as compared to previous year 2019.
- The number of serious accidents in the year 2020 stands at 117 with 120 seriously injured persons. The number of serious accidents has decreased as compared to previous year 2019.
- Among the broad category of causes, most number of fatal accident occurred due to “Transportation Machinery (non-winding)”. Details can be seen in the tables.
- Among the broad category of causes, most number of serious accident occurred due to “Falls (other than fall of ground)”. Details can be seen in the tables.
- Maximum number of fatal accident occurred in South Eastern Coalfields Limited. Maximum number of serious accident occurred in Singareni Collieries Company Limited. Details can be seen in the tables.
- Maximum number of fatal accident occurred in the mines under Western Zone of this Directorate and maximum number of serious accident occurred in the mines under South Central Zone of this Directorate.
- Major Accident:
 - Date of Accident: 02 June 2020; Mine Name: Ramagundam OC I; Mine Owner: Singareni Collieries Company Limited; Number of Persons Killed: 4; Number of Persons Seriously Injured: 3
 - Cause of the Accident: While a group of seven persons were charging explosive in large diameter holes, drilled in big boulders, measuring about 2.0m x 3.0m x 3.0m, for secondary blasting in an opencast coal mine, suddenly the explosive column, poured in hole, exploded inflicting fatal injuries to three of them on the spot, one person succumbed to his injuries on the way to hospital and rest three persons were seriously injured.
 - What could have averted this accident: Had,
 1. the hazards associated with charging of large diameter holes into boulders, lying at a place not convenient for charging, been identified, its risk been assessed & eliminated/minimized/controlled at source and the work been done as required under the documented SMP of the mine, prepared in accordance with Regulation 104(1), Regulation 104(2) and Regulation 104(3) of the Coal Mines Regulation, 2017,
 2. the SOP been framed as part of SMP, in accordance with the identified hazards and assessed risk for charging SME explosive, as required under Regulation 104(5)(e) and implemented under Regulation 104(8) of the Coal Mines Regulation, 2017,
 3. the persons, employed in handling and use of explosive including SME explosive, been imparted training for that purpose as required under Rule 13 of the Mines Vocational Training Rules, 1966 as detailed in 6th schedule,

4. the unsafe practice of drilling large dia. holes in boulders for secondary blasting and charging those hole with SME explosive not been done, thereby negligently and wilfully endangering lives of persons, employed in mines as required under Regulation 239 of the Coal Mines Regulation, 2017,
5. it been ensured that the large diameter hole in boulders was charged with SME explosive from easily reachable place, thereby not negligently and wilfully endangering lives of persons employed in mines as required under Regulation 239 of the Coal Mines Regulation, 2017.

Statement 7.1

Casualty/serious injury rates in coal mines for different companies in 2020

Sl.	Mineral/State/ District	Number of Accidents		No. of Persons Killed						No. of Persons Seriously Injured					
		-----		Below Ground	Opencast		Above Ground		Total	Below Ground	Opencast		Above Ground		Total
		Fatal	Serious		M	F	M	F			M	F	M	F	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1.	Coal														
	Chhattisgarh														
	Bilaspur	0	1	0	0	0	0	0	0	1	0	0	0	0	1
	Raigarh	3	2	0	3	0	0	0	3	0	1	0	1	0	2
	Korea	3	1	3	0	0	0	0	3	1	0	0	0	0	1
	Korba	6	1	0	3	0	3	0	6	0	1	0	0	0	1
	TOTAL : CHHATTISGARH	12	5	3	6	0	3	0	12	2	2	0	1	0	5
	Jharkhand														
	Dhanbad	6	10	3	3	0	1	0	7	6	6	0	3	0	15
	Hazaribagh	1	0	0	1	0	0	0	1	0	0	0	0	0	0
	Bokaro	1	1	0	1	0	0	0	1	0	1	0	0	0	1
	TOTAL : JHARKHAND	8	11	3	5	0	1	0	9	6	7	0	3	0	16
	Madhya Pradesh														
	Betul	1	0	1	0	0	0	0	1	0	0	0	0	0	0
	Shahdol	0	2	0	0	0	0	0	0	0	1	0	1	0	2
	Singrauli	3	3	0	4	0	0	0	4	0	5	0	0	0	5
	TOTAL : MADHYA PRADESH	4	5	1	4	0	0	0	5	0	6	0	1	0	7
	Maharashtra														

Chandrapur	2	2	1	1	0	0	0	2	0	1	0	1	0	2
Nagpur	1	1	0	1	0	0	0	1	0	0	0	1	0	1
Yavatmal	1	1	0	0	0	1	0	1	0	0	0	1	0	1
<hr/>														
TOTAL : MAHARASHTRA	4	4	1	2	0	1	0	4	0	1	0	3	0	4
<hr/>														
Orissa														
Angul	4	0	1	2	0	1	0	4	0	0	0	0	0	0
Sundergarh	0	1	0	0	0	0	0	0	0	1	0	0	0	1
Jharsuguda	1	1	0	1	0	0	0	1	1	0	0	0	0	1
<hr/>														
TOTAL : ORISSA	5	2	1	3	0	1	0	5	1	1	0	0	0	2
<hr/>														
Telangana														
Adilabad	1	35	1	0	0	0	0	1	30	0	0	8	0	38
Karimnagar	5	22	2	4	0	2	0	8	11	8	0	6	0	25
Khammam	0	4	0	0	0	0	0	0	3	1	0	1	0	5
Warangal	0	15	0	0	0	0	0	0	12	1	0	2	0	15
Kothagudem	0	1	0	0	0	0	0	0	1	0	0	0	0	1
Kalaburagi	1	2	0	1	0	0	0	1	0	1	0	1	0	2
Mancheria	2	0	0	2	0	0	0	2	0	0	0	0	0	0
<hr/>														
TOTAL : TELANGANA	9	79	3	7	0	2	0	12	57	11	0	18	0	86
<hr/>														
Uttar Pradesh														
Sonebhadra	0	2	0	0	0	0	0	0	0	1	0	2	0	3
<hr/>														
TOTAL : UTTAR PRADESH	0	2	0	0	0	0	0	0	0	1	0	2	0	3
<hr/>														
West Bengal														
Bankura	0	1	0	0	0	0	0	0	0	0	0	1	0	1
Burdwan	6	7	4	1	0	1	0	6	9	4	0	0	0	13
<hr/>														
TOTAL : WEST BENGAL	6	8	4	1	0	1	0	6	9	4	0	1	0	14
<hr/>														
<hr/>														

ALL INDIA : COAL	48	116	16	28	0	9	0	53	75	33	0	29	0	137

2. Lignite														
Kutch	0	1	0	0	0	0	0	0	0	1	0	0	0	1

TOTAL : GUJARAT	0	1	0	0	0	0	0	0	0	1	0	0	0	1

ALL INDIA : LIGNITE	0	1	0	0	0	0	0	0	0	1	0	0	0	1

ALL INDIA : ALL COAL	48	117	16	28	0	9	0	53	75	34	0	29	0	138

Note 1 : M:Male, F:Female

Note 2 : Fatal as well as serious accidents are considered in computing the figures of number of persons seriously injured in this statement.

Statement 7.2
Casualty/serious injury rates in coal mines for different companies in 2020

Company	Number of Accidents		Number of Persons Killed						Number of Persons Seriously Injured					
			Below Ground	Opencast		Above Ground		Total	Below Ground	Opencast		Above Ground		Total
	Fatal	Serious		Male	Male	Female	Male			Female	Male	Male	Female	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
BCCL	4	5	0	3	0	1	0	4	1	6	0	3	0	10
CCL	2	1	0	2	0	0	0	2	0	1	0	0	0	1
ECL	7	8	6	1	0	1	0	8	9	4	0	1	0	14
MCL	5	2	1	3	0	1	0	5	1	1	0	0	0	2
NCL	2	5	0	2	0	0	0	2	0	6	0	2	0	8
SECL	12	7	3	6	0	3	0	12	2	3	0	2	0	7
WCL	5	4	2	2	0	1	0	5	0	1	0	3	0	4
TOTAL : CIL	37	32	12	19	0	7	0	38	13	22	0	11	0	46
GMDC	0	1	0	0	0	0	0	0	0	1	0	0	0	1
IISCO	1	1	1	0	0	0	0	1	1	0	0	0	0	1
SCCL	9	79	3	7	0	2	0	12	57	11	0	18	0	86
TISCO	0	4	0	0	0	0	0	0	4	0	0	0	0	4
SASAN	1	0	0	2	0	0	0	2	0	0	0	0	0	0
TOTAL : NON-CIL	11	85	4	9	0	2	0	15	62	12	0	18	0	92
TOTAL : ALL INDIA	48	117	16	28	0	9	0	53	75	34	0	29	0	138

STATEMENT NO. 7.3

Number of accidents and casualties/seriously injured persons in coal mines by place and detailed cause in 2020

CAUSE OF ACCIDENT	BELOW GROUND					OPENCAST					ABOVE GROUND					TOTAL				
	Fatal		Accident		S/Accident	Fatal		Accident		S/Accident	Fatal		Accident		S/Accident	Fatal		Accident		S/Accident
	ACC	KILL	INJ	ACC	INJ	ACC	KILL	INJ	ACC	INJ	ACC	KILL	INJ	ACC	INJ	ACC	KILL	INJ	ACC	INJ
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
Fall of Roof	4	4	0	4	5	0	0	0	1	1	0	0	0	0	0	4	4	0	5	6
Fall of Sides (Other than Overhangs)	3	3	2	2	2	0	0	0	0	0	0	0	0	0	0	3	3	2	2	2
Fall of Overhangs	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0
Rock Burst/Bumps	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
Air Blast	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
TOTAL : GROUND MOVEMENT	8	8	3	8	9	0	0	0	1	1	0	0	0	0	0	8	8	3	9	10
Rope Haulage	1	1	0	13	13	0	0	0	1	1	0	0	0	0	0	1	1	0	14	14
Conveyors	1	1	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0	1	1
Dumpers	0	0	0	0	0	6	7	2	4	4	1	1	0	0	0	7	8	2	4	4
Wheeled Trackless (Truck, Tanker, etc.)	0	0	0	0	0	6	6	7	2	2	2	2	0	0	0	8	8	7	2	2
TOTAL : TRANSPORTATION MACHINERY (NON-WINDING)	2	2	0	13	13	12	13	9	7	7	3	3	0	1	1	17	18	9	21	21
Drilling Machines	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	2	2	0	0	0
Winding Engine	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
Shovel, Draglines, Frontend Loader, etc.	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
Other Heavy Earth Moving Machinery	0	0	0	0	0	3	3	0	2	2	0	0	0	2	2	3	3	0	4	4
Other Non-Transportation Machinery	0	0	0	3	3	1	1	0	0	0	1	1	0	2	2	2	2	0	5	5
TOTAL : MACHINERY OTHER THAN TRANSP. MACHINERY	0	0	0	5	5	6	6	0	2	2	1	1	0	4	4	7	7	0	11	11
Solid Blasting Projectiles	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
Secondary Blasting Projectiles	0	0	0	0	0	1	4	3	0	0	0	0	0	0	0	1	4	3	0	0
Misfires/Socket (While Drilling into)	2	2	3	0	0	0	0	0	0	0	0	0	0	0	0	2	2	3	0	0
TOTAL : EXPLOSIVES	2	2	3	1	1	1	4	3	0	0	0	0	0	0	0	3	6	6	1	1
Overhead Lines	0	0	0	0	0	1	1	0	0	0	0	0	0	1	1	1	1	0	1	1

Energized Machines	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	1	1
Power Cables Other Than Trailing Cables	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	1	1
Other Electrical Accidents	0	0	0	0	0	0	0	0	1	1	0	0	0	1	2	0	0	0	2	3	
TOTAL : ELECTRICITY	0	0	0	0	0	1	1	0	1	1	0	0	0	4	5	1	1	0	5	6	
Fall of Person from Height/into Depth	1	1	0	23	23	1	1	0	8	9	3	3	0	9	9	5	5	0	40	41	
Fall of Persons on the Same Level	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	2	2	
Fall of Objects incl. Rolling Objects	0	0	0	9	9	1	1	0	1	1	0	0	0	3	3	1	1	0	13	13	
TOTAL : FALLS (OTHER THAN FALL OF GROUND)	1	1	0	32	32	2	2	0	9	10	3	3	0	14	14	6	6	0	55	56	
Irruption of Water	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0	0	0	
Drowning in Water	0	0	0	0	0	2	2	0	0	0	2	2	0	0	0	4	4	0	0	0	
Unclassified	1	1	0	9	9	0	0	0	1	1	0	0	0	5	5	1	1	0	15	15	
TOTAL : OTHER CAUSES	2	3	0	9	9	2	2	0	1	1	2	2	0	5	5	6	7	0	15	15	
ALL INDIA : ALL COAL	15	16	6	68	69	24	28	12	21	22	9	9	0	28	29	48	53	18	117	120	

STATEMENT 7.4**Number of fatal accidents in coal mines by major cause and responsibility during the year 2020**

Responsibility / Major Cause Group	1	2	3	4	5	6	7	8	9	Total
Misadventure	0	0	0	0	0	0	0	1	0	1
Management	1	0	2	0	0	0	0	1	2	6
Management & Sub. Sup. Staff(SSS)	5	0	1	3	1	1	0	2	2	15
Management, SSS & Shotfirer	0	0	0	0	2	0	0	0	0	2
Management, SSS & Coworker	0	0	2	1	0	0	0	0	0	3
Management,SSS,Coworker,Deceased	0	0	1	0	0	0	0	0	0	1
Management, SSS & Deceased	0	0	2	0	0	0	0	0	1	3
Management, SSS & Others	0	0	1	1	0	0	0	0	1	3
Management & Coworker	0	0	1	1	0	0	0	0	0	2
Management & Deceased	0	0	0	0	0	0	0	1	0	1
Management & Contractor's Worker	0	0	3	1	0	0	0	0	0	4
Subordinate Supervisory Staff(SSS)	2	0	0	0	0	0	0	0	0	2
Sub. Sup. Staff & Deceased	0	0	1	0	0	0	0	0	0	1
Coworker	0	0	3	0	0	0	0	0	0	3
Deceased	0	0	0	0	0	0	0	1	0	1
Total	8	0	17	7	3	1	0	6	6	48

STATEMENT NO. 7.5

Causewise number of fatal accidents in Coal Mines for different companies in 2020

Cause/Company	BCCL	CCL	ECL	MCL	NCL	NEC	SECL	WCL	CIL	SCCL	IISCO	NLC	TISCO	OTHERS	TOTAL
Fall of Roof	0	0	0	1	0	0	1	1	3	1	0	0	0	0	4
Killed-S/Injured :	0-0	0-0	0-0	1-0	0-0	0-0	1-0	1-0	3-0	1-0	0-0	0-0	0-0	0-0	4-0
Fall of Sides	0	0	3	0	0	0	0	1	4	0	0	0	0	0	4
Killed-S/Injured :	0-0	0-0	3-3	0-0	0-0	0-0	0-0	1-0	4-3	0-0	0-0	0-0	0-0	0-0	4-3
Rope Haulage	0	0	1	0	0	0	0	0	1	0	0	0	0	0	1
Killed-S/Injured :	0-0	0-0	1-0	0-0	0-0	0-0	0-0	0-0	1-0	0-0	0-0	0-0	0-0	0-0	1-0
Dumpers	2	0	0	1	2	0	0	0	5	1	0	0	0	1	7
Killed-S/Injured :	2-1	0-0	0-0	1-0	2-1	0-0	0-0	0-0	5-2	1-0	0-0	0-0	0-0	2-0	8-2
Trucks	1	0	1	1	0	0	3	1	7	1	0	0	0	0	8
Killed-S/Injured :	1-4	0-0	1-3	1-0	0-0	0-0	3-0	1-0	7-7	1-0	0-0	0-0	0-0	0-0	8-7
Other Machinery	0	1	0	1	0	0	5	1	8	0	0	0	0	0	8
Killed-S/Injured :	0-0	1-0	0-0	1-0	0-0	0-0	5-0	1-0	8-0	0-0	0-0	0-0	0-0	0-0	8-0
Explosives	0	0	0	0	0	0	1	0	1	2	0	0	0	0	3
Killed-S/Injured :	0-0	0-0	0-0	0-0	0-0	0-0	1-0	0-0	1-0	5-6	0-0	0-0	0-0	0-0	6-6
Fall of Persons	0	1	0	0	0	0	1	0	2	2	1	0	0	0	5
Killed-S/Injured :	0-0	1-0	0-0	0-0	0-0	0-0	1-0	0-0	2-0	2-0	1-0	0-0	0-0	0-0	5-0
Fall of Objects	0	0	0	0	0	0	0	1	1	0	0	0	0	0	1
Killed-S/Injured :	0-0	0-0	0-0	0-0	0-0	0-0	0-0	1-0	1-0	0-0	0-0	0-0	0-0	0-0	1-0
Other causes	1	0	2	1	0	0	1	0	5	2	0	0	0	0	7
Killed-S/Injured :	1-0	0-0	3-0	1-0	0-0	0-0	1-0	0-0	6-0	2-0	0-0	0-0	0-0	0-0	8-0
Belowground	0	0	5	1	0	0	3	2	11	3	1	0	0	0	15
Killed-S/Injured :	0-0	0-0	6-3	1-0	0-0	0-0	3-0	2-0	12-3	3-3	1-0	0-0	0-0	0-0	16-6
Opencast	3	2	1	3	2	0	6	2	19	4	0	0	0	1	24
Killed-S/Injured :	3-5	2-0	1-3	3-0	2-1	0-0	6-0	2-0	19-9	7-3	0-0	0-0	0-0	2-0	28-12
Aboveground	1	0	1	1	0	0	3	1	7	2	0	0	0	0	9
Killed-S/Injured :	1-0	0-0	1-0	1-0	0-0	0-0	3-0	1-0	7-0	2-0	0-0	0-0	0-0	0-0	9-0
TOTAL	4	2	7	5	2	0	12	5	37	9	1	0	0	1	48
Killed-S/Injured :	4-5	2-0	8-6	5-0	2-1	0-0	12-0	5-0	38-12	12-6	1-0	0-0	0-0	2-0	53-18

STATEMENT NO. 7.6

Causewise number of serious accidents in Coal Mines for different companies in 2020

Cause/Company	BCCL	CCL	ECL	MCL	NCL	NEC	SECL	WCL	CIL	SCCL	IISCO	NLC	TISCO	OTHERS	TOTAL
Fall of Roof	1	0	1	0	0	0	1	0	3	2	0	0	0	0	5
S/Injured :	1	0	1	0	0	0	1	0	3	3	0	0	0	0	6
Fall of Sides	0	0	0	0	0	0	1	0	1	1	0	0	0	0	2
S/Injured :	0	0	0	0	0	0	1	0	1	1	0	0	0	0	2
Rope Haulage	0	0	1	0	0	0	0	1	2	12	0	0	0	0	14
S/Injured :	0	0	1	0	0	0	0	1	2	12	0	0	0	0	14
Dumpers	0	0	0	1	2	0	0	0	3	1	0	0	0	0	4
S/Injured :	0	0	0	1	2	0	0	0	3	1	0	0	0	0	4
Trucks	0	0	0	0	0	0	1	0	1	0	0	0	0	1	2
S/Injured :	0	0	0	0	0	0	1	0	1	0	0	0	0	1	2
Other Machinery	1	0	0	0	0	0	0	2	3	8	0	0	1	0	12
S/Injured :	1	0	0	0	0	0	0	2	3	8	0	0	1	0	12
Explosives	0	0	0	1	0	0	0	0	1	0	0	0	0	0	1
S/Injured :	0	0	0	1	0	0	0	0	1	0	0	0	0	0	1
Fall of Persons	2	1	3	0	1	0	2	1	10	30	0	0	2	0	42
S/Injured :	2	1	3	0	2	0	2	1	11	30	0	0	2	0	43
Fall of Objects	0	0	0	0	1	0	0	0	1	11	0	0	1	0	13
S/Injured :	0	0	0	0	1	0	0	0	1	11	0	0	1	0	13
Other causes	1	0	3	0	1	0	2	0	7	14	1	0	0	0	22
S/Injured :	1	0	3	0	2	0	2	0	8	14	1	0	0	0	23
Belowground	1	0	6	1	0	0	2	0	10	53	1	0	4	0	68
S/Injured :	1	0	6	1	0	0	2	0	10	54	1	0	4	0	69
Opencast	1	1	1	1	4	0	3	1	12	8	0	0	0	1	21
S/Injured :	1	1	1	1	5	0	3	1	13	8	0	0	0	1	22
Aboveground	3	0	1	0	1	0	2	3	10	18	0	0	0	0	28
S/Injured :	3	0	1	0	2	0	2	3	11	18	0	0	0	0	29
TOTAL	5	1	8	2	5	0	7	4	32	79	1	0	4	1	117
S/Injured :	5	1	8	2	7	0	7	4	34	80	1	0	4	1	120

STATEMENT NO. 7.7**Regionwise/zonewise number of accidents and resultant casualties/seriously injured persons in coal mines in 2020**

Region/Zone	Fatal Accidents			Serious Accidents	
	No. of Accidents	Fatalities	S/Injured	No. of Accidents	S/Injured
Dhanbad I	0	0	0	4	4
Dhanbad II	4	5	1	2	2
Dhanbad III	2	2	4	4	4
Koderma	1	1	0	1	1
Central Zone	7	8	5	11	11
Sitarampur I	3	3	2	4	4
Sitarampur II	1	1	3	3	3
Sitarampur III	2	2	1	1	1
Eastern Zone	6	6	6	8	8
Udaipur	0	0	0	1	1
North-Western Zone	0	0	0	1	1
Varanasi	3	4	1	5	7
Northern Zone	3	4	1	5	7
Hyderabad I	5	8	3	42	43
Hyderabad II	4	4	3	37	37
South-Central Zone	9	12	6	79	80
Bhubaneswar	5	5	0	1	1
Chaibasa	0	0	0	1	1
Raigarh	2	2	0	0	0
Ranchi	1	1	0	0	0
South-Eastern Zone	8	8	0	2	2
Bilaspur	10	10	0	5	5
Jabalpur	0	0	0	2	2
Nagpur I	2	2	0	1	1
Nagpur II	3	3	0	3	3
Western Zone	15	15	0	11	11
ALL INDIA	48	53	18	117	120

STATEMENT NO. 7.8**Summary of Findings of Fatal Accidents during the year 2020**

Code : 0100 Ground Movement

Code : 0111 Fall of Roof
 (4 Deaths)

1. Date - 20.08.20 Mine - NANDIRA
 Time - 7.30 Owner - Mahanadi Coalfields Ltd.
 Dist. - Angul, State - Orissa
 Person(s) Killed :
 1. G. Das, Mistry, Male, 57 Years

While a workman was standing beneath an unsupported roof of an underground coal mine, a mass of sandstone roof measuring size about 4.1m (L) x 2.5m (B) x 0.20m (T) fell from a height of 2.7m inflicting serious bodily injuries to him and was declared brought dead on the surface of the mine.

Had,

i) roof and sides of the working places including original galleries been made kept secured as required under Regulation 115(1) of the Coal Mines Regulations, 2017

ii) splitting of pillars were carried out not beyond two pillars ahead from the pillar under extraction as required under condition no. 5.6 of permission letter no. 010696/SEZ/ Bhubaneswar Region/Perm/2019/2032/2BBR-DH/CO-4/P-100(1)/1 dated 15.07.2019

iii) diagonal line of extraction been followed and maintained during extraction of pillars as required under condition no. 5.6 of permission letter no. 010696/SEZ/ Bhubaneswar Region/Perm/2019/2032/2BBR-DH/CO-4/P-100(1)/1 dated 15.07.2019

iv) a reputed scientific agency been engaged to study and predict the strata behaviour as well as impending of permission letter no. 010696/SEZ/ Bhubaneswar Region/Perm/2019/2032/2BBR-DH/CO-4/P-100(1)/1 dated 15.07.2019

this accident could have been averted.

2. Date - 15.10.20 Mine - TAWA
 Time - 14.30 Owner - Western Coalfields Ltd.
 Dist. - Betul, State - Madhya Pradesh
 Person(s) Killed :
 1. R. Singh, Support, Male, 58 Years

While a person was engaged in a disturbed area of depillaring panel without making and keeping the roof secured, for tying rope to a wooden prop for its withdrawal, suddenly there was a crackling sound from the roof and roof rocks measuring 2.25m x 1.30m x 0.30m and 1.20m x 1.15m x 0.25m fell from a height of 3m and the person trying to escape from the area lost his balance and fell on the floor and received head injuries. Later he succumbed to his injuries during treatment at the hospital.

Had,

the person not been engaged in the area having disturbed roof without making and keeping the roof secured as required under the provisions of the regulation 115(1) of the Coal Mines Regulations 2017

this accident could have been averted.

3. Date - 29.10.20 Mine - VAKILPALLI
Time - 11.40 Owner - Singareni Collieries Company Ltd.
Dist. - Karimnagar, State - Telangana
Person(s) Killed :
1. R.N. Kumar, Overman, Male, 26 Years

While a person was supervising at a junction of a development district of an underground coal mine, suddenly a mass of roof measuring about 20m long x 4.2m wide and 1.2m to 3.0m height fell down from a height of about 3m inflicting serious bodily injuries to which he succumbed on the spot.

Had,

i) support plan been framed and enforced in consonance with the recommendations of the scientific study report prepared for Strata Control and Monitoring Plan (SCAMP) with due regard to the local geological conditions as required under Regulation 123 (1)&(2) of the coal mines Regulations, 2017

ii) support plan been included the system of measurement of strata behaviour in the support plan as required with Regulation 123(6) of the coal Mines Regulation 2017 and

iii) a copy of support plan been submitted to the Regional Inspector of Mines as required under Regulation 123(3) of the Coal Mines Regulations, 2017

this accident could have been averted.

4. Date - 21.11.20 Mine - CHURCHA
Time - 12.00 Owner - South Eastern Coalfields Ltd.
Dist. - Korea, State - Chhattisgarh
Person(s) Killed :
1. B. Ram, Dresser, Male, 52 Years

While a dresser was dressing disturbed roof in the dip slice of a depillaring panel in a belowground coal mine, a piece of sandstone measuring about 1.6m x 1.0m x 0.12m parted & fell from a height of 2.4m causing serious bodily injuries to which he succumbed on the way to hospital.

Had,

i) the danger observed in the form of disturbed roof at the face been removed in the personal supervision or all approaches to the place been fenced off so as to prevent persons entering such place as required under Regulation 48(3) of coal Mines Regulations, 2017

ii) prompt attention been given to the removal of the danger of disturbed roof condition or the place been kept adequately fenced off as required under Regulation 47(5)(1) of the Coal Mines Regulations, 1957

iii) it been ensured that the persons under the charge understand and carry out duties properly in accordance with the provisions of the Mines Act and Regulations & Orders made there under, as required by Regulations 42(1), 42(2) read with Regulation 45(1) of coal Mines Regulations, 2017

this accident could have been averted.

Code : 0112 Fall of Sides (Other than Overhangs)
(3 Deaths)

5. Date - 25.05.20 Mine - PARASCOLE WEST
Time - 20.50 Owner - Eastern Coalfields Ltd.
Dist. - Burdwan, State - West Bengal

Person(s) Killed :

1. R. Pandey, Driller, Male, 46 Years

While a drilling crew consists of three persons drilling shot holes in a development working face, suddenly a shale coal piece measuring 0.6m x 0.3m x 0.2m thick fell from a height of 2.5m by dislodging from the sides of the pillar over the drilling crew inflicting one fatal, one serious, and other escaped with minor injuries.

Had,

i) the supervisor could have taken reasonable care for dressing the roof and sides of working place and kept secure,

ii) the roof and sides been supported as per the strata control and monitoring plan (SCAMP) to secure the roof and sides of belowground working place,

iii) the workings been placed under the charge of an overman in each working shift

as required under the provisions of the Regulation 33(1), 45(1)&(5), 48(2)(f) and Regulation 123(1)(a) of the Coal Mines Regulations, 2017

this accident could have been averted.

6. Date - 18.06.20
Time - 11.22

Mine - MAHAKALI
Owner - Western Coalfields Ltd.
Dist. - Chandrapur, State - Maharashtra
Person(s) Killed :

1. A.B. Thawari, Mazdoor, Male, 39 Years

While a crew of three support persons were drilling holes for side bolting at the rise side of a developed gallery, suddenly a mass of coal measuring 3.3m (L) x 0.7m (W) x 0.3m (T), parted from the side wall and fell from a height of about 2.0m, inflicting serious injury to one of them to which he succumbed after 14 hours and the other two members escaped unhurt.

Had,

the work place been made and kept secured before employing support personnel for drilling holes for side bolting as required under the provisions of Regulation 115(1) of the Coal Mines Regulations 2017

this accident could have been averted.

7. Date - 27.10.20
Time - 11.20

Mine - PARASCOLE EAST
Owner - Eastern Coalfields Ltd.
Dist. - Burdwan, State - West Bengal
Person(s) Killed :

1. Gopal Gope, Timber, Male, 52 Years

While a stowing crew consists of four persons replacing 6" dia HDPE pipe for sand stowing raga in a depillaring district, one stowing mazdoor went to bring pipe wrench from a nearby dip, during his travel suddenly coal boulders measuring 4.0m (L) x 0.3m (W) x 0.2m thick and 0.5m (L) x 0.3m (W) x 0.2m (T) fell on him from a height of 2.4m by dislodging from the sides of the pillar causing head injury and immediately succumbed to injuries.

Had,

i) the sides of the pillars of the gallery regularly frequented by the workman kept secure by dressing and supporting,

ii) the sides of the pillars been supported as per the strata control and monitoring (SCAMP) plan to secure the sides of belowground working places,

as required under the provisions of the Reg. 47(3) & (5)(i), 45(1) &(5) and 123(1)(a) of the Coal Mines Regulations, 2017

this accident could have been averted.

Code : 0113 Fall of Overhangs
(1 Death)

8. Date - 24.02.20 Mine - CHAPUIKHAS
 Time - 12.30 Owner - Eastern Coalfields Ltd.
 Dist. - Burdwan, State - West Bengal
 Person(s) Killed :
 1. A. Kanu, Driller, Male, 55 Years

While two persons were carrying wooden sleepers in a development district, suddenly an overhang measuring 2.5m (L) x 0.35m (W) x 1.40m (T) fell from a height of 2.2m on them inflicting serious bodily injuries to both of them, due to which one succumbed to the injuries.

Had,

the overhanging sides of the pillar been properly dressed down or supported by stay props or other suitable means of support to make the roof and sides of the working place secure before the persons were engaged by supervisory staff for transportation of wooden sleepers, as required under Regulations 124(11), 115(1), 48(2)(f) and 47(3) of the Coal Mines Regulations, 2017,

this accident could have been averted.

Code : 0300 Transportation Machinery(Non-Winding)

Code : 0332 Rope Haulage
(1 Death)

9. Date - 25.03.20 Mine - NEW KENDA
 Time - 21.30 Owner - Eastern Coalfields Ltd.
 Dist. - Burdwan, State - West Bengal
 Person(s) Killed :
 1. S. Dusadh, H. Operator, Male, 57 Years

While two loosemen deployed in a shaft level endless haulage for transport of coal tubs, one looseman brought a set of empties from shaft to near two pillars distance of landing level and kept halt with uncoupling and left to landing level near junction, meanwhile loaded tubs reached from the working district to landing level which were coupled to endless rope by other looseman and hauled up by signalling. After moving the loaded tubs the other looseman suddenly inadvertently fell down in empty track line and run over by a set of empty tubs which were on move causing serious bodily injuries to head and chest to which he was succumbed to injuries on the way to hospital.

Had,

i) the looseman deployed in the endless haulage been taken reasonable care for his own safety and health and that of other persons who may effected by his own act and omission at work including proper care by absent himself at work place without previously obtained permission from such officials as required under the provisions

of Regulation 40(4)(a)m 42(b) and read with Regulation 239 of Coal Mines Regulations, 2017

this accident could have been averted.

Code : 0334 Conveyors
(1 Death)

10. Date - 30.05.20 Mine - CHURCHA
Time - 1.10 Owner - South Eastern Coalfields Ltd.
Dist. - Korea, State - Chhattisgarh
Person(s) Killed :
1. E. Tirkey, Mistry, Male, 49 Years

While a timber Mistry, authorized to work as conveyor operator, was trying to remove a coal piece stuck near discharge drum of a running belt conveyor with a hand shovel in a belowground coal mine, he was pulled and trapped between the discharge drum and the chute side plate and received multiple injuries to which he succumbed at the spot.

Had,

i) the belt conveyor been stopped before cleaning the coal pieces by the conveyor operator and thus not negligently endangered his own life as required under Regulation 211(4), code of practice for belt operation issued by the manager and Reg. 239 read with Reg. 40(1) of the Coal Mines Regulations 2017

ii) the discharge drum been adequately fenced by such suitable guards of substantial construction which could have been kept in position while the drum was in motion, as required under the provisions of Regulation 211(2)&(3) of CMR 2017

iii) a code of practice for safe installation, operation, maintenance and use of belt conveyor belowground as required under Regulation 97(6)&(9) of the Coal Mines Regulation 2017, was prepared and implemented in the mine, and

iv) the proper training of persons employed for operation of belt conveyor been ensured as required under the provisions of Regulation 217(2) of CMR 2017 read with DGMS(Tech) Circular no. 12 of 1983;

this accident could have been averted.

Code : 0335 Dumpers
(8 Deaths)

11. Date - 24.01.20 Mine - AMALGAMATED RAMAKRISHNAPUR OCP
Time - 4.45 Owner - Singareni Collieries Company Ltd.
Dist. - Mancherial, State - Telangana
Person(s) Killed :
1. D.K. Swamy, Driver, Male, 44 Years

While a loaded dumper was negotiating a curve in three way junction in an opencast coal mine, a maintenance van coming towards the junction, collided with the dumper, crushing the driver portion of the maintenance van and inflicting fatal injuries to the driver of maintenance van.

Had,

i. the three way junction been properly designed so as to have a clear view for a distance of not less than three times the braking distance as required under

Regulation 101 of Coal Mines Regulations, 2017 read with clause no.4 of the gazette notification no. G.S.R. 976(E).

ii. the junction been provided with proper divider, sign boards and police barricading so as to reduce the speed of vehicle while approaching the junction, as required under Regulation 101 of Coal Mines Regulations, 2017 read with clause no.4 of the gazette notification no. G.S.R. 976(E) and Regulation 104(3) and 109(1) of Coal Mines Regulations, 2017 read with Safe Operating Procedure no.04 of Safety Management Plan prepared by mine management.

iii. the dumper and maintenance van been provided with suitable retro reflective reflectors at suitable locations as required under the Regulation 217(2) of Coal Mines Regulations, 2017 read with gazette notification no.G.S.R.987(E) and maintenance van been provided with suitable flasher lights as required under Regulation 104(3) and 109(1) of Coal Mines Regulations, 2017 read with Safe Operating Procedure no.17 of Safety Management Plan prepared by mine management.

iv. the dumper operator not negligently negotiated the curve near the three way junction without giving any horn and observing the surroundings, as required under Regulations 63(1)(d), 63(1)(f) and 63(1)(1) of Coal Mines Regulations, 2017.

this accident could have been averted;

12. Date - 03.05.20	Mine - ANANTA O/C
Time - 5.30	Owner - Mahanadi Coalfields Ltd.
	Dist. - Angul, State - Orissa
	Person(s) Killed :
	1. B. Sahoo, Cableman, Male, 51 Years

While a dumper was being reversed at workshop premises of an opencast coal mine, one workman was run over inflicting fatal injuries to him.

Had,

the dumper been driven defensively and not been operated in reverse direction unless there was a clear view of the area behind and audible warning signal been given before reversing it, as required under Regulation 63(1)(d) & 63(1)(h) of the Coal Mines Regulations, 2017,

this accident could have been averted.

13. Date - 29.05.20	Mine - ROCP/SOUTH JHARIA
Time - 8.35	Owner - Bharat Coking Coal Ltd.
	Dist. - Dhanbad, State - Jharkhand
	Person(s) Killed :
	1. S. Kumar, Tipper, Male, 28 Years

While a tipper operator was unloading the overburden, at a distance of about 5m from the another tipper also unloading simultaneously, the overburden in an opencast coal mine, the first tipper got unbalanced during raising of its body due to unbalanced lode of boulder and it toppled over the second tipper towards left side, resulting canopy of toppled tipper fell over the cabin of second tipper, inflicting serious bodily injuries to operator sitting in the cabin of second tipper, in which he succumbed almost instantly.

Had,

the tippers were not parked within a distance of 5m from each other while dumping of overburden in the dump no. 5 and the uneven loading of boulder in to the tipper was not made and loaded tipper should have been parked on a stable ground while unloading of overburden in the dumping place of dump no. 5 as per safe operating procedure framed, under transport rules, as required under Regulation 63(j) read with 109(1) of the Coal Mines Regulations, 2017;

this accident could have been averted.

14. Date - 13.07.20 Mine - BLOCK "B" PROJECT
Time - 12.40 Owner - Northern Coalfields Ltd.
Dist. - Singrauli, State - Madhya Pradesh
Person(s) Killed :
1. Raja Ram, Dumper Optr., Male, 56 Years

While a 100T BEML dumper after unloading coal in CHP was returning to the coal face in speed down the gradient in haul road in an opencast coal mine, entered in designated loaded dumpers lane of the one way haul road and collided head on with a upcoming loaded dumper. Both dumper drivers received serious bodily injuries and one of them trapped in operator's cabin succumbed after 03:45 hrs during the rescue and recovery operation.

Had,

the empty dumper make BEML, S.No. 1089, been not entered in designated loaded dumpers lane of the haul road thus negligently not omitted to ensure safety of persons as required under the provisions of Regulation 239 of the Coal Mines Regulations 2017; and,

the empty dumper make BEML, S.No. 1089, been driven defensively and not been operated in neutral gear allowing it to over speed thus negligently not omitted to ensure safety of persons as required under the provisions of Regulation 239 read with Reg63(d) of the Coal Mines Regulations 2017; and

the limiting speed device of the empty dumper make BEML, S.No. 1089 been maintained in safe working order as required under the provisions of Para 2.1 (c) of GSR 987(E) dated 1st October, 2018 notified under the provisions of Regulation 216 (2) read with Regulation 54(d) of the Coal Mines Regulations 2017; and

the service brake of dumper make BEML, S.No. 1089, been maintained in safe working order to stop the dumper within the specified distance efficiently, as required under the provisions of Para 1.0(H) (i) of GSR 987(E) dated 1st October, 2018 notified under the provisions of Regulation 216 (2) read with Regulation 54(d) of the Coal Mines Regulations 2017;

The accident could have been averted.

15. Date - 20.07.20 Mine - DUDHICHUA PROJECT
Time - 12.00 Owner - Northern Coalfields Ltd.
Dist. - Singrauli, State - Madhya Pradesh
Person(s) Killed :
1. R.S. Rajak, Cont. Helper, Male, 38 Years

While a contractor worker of maintenance crew consisting of five workers was removing mounting bolt of tilt cylinder which hold operator cabin of tipper in an Opencast Coal Mine, during this process, cabin fell down on one of the contractual person who were supporting the cabin from front side, resulting into serious bodily injuries to him, to which he succumbed on the spot"

Had:

the mounting bolt of tilt cylinder of tipper not been removed in tilted position of the cabin without providing proper locking arrangement thus negligently not omitted to ensure safety of persons as required under the provisions of Regulation 239 of the Coal Mines Regulations 2017; and,

the removal of mounting bolt of tilt cylinder of tipper been carried out at designated workshop where the basic infrastructure required to carry out this job was available thus negligently not omitted to ensure safety of persons as required under the provisions of Regulation 239 of the Coal Mines Regulations 2017:

the mandatory safety precautions as recommended by OEM for removal of tilt cylinder been followed thus negligently not omitted to ensure safety of persons as required under the provisions of Regulation 239 of the Coal Mines Regulations 2017;

the clause No. 4,7, 8 & 9 as mentioned in code of practices framed by the manager vide letter no. fur/ arfer/20/042 dated 13.03.20 for tipper maintenance which :- required engagement of only trained workers and use of crane for fitting or for dismantling heavy assembly required not to allow persons in the vicinity while fitting or dismantling heavy assembly, - required not to position heavy assembly manually been followed thus negligently not omitted to ensure safety of persons as required under the provisions of Regulation 239 read with the code of practices framed by the manager of Coal Mines Regulations 2017;

the maintenance or examinations of cabin tilt cylinder been carried out under the supervision of engineer as required under the provisions of Regulation 217 (3) read with Regulation 54(d) of the Coal Mines Regulations 2017;

The accident could have been averted.

16. Date - 14.11.20 Mine - MOHER & MOHER AMLOHRI EXTENSION OCP
Time - 16.35 Owner - M/S SASAN POWER LTD.
Dist. - Singrauli, State - Madhya Pradesh
Person(s) Killed :
1. D.K. Pandey, Driver, Male, 44 Years
2. A. Shah, Helper, Male, 30 Years

While a light motor vehicle carrying maintenance crew was returning by light motor vehicle road after attending breakdown of rope shovel in an opencast coal mine, the driver suddenly entered into haul road through one of the cuts in road divider and waiting near Junction when a dumper of 240 Te. capacity coming by haul road from opposite direction run over the light motor vehicle in which two persons riding the vehicle succumbed instantaneously on the spot, while the remaining two persons jumped out from the vehicle unhurt.

Had,

i) the light motor vehicle driver followed the LMV (light motor vehicle) road which was provided adjacent to the haul road and not entered in the haul road as required under the provisions at Sl. no. (6) & (19) of the code of practice framed by the manager under the Regulation 110 of the Coal Mines Regulations, 2017,

ii) the cuts not been provided in road divider between haul road and light motor vehicle road to prevent light motor vehicle to enter into haul road as required under Regulation 101 of The coal Mines Regulation, 2017 read with DG Tech. Cir. No. 06 dated 11.11.2010,

iii) the dumper operator reduced his dumper speed at the junction in compliance with the provision of traffic rule framed by the manager, looked in both direction along the haul road and proceeded only if it is safe to do so and drove the dumper not too fast, defensively and without distraction as per the provisions of Regulation 63 (d), (f) & (3) of the Coal Mines Regulations, 2017,

iv) the speed barrier or any other effective arrangement been provided on haul road to ensure that the speed of the dumper does not exceed the maximum speed limit of 10 Km/hrs at the crossing, thus negligently endangering the safety of the persons employed in the mine as required under Regulation 239 of the Coal Mines Regulation 2017, read with the traffic rule framed by the manager and

v) the dumper been provided with proximity warning device, which would have alerted the dumper-operator on arriving the dumper in close proximity of light motor vehicle as required under Reg. 216 (2) of the Coal Mines Regulation, 2017 read with clause 2.1 (e) of gazette notification no. GSR 987(E) dated 01.10.2018.

this accident could have been averted.

17. Date - 19.12.20
Time - 21.50

Mine - ROCP/SOUTH JHARIA
Owner - Bharat Coking Coal Ltd.
Dist. - Dhanbad, State - Jharkhand
Person(s) Killed :
1. S. Singh, Tipper Optr., Male, 63 Years

While reversing an empty tipper in coal stock yard, in an opencast mine, another tipper operator returning from trip card entry room somehow trapped and run over by left rear wheel of the tipper inflicting serious bodily injuries, to which he succumbed almost instantly.

Had,

i) the SOP framed, under transport rules regarding operation of tipper/dumper by the Manager been implemented and adhered with, as required under Regulations 109(3) of the Coal Mines Regulations, 2017 &

ii) the disembarking from tipper at non-designated place not been practiced/ carried out in contravention of Transport Rules framed by the Manager as required under Regulations 63(J) of the Coal Mines Regulations, 2017

this accident could have been averted.

Code : 0339 Wheeled Trackless (Truck, Tanker, etc.)
(8 Deaths)

18. Date - 22.01.20
Time - 12.45

Mine - BONJAMEHARI
Owner - Eastern Coalfields Ltd.
Dist. - Burdwan, State - West Bengal
Person(s) Killed :
1. U. Mohanty, Helper, Male, 53 Years

While six members of a departmental maintenance crew in an opencast coal mine were being transported by means of a private light Motor Vehicle in the down gradient haul road to carry out a pre-scheduled operation at the coal bench, the vehicle got overturned before reaching the spot to which four of the crew members received serious injuries out of which one person succumbed during treatment in the hospital.

Had,

i) COP (Code of Practice) with respect to the LMV been framed and there has been a system in place for the enforcement of the same as required under Regulation 110(1 & 4) of coal mines regulations 2017.

ii) the driver been trained for not less than six days before being authorized to drive the vehicle in the opencast mine as required under Rule (6)(1) of Mine Vocational Training Rules 1966

iii) the vehicle not been allowed to move with persons beyond its seating capacity and not endangering the life of workers wilfully or negligently thereby as required under Regulation 239 of coal mines regulation 2017.

19. Date - 05.04.20
Time - 2.35

Mine - KALYANI KHANI OCP
Owner - Singareni Collieries Company Ltd.
Dist. - Kalaburagi (Formerly-GULBERGA), State -
Telangana
Person(s) Killed :
1. M.M. Das, Driver, Male, 39 Years

While a person was driving loaded tipper uphill on a haul road of an opencast coal mine, suddenly it collided with a parked loaded tipper at the rear; inflicting fatal injuries to him.

Had,

i) the driver been driven the tipper carefully thus not negligently omit to do anything necessary to ensure the safety of himself and his tipper as required under the provisions of Regulation 239 of the Coal Mines Regulations, 2017.

ii) the driver been not driven the tipper too fast and approached very close to the parked tipper unless he can see clearly far enough ahead to be sure that he cannot come in line with the tipper to ensure his safety as required under the provisions of Regulation 63(1)(d) of the Coal Mines Regulations, 2017.

iii) the driver been strictly adhere to the transport rules made under Regulation 109 while driving the tipper as required under the provisions of Regulation 63(1)(j) of the Coal Mines Regulations, 2017.

iv) the mining operations been carried out as per the code of practices framed by manager for transportation of tippers as required under the provision of Regulation 47(2)(d) of the Coal Mines Regulations, 2017.

this accident could have been averted.

20. Date - 30.04.20
Time - 18.50

Mine - LAKHANPUR OPEN-CAST
Owner - Mahanadi Coalfields Ltd.
Dist. - Jharsuguda, State - Orissa
Person(s) Killed :
1. Mohan, Driver, Male, 38 Years

While a diesel bowser was parked on an old discontinued OB dump of an opencast coal mine, it rolled back for about 31m and hit a person inflicting fatal injuries to him.

Had,

i) the diesel bowser been parked securely, the parking brakes have been applied fully and the wheel chocks have been kept in place as stipulated in the transport rules made under regulation 109 of Coal Mines Regulations, 2017 read with Regulations 63(j) of Coal Mines Regulations, 2017;

ii) the parking area been kept securely fenced as required under Regulation 237(1) of Coal Mines Regulations, 2017 and

iii) it been ensured that the persons employed for operation and maintenance of machinery been imparted proper training as required under Regulation 217(2) of Coal Mines Regulations, 2017 read with Rule 6(1) of Vocational Training Rules, 1966;

this accident could have been averted.

21. Date - 02.05.20
Time - 4.00

Mine - KUSMUNDA OCP
Owner - South Eastern Coalfields Ltd.
Dist. - Korba, State - Chhattisgarh
Person(s) Killed :
1. Trilochan Kar, Contract Emp., Male, 36
Years

While a loaded tipper was being driven in an opencast coal mine, the tipper after driving for about 410m from a coal face on a haul road, lost control over the tipper and the tipper toppled after crossing parapet wall on his right side of the haul road, in which he received serious bodily injuries which turned fatal on the way to hospital.

Had,

i) the tipper been driven carefully & defensively and also kept under control at all times as required under the provisions of Reg. 63(1)(d) of the CMR 2017; and

ii) the strong parapet wall along the edge of the haul road been constructed and maintained in accordance with the condition No. 6 of the Gazette Notification No. GSR 976(E) dated 01.10.2018 issued the provisions of Reg. 101 of the CMR 2017,

this accident could have been averted.

22. Date - 30.07.20
Time - 4.15

Mine - GEVRA PROJECT
Owner - South Eastern Coalfields Ltd.
Dist. - Korba, State - Chhattisgarh
Person(s) Killed :
1. M.K. Diwakar, Cont. Emp., Male, 25 Years

While a contractual employee deployed in the field maintenance yard of an opencast coal mine, was fitting a sensor on an exhaust manifold of a tipper by positioning himself beneath its leaf spring assembly, suddenly the bottom most leaf spring had broken and hit on his head, thereby inflicting severe head injuries to him, to which he succumbed after one day while under treatment in hospital.

Had,

the relevant work place safety been ensured by carrying out the maintenance of the tipper at a place having adequate infrastructure and proper maintenance facilities and not at field maintenance yard, thus not negligently or wilfully omitting safety of persons employed therein, as required under the provision of Regulation 39(1)(c) read with Regulation 239 of Coal Mines Regulations, 2017; also read with the clause 9.0 & 25 of code of practice framed by the mine manager under provision of Regulation 110 of CMR, 2017.

the maintenance of the tipper which requires technical knowledge or experience been carried out under the supervision of the engineer or competent person, as required under the provisions of the Regulation 217(3) read with Regulation 54(d) & 239 of coal mines Regulations, 2017; also read with clause 8 of the practice framed by the mine manager under provision of regulation 110 of the coal mines Regulations, 2017.

the persons carrying out maintenance of the tipper been trained properly, as required under the provision of Regulation 217(2) of the Coal Mines Regulations, 2017; read with Section 18(4) of the Mines Act, 1952.

It been ensured that the contractual employee wore safety helmet while carrying out maintenance of the tipper, as required under the provisions of Regulation 241(1) of Coal Mines Regulations, 2017; read with clause 2 of code of practice framed by the mine manager under provision of Regulation 110 of CMR, 2017.

the accident could have been averted.

23. Date - 05.11.20
Time - 14.30

Mine - ENA
Owner - Bharat Coking Coal Ltd.
Dist. - Dhanbad, State - Jharkhand
Person(s) Killed :
1. N. Das, Dumper Optr., Male, 42 Years

While a LMV with four work persons was going down at high speed along haul road having gradient of 1:12 and width 15m, suddenly the driver lost his control over the jeep due to distraction by his mobile phone call ramming into front bumper of 100T dumper parked by the side of haul road resulting into fatal injuries to one of them, fortunately other three persons and driver escaped with serious bodily injury.

Had,

i) the LMV been driver defensively in controlled speed and mobile phone not been used while driving thus negligently not endangered own life of limb and other persons travelling with the vehicles as required under the regulation 239 of the coal mines regulations 2017

ii) strict compliance of transport rules framed for movement of HEMM been ensured and dumper been parked at designated place instead of by the side of the haul road as required under the Reg. 63(1)(j) and 109 of the coal mines regulation 2017 read with condition no. 9(f) of the permission issued by the Directorate vide letter no. R-3/010171/2019/735 dated 19.11.2019

iii) separate haul road for light vehicle been provided and haul road width & its gradient been maintained thus ensure compliance of the provisions of the act, and rules and regulation framed thereunder as required under the Reg. 39(1)(d) and 101 of the coal Mines Regulation 2017 read with condition no. 7.0 of permission issued by the Directorate vide letter no. R-3/010171/2019/735 dated 19.11.201

this accident could have been averted.

24. Date - 30.11.20
Time - 10.00

Mine - CHHAAL OPEN CAST
Owner - South Eastern Coalfields Ltd.
Dist. - Raigarh, State - Chhattisgarh
Person(s) Killed :
1. S. Das, Driver, Male, 53 Years

While a loaded water tanker was reversing from the farthest point of a dead end road, formed in a portion of overburden bench in an opencast coal mine, it got uncontrolled & skidded to the immediate lower bench at a depth of 3.3m and toppled inflicting serious injuries to the driver who succumbed on the way to the hospital.

Had,

i) the road on overburden bench existing above the level of surrounding area from its three sides been provided with strong parapet walls/embankments at its edges as required under the provisions of Regulation 101 of the Coal Mines Regulations, 2017 read with condition no. 6 of G.S.R. 976(E) dated 01.10.2018

ii) the road on overburden bench on which tyre mounted water tanker was plying, not been made having a gradient steeper than 1 in 16 as required under Reg. 101 of the coal mines Regulations, 2017 read with condition no. 5 of the GSR 976(E) dated 01.10.2018

iii) systematic benches in overburden, as per the method of working recommended by scientific study been formed so that a portion of overburden bench was not left above the level of surrounding area from its three sides creating an unsafe work place as required under the provisions of Regulation 106(2) and (3) of the coal Mines Regulation, 2017 read with point no. 6.0 and 7.0 of the report of scientific study conducted by IIT Banaras, in the Mine

iv) the water tanker not been entered the narrow road (i.e., less than the permissible width of 7.8m) as required under the condition no. 11 of the safe operating procedure, no. 3832 dated 31.10.2020, of the water tanker operation framed under the provision of Regulation 110 of the Coal Mines Regulations, 2017; and

v) the water tanker not been reversed from the edge of a wet road as required under condition no. 21 of the safe operating procedure, no. 3832 dated 31.10.2020, of the water tanker operation framed under the provision of Regulation 110 of the Coal Mines Regulations, 2017,

this accident could have been averted.

25. Date - 02.12.20 Mine - UKNI O.C
Time - 11.15 Owner - Western Coalfields Ltd.
 Dist. - Yavatmal, State - Maharashtra
 Person(s) Killed :
 1. M.D. Warwade, Tipper Optr., Male, 24
Years

While a tipper operator was walking in the middle of a road towards the check post of an opencast mine to submit the out-pass, on seeing an incoming empty tipper, he took shelter under the dump body, in between the last two rear tyres of a loaded tipper parked nearby and suddenly the parked tipper moved forward and run over him causing serious bodily injuries to which he succumbed instantly,

Had,

the deceased tipper driver followed provisions of point no.20 & 21 of the Safe Operating Procedure for tipper drivers which required, framed under Regulation 110 of coal mines regulation 2017 and not taken shelter negligently in the space between the last two rear dual tyres of a parked loaded tipper, endangering his own safety in contravention of the regulation 239 of the coal mines Regulations 2017 and

the tipper driver of loaded tipper followed point no. 2 of the Safe Operating Procedure for tipper drivers, which required framed under Regulation 110 of the Coal Mines Regulations 2017

this accident could have been averted.

```

-----
Code : 0400      Machinery Other than Transp. Machinery
-----
Code : 0441      Drilling Machines
                  (2 Deaths)
-----

```

26. Date - 05.05.20 Mine - HINGULA OPENCAST MINE
Time - 9.00 Owner - Mahanadi Coalfields Ltd.
 Dist. - Angul, State - Orissa
 Person(s) Killed :
 1. S. Gavde, Cont. Emp., Male, 38 Years

While a drill machine was being marched to surface parking site through overburden bench of an opencast coal mine, it ran over a workman inflicting fatal injuries to him.

Had,

i) the drill machine not been moved or operated when persons are in such proximity as to be endangered as required under Regulation 62(g) of Coal Mines Regulations, 2017;

ii) the supervision been ensured in the working shift by appointing sufficient no. of competent persons, including officials and technicians as is sufficient to secure a thorough supervision of all operations in the mine and to secure running and maintenance in safe working order of all machinery in the mine as required under Regulation 35(1) (ii)&(iii) of Coal Mines Regulations, 2017;

this accident could have been averted.

27. Date - 19.12.20 Mine - RAJRAPPA PROJECT
Time - 17.30 Owner - Central Coalfields Ltd.

Dist. - Hazaribagh, State - Jharkhand
Person(s) Killed :
1. M. Manjhi, Cableman, Male, 58 Years

While breakout wrench operation was being done for unscrewing the second drill rod on a drill machine deployed at an overburden bench of opencast coal mine, a metal piece flew from the drill rod and hit a person's forehead; causing serious bodily injuries to him, to which he succumbed during treatment at hospital after one day.

Had,

i) the drill rod been free from its patent defect (i.e., alternation made in design by welding the additional metal on the periphery of the drill rod where breakout wrench chain is to be applied), as required under the provision of Regulation 217(1) of the Coal Mines Regulations, 2017

ii) no person been allowed to enter into the danger area of the drill machine while it is in operation as required in clause no. 4 of the Safe Operating Procedure, dated 31.9.2020 (doc. no. 61) framed under Regulation 110 of the Coal Mines Regulations, 2017

iii) the cable man been wore the PPE(helmet) properly while on duty and not entered in such a proximity/place so as to be endangered his own safety, as required under the provisions of Regulations 40(1) & 40(4)(a) of the Coal Mines Regulations, 2017

this accident could have been averted.

Code : 0448 Other Heavy Earth Moving Machinery
(3 Deaths)

28. Date - 13.02.20 Mine - JAMPALLI O/C MINE
Time - 2.40 Owner - South Eastern Coalfields Ltd.
Dist. - Raigarh, State - Chhattisgarh
Person(s) Killed :
1. R.K. Kushwaha, Excavator Optr, Male, 24
Years

While an excavator was parked at top of overburden bench of an opencast coal mine during break period, the operator's cabin caught fire due to short circuit inflicting serious burn injuries to the operator sleeping inside the cabin, who succumbed to injuries during treatment at hospital after five days.

Had,

i) the excavator been provided with Automatic fire Detection and Suppression System, as required under the provisions of Regulations 139(1)(d) of the Coal Mines Regulations, 2017;

ii) the excavator been inspected and tested in the beginning of the shift about various systems, sub-systems and protective devices and cabin been kept clean and free from any inflammable material as stipulated in codes of practices prepared under Regulation 110 of the Coal Mines Regulations, 2017;

iii) the excavator been free from patent defect (i.e., alternation in design by connecting additional cable with joints from the battery) and maintained properly for safe operation, as required under the provision of Regulations 217(1) of the Coal Mines Regulations, 2017;

this accident could have been averted.

29. Date - 14.09.20 Mine - JAMPALLI O/C MINE
Time - 21.30 Owner - South Eastern Coalfields Ltd.

Dist. - Raigarh, State - Chhattisgarh
Person(s) Killed :
1. Raju Narang, Tipper, Male, 24 Years

While a person was sitting on OB bench in an opencast coal mine, he was run over by grader thereby inflicting serious bodily injuries, to which he succumbed on the way to hospital.

Had,

i) adequate lighting arrangement been maintained as per illumination standards as required under Regulation 175(1)(a)(iii) read with Regulation 178(2)(b) & GSR 981 (E), dated 01.10.2018 of Coal mines Regulations, 2017

ii) the persons employed for operation prior to commencing work been imparted proper training as required under Regulation 39(1)(c) of Coal Mines Regulations, 2017 read with Rule 6(1) of Mines Vocational Training Rules, 1966

iii) the grader not been moved or operated when persons are in such proximity as to be endangered as required under Regulation 62(g) of Coal Mines Regulations, 2017

iv) the OB bench face been placed under the charge of adequate no. of officials for through supervision and running of machinery in safe working order in the mine as required under Regulation 35(1)(i)&(iii) of Coal Mines Regulations, 2017

v) competent persons been appointed & duly authorized in writing by the manager to operate the tippers and grader in safe manner as required under Regulation 35(1)(iii) read with Regulation 216(4) of Coal Mines Regulations, 2017

vi) injuries been reported while performing the work in the mine as required under Regulation 39(1)(b) read with Regulation 40(4)(b) of Coal Mines Regulations, 2017

this accident could have been averted.

30. Date - 15.10.20
Time - 22.10

Mine - GEVRA PROJECT
Owner - South Eastern Coalfields Ltd.
Dist. - Korba, State - Chhattisgarh
Person(s) Killed :
1. D.K. Jain, Fitter, Male, 57 Years

While two mechanics and a dozer operator were repairing the accelerator linkages of a dozer keeping it engine in running condition in a opencast mine, positioning themselves on its track chain, suddenly the dozer moved forward, thereby trapping one of the mechanic below its track chain, who sustained serious bodily injuries to which he succumbed instantaneously, whereas others two escaped unhurt.

Had

it been ensured that the repairing of the dozer been not undertaken while its engine was in motion, as required under the provisions of the Regulation 211(4) read with clause 8.0, 9.0 & 31.0 of code of practices for fitters and clause 27.0 of code of practices for operators, framed by the manager under provision of Regulation 110, also read with Regulation 62(j) & Regulation 239 of Coal Mines Regulation, 2017;

the safety features fitted in the dozer been maintained in safe working order, as required under the provisions of the Regulation 216(2) read with Regulation 54(a) and Regulation 54(d), also read with Regulation 42(1) of the coal mines Regulation, 2017.

the officials ensured that the mechanics been engaged in dozer repairing work were well conversant with the hazards associated with assigned work and adequate supervision been ensured while repairing the dozer, as required under the provisions of the Regulation 42(2) of coal mines Regulations, 2017 read with clause 10.0 of code of practices for supervisors framed by the manager under provision of Regulation 110 of coal mines Regulation, 2017;

the accident could have been averted.

Code : 0449 Other Non-Transportation Machinery
(2 Deaths)

31. Date - 18.10.20 Mine - BHATADI O.C
 Time - 14.20 Owner - Western Coalfields Ltd.
 Dist. - Chandrapur, State - Maharashtra
 Person(s) Killed :
 1. T.R. Gomase, Mazdoor, Male, 58 Years

While a blasting mazdoor deployed as a guard during blasting in an opencast mine unauthorizedly entered into the operating area of a dozer deployed for making a ramp having gradient 1 in 7.5, located within the danger zone, by riding in his two wheeler and the reversing dozer hit his two wheeler causing serious bodily injury to him, to which he succumbed after four days and 17 hours.

Had,

the entrance from the service roadway to the working place of the dozer been kept securely fenced so as to prevent any person from inadvertently entering the opencast working as required under the provisions of Regulation 128(6) of the Coal Mines Regulations 2017,

not the blasting mazdoor negligently entered into the operating area of the dozer by riding his two wheeler, endangering his own safety in contravention of the Regulation 239 of the Coal Mines Regulations, 2017

this accident could have been averted.

32. Date - 02.12.20 Mine - GEVRA PROJECT
 Time - 12.30 Owner - South Eastern Coalfields Ltd.
 Dist. - Korba, State - Chhattisgarh
 Person(s) Killed :
 1. H.Ghritalahare, Fitter, Male, 34 Years

While two work persons were dismantling the suspension assembly of a dumper in a workshop of an opencast coal mine, its piston rod suddenly blurted out of its position while removing the last mounting bolt and thrown away for a distance of 10m, thereby inflicted injuries to a work persons standing in front of it, who sustained serious bodily injuries to which he succumbed instantaneously, whereas other person escaped unhurt.

Had,

the specific instructions been given to the work persons by official to release the nitrogen gas inside the suspension assembly before start of its dismantling and during dismantling activity, as required under the provisions of the Regulation 42(1) read with Regulation 239 of Coal Mines Regulations, 2017

it been ensured that the reasonable care been taken to release the nitrogen gas inside suspension assembly, while dismantling it and the provisions made in the code of practice framed under the Regulation 110 of the Coal Mines Regulations, 2017 relating to repairing of the suspension assembly been carried out properly by the subordinate officials and work persons deployed for the job, as required under the provisions of clause no. 6 of code of practice framed under the Regulation 110, also read with the Reg. 54(d) of Coal Mines Regulation, 2017

the work persons been made well conversant with the associated hazards in relation to dismantling of suspension assembly without releasing nitrogen gas inside it, before start of its dismantling and adequate supervision been ensured during repairing work, as required under the provisions of clause 8.0, 9.0 & 10.0 code of practices framed by the manager under provision of Regulation 110 read with the Regulation 41 and Regulation 239 of Coal Mines Regulations, 2017

this accident could have been averted.

Code : 0500 Explosives

Code : 0553 Secondary Blasting Projectiles
(4 Deaths)

33. Date - 02.06.20 Mine - RAMAGUNDAM OC-I
 Time - 10.25 Owner - Singareni Collieries Company Ltd.
 Dist. - Karimnagar, State - Telangana
 Person(s) Killed :
 1. B. Rajesham, Mazdoor, Male, 46 Years
 2. B. Praveen, Mazdoor, Male, 37 Years
 3. R.R. Balkiwar, Mazdoor, Male, 27 Years
 4. B. Arjaiah, Mazdoor, Male, 32 Years

While a group of seven persons were charging explosive in large diameter holes, drilled in big boulders, measuring about 2.0m x 3.0m x 3.0m, for secondary blasting in an opencast coal mine, suddenly the explosive column, poured in hole, exploded inflicting fatal injuries to three of them on the spot, one person succumbed to his injuries on the way to hospital and rest three persons were seriously injured.

Had,

i) the hazards associated with charging of large diameter holes into boulders, lying at a place not convenient for charging, been identified, its risk been assessed & eliminated/minimized/controlled at source and the work been done as required under the documented SMP of the mine, prepared in accordance with Regulation 104(1), Regulation 104(2) and Regulation 104(3) of the Coal Mines Regulation, 2017,

ii) the SOP been framed as part of SMP, in accordance with the identified hazards and assessed risk for charging SME explosive, as required under Regulation 104(5)(e) and implemented under Regulation 104(8) of the Coal Mines Regulation, 2017,

iii) the persons, employed in handling and use of explosive including SME explosive, been imparted training for that purpose as required under Rule 13 of the Mines Vocational Training Rules, 1966 as detailed in 6th schedule,

iv) the unsafe practice of drilling large dia. holes in boulders for secondary blasting and charging those hole with SME explosive not been done, thereby negligently and wilfully endangering lives of persons, employed in mines as required under Regulation 239 of the Coal Mines Regulation, 2017,

v) it been ensured that the large diameter hole in boulders was charged with SME explosive from easily reachable place, thereby not negligently and wilfully endangering lives of persons employed in mines as required under Regulation 239 of the Coal Mines Regulation, 2017.

this accident could have been averted.

Code : 0555 Misfires/Socketts(While Drilling into)
(2 Deaths)

34. Date - 24.06.20 Mine - KURASIA COLLIERY
 Time - 1.45 Owner - South Eastern Coalfields Ltd.
 Dist. - Korea, State - Chhattisgarh
 Person(s) Killed :
 1. Dhaneshwar, Helper, Male, 58 Years

While a UDM(Universal Drilling Machine) operator was drilling holes with UDM at the floor near a split face of depillaring panel in an underground mine, the drill rod of the UDM accidentally holed into a misfired shot of previous shift causing it to explode, in which an UDM helper who was present near the face was hit by the projectiles of the explosion receiving multiple injuries, to which he succumbed on the way to hospital.

Had,

i) a careful examination been made at the place after firing of shots before any other person was allowed to enter the place, as required under Regulation 49(f) read with Regulation 203(1) of the CMR 2017;

ii) the presence of misfired hole been reported to the succeeding shift by the shot-firer by recording in shot-firer's report book, as required under Regulation 206(2) of the CMR 2017;

iii) the working place been examined carefully and made safe and instructions to observe any special precaution been given to persons before allowing them to work, as required under Regulations 48(1) read with Regulations 48(2)(c) and 129(5) of the CMR 2017; and

iv) an overman been deployed to hold charge of P-18 panel in each working shift for performing duties under these regulations, as required under Regulation 33(1) of the CMR 2017,

this accident could have been averted.

35. Date - 02.09.20 Mine - RAVINDRA KHANI NO.5
 Time - 17.10 Owner - Singareni Collieries Company Ltd.
 Dist. - Adilabad, State - Telangana
 Person(s) Killed :
 1. R. Lingaiah, Cutter, Male, 54 Years

While a crew of five persons engaged in drilling operation at a split gallery of an underground coal mine, suddenly the drill bit came in contact with explosive charge of a shot hole (misfire) and got blasted; inflicting fatal injuries to one of the crew member and serious injuries to the other three of them; while the shot firer escaped unhurt.

Had,

i) the split gallery been examined and declared safe in all aspects including misfire before engaging drilling crew as required under the provisions of Regulation 203, 204, & 129(5) of Coal Mines Regulations, 2017

ii) the code of practice for drilling and blasting and dealing with misfire shots been followed as required under the provisions of Regulation 110 and 204 of Coal Mines Regulations, 2017

this accident could have been averted.

Code : 0600 Electricity

Code : 0661 Overhead Lines
 (1 Death)

36. Date - 21.03.20 Mine - LINGARAJ OCP
Time - 9.40 Owner - Mahanadi Coalfields Ltd.
 Dist. - Angul, State - Orissa
 Person(s) Killed :
 1. S. Pradhan, Contract, Male, 44 Years

While a contractual mazdoor was about to descend from the overhead line pole after dismantling work at the surface of an opencast coal mine, he slipped and the safety rope attached to the safety harness snapped, he fell to the ground from the height of 12 meters and sustained fatal injuries.

Had,

adequate precautions been taken to provide safety devices and maintain it in efficient working condition for protecting a person from mechanical and electrical injuries as required under Regulation 19(2) of Central Electricity Authority (Measures relating to Safety and Electric Supply) Regulations, 2010

the accident could have been averted.

Code : 0800 Falls(Other than Falls of Ground)

Code : 0881 Fall of Person from Height/into Depth
 (5 Deaths)

37. Date - 30.04.20 Mine - ADRIYALA LONGWALL PROJECT
Time - 21.40 Owner - Singareni Collieries Company Ltd.
 Dist. - Karimnagar, State - Telangana
 Person(s) Killed :
 1. Koduri Swamy, Cont. Emp., Male, 49 Years

While a person was working on a drill platform placed on surface in an UG coal mine, he slipped and fell down from a height of about 3.0m causing serious bodily injuries to which he succumbed on the way to hospital.

Had,

i) the drill platform with fencing been provided to avoid danger or risk of person falling from height as required under Regulation 131(2) of the Coal Mines Regulation, 2017,

ii) the safety belt, of the type and standard suitable for the nature of work being performed and approved by the CIM been provided as required under Regulation 131(3) of the Coal Mines Regulations, 2017,

iii) a safety net of adequate strength and design been provided immediately below the platform so that the danger or risk of injuries to the persons falling from the drill platform is completely eliminated as required under Regulation 131(6) of the Coal Mines Regulations, 2017 and

iv) the code of safe practices been framed and implemented to ensure safety precautions while execution of drilling work for prevention of accidents as

required under Regulation 131(7) and Regulation 208(7) of the Coal Mines Regulations, 2017

this accident could have been averted.

38. Date - 12.05.20 Mine - AMALGAMATED AMLO-DHORI OCM
Time - 15.30 Owner - Central Coalfields Ltd.
Dist. - Bokaro, State - Jharkhand
Person(s) Killed :
1. Babulal Bhuyia, Pump Optr., Male, 57
Years

While two pump operators were taking shelter under a portable rest shelter placed on overburden dump of an opencast coal mine, suddenly portable rest shelter topple down due to heavy storm and rolled down along the slope of the dump for a length of about 30m into waterlogged quarry along with person sitting on the seat who succumbed to his injuries, while other pump operator escaped unhurt.

39. Date - 22.05.20 Mine - CHASNALLA
Time - 19.30 Owner - Indian Iron & Steel Company Ltd.
Dist. - Dhanbad, State - Jharkhand
Person(s) Killed :
1. Mahatab Alam, Cont. Emp., Male, 38 Years

While a contractor worker was trying to clean the stuck-up coal in the chimney - 5(used for coal transportation) driven in gradient of 39 degrees, near the discharge end of the chain conveyor at (-) 82 mRL of the semi mechanized longwall panel (Jankowice method), in an underground coal mine, he lost his control and fell in to the Chimney from a height of about 80m, inflicting serious bodily injury, to which he succumbed almost instantly.

Had,

i) the SOP framed, under Safety Management Plan for cleaning of stuck-up coal in chimney-5 was implemented at place, as required under Regulations 104(8) of the Coal Mines Regulations, 2017 &

ii) fencing at the dangerous place, i.e., at the edge of the chimney-5 was temporarily removed with adequate precautions as required under Regulations 237(3) of the Coal Mines Regulations, 2017

iii) the dangerous place was carefully examined/inspected before deployment of person near chimney-5 as required under Regulations 129(5) of the Coal Mines Regulations, 2017 respectively.

this accident could have been averted.

40. Date - 06.07.20 Mine - RAMAGUNDAM OC-II
Time - 15.15 Owner - Singareni Collieries Company Ltd.
Dist. - Karimnagar, State - Telangana
Person(s) Killed :
1. C. Sadaiah, Contract, Male, 50 Years

While a person was fixing corrugated Asbestos sheet on a roof of a store, standing on pre-fixed corrugated Asbestos sheet in an opencast coal mine, suddenly the pre-fixed asbestos sheet broke down, resulting him to fall from a height of six meters (6m), inflicting serious bodily injuring to which he succumbed while undergoing treatment in the hospital on the same day.

Had,

i) Code of safe practices been framed and implemented to ensure safety precautions while carrying out roof sheets fixing work at height as required under Regulation 131(7) of the Coal Mines Regulations, 2017

ii) the work person been imparted basic/refresher training to acquaint him with the basic safety while working at height as required under Rule 6 of the Mines Vocational Training Rules, 1966

iii) the person working at height roof of the shed been ensured to use safety belt to prevent injuries due to falling from height as required under Regulation 131(1) of the Coal Mines Regulations, 2017 and

iv) a safety net of adequate strength and design been provided immediately below the roof of store so that the danger or risk of injuries to the persons falling from the roof is completely eliminated as required under Regulation 131(6) of the Coal Mines Regulations, 2017,

this accident could have been averted.

41. Date - 20.12.20
Time - 11.45

Mine - DIPKA MINE NO.IA
Owner - South Eastern Coalfields Ltd.
Dist. - Korba, State - Chhattisgarh
Person(s) Killed :
1. R. Urre, Contract, Male, 44 Years

While a contractual workman was engaged for cleaning of a conveyor belt leading to SILO in an opencast coal mine, he moved from his workplace and went to other part of the conveyor over the gantry structure and fell through an unprotected open space existing underneath the return belt of the conveyor, from a height of about 52.98 m onto the ground and succumbed to his injuries on the spot.

Had,

i. the gap existing beneath the conveyor belt on the gantry been covered or adequately fenced/guarded to prevent the inadvertent fall of persons from height as required under Reg. 54(d) read with Reg. 131(1) of the CMR 2017;

ii. it been ensured that the belt cleaning operation was done under the constant supervision of a supervisor as required under SOP for belt cleaning, issued vide letter No. SECL/UP(khanan)/V.BHA./20-21/GEN/440/14.09.2020 framed under Regulation 208(8) of the CMR 2017,

iii. the supervisor in charge of the belt cleaning ensured that the persons working under his charge understand and carry out their respective duties properly, as required under R 42(1)&(2) of the CMR 2017;

iv. the person deployed near the discharge end of the conveyor not left his working place and went to conveyor gantry without permission of his supervisor as required under Reg. 40(6) of the Coal Mines Regulations 2017;

this accident could have been averted.

Code : 0883 Fall of Objects incl. Rolling Objects
(1 Death)

42. Date - 22.05.20
Time - 12.40

Mine - MAKARDHOKRA MINE NO.I
Owner - Western Coalfields Ltd.
Dist. - Nagpur, State - Maharashtra
Person(s) Killed :

1. R.B. Sharma, Tripman, Male, 28 Years

While a contractual worker, working as trip man was sitting beneath a congested space formed by two adjoining boulders of size 3.5m x 1.75m x 1.5m and 2.7m , 1.8m x 1.6m resting on each other, suddenly part of the top edge of the big boulder which was having crack and was resting on the smaller boulder parted from its main and settled down trapping him beneath the boulder inflicting serious bodily injuries which turned fatal instantaneously.

Had,

the trip man not entered in the congested space formed by two adjoining boulders and thus not wilfully omitted to take precautions for his own safety as required under regulation 239 of the Coal Mines Regulation

this accident could have been averted.

Code : 0900 Other Causes

Code : 0991 Irruption of Water
 (2 Deaths)

43. Date - 08.12.20 Mine - KHOODIA
Time - 4.10 Owner - Eastern Coalfields Ltd.
Dist. - Dhanbad, State - Jharkhand
Person(s) Killed :
1. B. Majhi, Operator, Male, 55 Years
2. M. Bouri, Helper, Male, 53 Years

While a group of four work persons including pump operators and fitter were taking rest in rise side of pumping station in an underground coal mine, there was sudden inrush of water to pumping site from dip side, due to failure of about 4.5m thick parting (having silty shale, coal & geological disturbance) with lower seam, but having higher water level located about 250m away from pumping site, in which two pump operators got trapped and drowned, whereas other two persons escaped out safely.

Had,

i. the work persons been not slept whilst on duty as required under Regulation 40 (7) of the Coal Mines Regulations, 2017,

ii. the work persons been not deployed at the pumping station which was at a lower level than the water level of lower seam without assessing of risk from underground water due to increased volume of water in lower seam as required under Regulation 150(2)(ii) read with Regulation 104 (1) of the Coal Mines Regulations, 2017,

iii. the development working not been extended within 60m of water logged area in lower seam as required under Regulations 150(3) of the Coal Mines Regulations, 2017.

iv. the plan and section of the mine been maintained accurate and kept up to date by marking of dykes, geological disturbances and all bore holes showing its extent, depth etc. within mine boundary as required under Regulations 65 (1)(b)(II) and 65 (1)(g)(V) of the Coal Mines Regulations, 2017,

This accident could have been averted.

Code : 0993 Drowning in Water
(4 Deaths)

44. Date - 11.01.20 Mine - SODEPUR
Time - 20.00 Owner - Eastern Coalfields Ltd.
Dist. - Burdwan, State - West Bengal
Person(s) Killed :
1. N. Kole, Driller, Male, 47 Years

While three workman were working on a tilted Pontoon Platform without fencing and in absence of supervision, one person who was standing on the platform suddenly fell down on the tilted platform and rolled down into the river and died due to drowning.

Had,

there been provided proper supervision of the works in the Sand Gathering Plant and proper fencing around the edge of the Pontoon for the safety of the persons working there at, as required under Regulation 239 and of the Coal Mines Regulations, 2017,

this accident could have been averted.

45. Date - 05.07.20 Mine - INDARAM KHANI NO.1A MINE
Time - 10.30 Owner - Singareni Collieries Company Ltd.
Dist. - Mancherial, State - Telangana
Person(s) Killed :
1. E. Mahesh, Helper, Male, 42 Years

While a person was assisting to conduct survey work in an opencast coal mine, partially containing water about 1-2 feet in depth, suddenly he slipped and fell down into a trench about 8 feet in depth excavated to channelize the water into sump, got drowned and succumbed due to asphyxia.

Had,

(i) the hazard associated in conduct of survey work in water logged workings been identified, assessed, and accordingly safety management plan been formulated and implemented to eliminate hazard by providing fencing to prevent the danger to the persons from falling in excavated trench as required under the provisions of section 18(4) of the Mines Act 1952 read with Regulation 104(1)(a), 2, 4 and 8 of the Coal Mines Regulations, 2017.

(ii) the efficient fence or barrier, so designed and provided as to effectively prevent any person from entering or falling in to excavated trench as required under the provisions of section 18(4) of the Mines Act 1952 read with Regulation 43(4) and 128(4) of the Coal Mines Regulations, 2017.

(iii) the workmen been provided with the life line or guard while assisting survey work in the water logged workings as required under the provisions of Regulation 242(1) of the Coal Mines Regulations, 2017.

this accident could have been averted.

46. Date - 21.07.20 Mine - MOONIDIH PROJECT
Time - 8.40 Owner - Bharat Coking Coal Ltd.
Dist. - Dhanbad, State - Jharkhand
Person(s) Killed :
1. B. Bhuia, Crew, Male, 58 Years

While a Gate Crew, an underground employee deployed on surface at the beginning of the shift after making his attendance was sitting on the fence wall of 0.6m X 0.3m of a water cooling pond of an underground coal mine, he probably lost his balance, fell inside the water cooling pond of 2.42m depth, got drowned and died instantly.

Had,

the water cooling pond on the surface used in connection with mining operation been kept securely fenced by providing 0.40m thick brick wall in cement mortar not less than 1.2m high with a barbed wire fence not less than 0.60m high on top as required under Regulation 237 of the Coal Mines Regulations, 2017 read with circular 11 of 1959,

this accident could have been averted.

47. Date - 23.07.20 Mine - KUSMUNDA OCP
Time - 7.00 Owner - South Eastern Coalfields Ltd.
Dist. - Korba, State - Chhattisgarh
Person(s) Killed :
1. Suresh Das, Contract, Male, 36 Years

While during a heavy rain two contractual workmen on the way to their workplace in an opencast coal mine, were taking shelter in a rest shelter located near the bank of a sump, suddenly on seeing localized flash flood of rain water with mud coming from the rise side workings, they attempted to escape from the shelter, in the process of which one of them slipped and was carried along with the flowing muddy water and fell into the sump filled with water up to a depth of about 8m, who was later recovered dead after 34 hours, whereas the other workman escaped unhurt.

Had,

i) the persons been stopped from going near the sump area during heavy rain as required under the safe operating procedure for working at pumps dated 18.06.2019, issued by the manager read with Reg., 43(1) and 54(d) of the coal mines regulations 2017;

ii) danger of sudden localized flood due to blockage of hume pipe near the shelter been studied and apprised to manager and suitable action taken to prevent the same, as required under Reg. 44(1)(e) of the CMR 2017;

iii) the hume pipe placed under the coal transportation road near the departmental sump been kept clean for free flow of water from rise side workings into the sump as required under the point no. 4&9 of code of safe practices for monsoon issued by the manager, read with Reg. 239 and 42(1) of the coal mines regulations 2017.

this accident could have been averted.

Code : 0999 Unclassified
(1 Death)

48. Date - 07.04.20 Mine - GODAVARI KHANI NO.11 INCLINE MINE
Time - 16.30 Owner - Singareni Collieries Company Ltd.
Dist. - Karimnagar, State - Telangana
Person(s) Killed :
1. K. Sanjeev, Mazdoor, Male, 57 Years

While a person was employed as pump operator at in an underground coal mine, he left his original place of working and travelled to disused workings of the same seam, far off from original place, and succumbed at that place due to irrespirable environment; his body was recovered after 10 days intense searching.

Had,

i) it been ensured that the official appointed Regulation 35 of the Coal Mines Regulations, 2017, remained in his place of working until end of the shift or until relieved by a duly appointed substitute as required under Regulation 48(4)(e) and Regulation 129(1) read with Regulation 239 of the Coal Mines Regulations, 2017 and

a competent person authorized by the manager been employed as pump operator as required Regulation 2(1)(m) and 213(1) of the Coal Mines Regulations, 2017, thereby negligently and wilfully not endangered life of the person employed in the mine,

ii) the official, authorized by the manager to employ person for operation of pump, engaged a competent person for operation of pump as required under Regulation 42(1) read with Regulation 2(1)(m), Regulation 213(1) and Regulation 239 of the Coal Mines Regulations, 2017, thereby negligently and wilfully not endangered life of the person employed in the mine,

iii) the official, appointed under Regulation 35 of the Coal Mines Regulations, 2017 remained underground until end of the shift or until relieved by a duly appointed substitute as required under Regulation 48(4)(e), Regulation 129(1) read with Regulation 239 of the Coal Mines Regulations, 2017, thereby negligently and wilfully not endangered life of the person employed in the mine, and

iv) the person remained at his assigned place working and did not go to any unauthorized place in the mine, as required under the provision of the Section 72(b) of the Mines Act, 1952 read with Regulation 40(5), Regulation 40(6) and Regulation 239 of the Coal Mines Regulations, 2017, thereby negligently and wilfully not endangered his life

this accident could have been averted.



8. ACCIDENT ANALYSIS IN COAL MINES: 2021

- The number of fatal accidents in coal mines in the year 2021 stands at 43 with 51 fatalities and 2 seriously injured in these fatal accidents. The number of fatal accidents has decreased as compared to previous year 2020.
- The number of serious accidents in the year 2021 stands at 186 with 191 seriously injured persons. The number of serious accidents has increased as compared to previous year 2020.
- Among the broad category of causes, most number of fatal accident occurred due to “Transportation Machinery (non-winding)”. Details can be seen in the tables.
- Among the broad category of causes, most number of serious accident occurred due to “Falls (other than fall of ground)”. Details can be seen in the tables.
- Maximum number of fatal accident occurred in Eastern Coalfields Limited. Maximum number of serious accident occurred in Singareni Collieries Company Limited. Details can be seen in the tables.
- Maximum number of fatal accident occurred in the mines under Western Zone of this Directorate and maximum number of serious accident occurred in the mines under South Central Zone of this Directorate.
- Major Accident:
 - Date of Accident: 10 November 2021; Mine Name: SRIRAMPUR NO.3 & 3 A; Mine Owner: Singareni Collieries Company Limited; Number of Persons Killed: 4; Number of Persons Seriously Injured: 0
 - Cause of the Accident: While four workmen entered into gallery for the purpose of roof stitching work in a depillaring district of an underground coal mine, a mass of coal roof measuring size of about 8.9m(Length)*4.2m(Breadth)*3.0m(Height) fell from a height of 2.8m burying all the workmen completely to which they succumbed on the spot.
 - What could have averted this accident: Had,
 1. roof and sides of the working places and travelling roadways been made and kept secured as required under Regulation 115(1) of the Coal Mines Regulations, 2017; and
 2. all faults in the working places been supported by cogs at intervals of 2.4m on either side and with cross-bars across it at intervals not exceeding 1m as required by Condition No. 6.0(C)(c) of strata control and Monitoring Plan (SCAMP) granted under Regulation 123 of the Coal Mines Regulations, 2017 issued vide this Directorate's permission letter no. 010036(SCZ) Hyderabad region no.2|perm|(2020)4872 dated 26.04.2020.

Statement 8.1
Casualty/serious injury rates in coal mines for different companies in 2021

Sl.	Mineral/State/ District	Number of Accidents		No. of Persons Killed						No. of Persons Seriously Injured					
		-----		Below Ground	Opencast		Above Ground		Total	Below Ground	Opencast		Above Ground		Total
		Fatal	Serious		M	F	M	F			M	F			
													M	F	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1.	Coal														
	Chhattisgarh														
	Bilaspur	1	0	1	0	0	0	0	1	0	0	0	0	0	0
	Raigarh	0	1	0	0	0	0	0	0	0	0	0	1	0	1
	Surguja	0	1	0	0	0	0	0	0	1	0	0	0	0	1
	Korea	2	6	2	0	0	0	0	2	5	0	0	1	0	6
	Korba	2	1	1	1	0	0	0	2	0	1	0	0	0	1
	Surajpur	0	1	0	0	0	0	0	0	0	0	0	1	0	1
TOTAL : CHHATTISGARH		5	10	4	1	0	0	0	5	6	1	0	3	0	10
	Jharkhand														
	Dhanbad	3	10	2	2	0	0	0	4	5	5	0	2	0	12
	Godda	0	1	0	0	0	0	0	0	0	0	0	1	0	1
	Hazaribagh	1	0	0	1	0	0	0	1	0	0	0	0	0	0
	Bokaro	1	1	0	1	0	0	0	1	0	1	0	0	0	1
	Chatra	0	1	0	0	0	0	0	0	0	0	0	1	0	1
	Ramgarh	2	2	0	0	0	2	0	2	0	1	0	1	0	2
TOTAL : JHARKHAND		7	15	2	4	0	2	0	8	5	7	0	5	0	17
	Madhya Pradesh														
	Betul	1	0	0	1	0	0	0	1	0	0	0	0	0	0
	Chhindwara	2	0	2	0	0	0	0	2	0	0	0	0	0	0
	Shahdol	0	6	0	0	0	0	0	0	3	2	0	1	0	6
	Umaria	1	1	1	0	0	0	0	1	0	0	0	1	0	1
	Anuppur	1	2	0	1	0	0	0	1	2	0	0	0	0	2

Singrauli	2	6	0	2	0	0	0	2	1	5	0	0	0	6
TOTAL : MADHYA PRADESH	7	15	3	4	0	0	0	7	6	7	0	2	0	15
Maharashtra														
Chandrapur	4	2	0	3	0	1	0	4	0	1	0	2	0	3
Nagpur	0	2	0	0	0	0	0	0	0	1	0	1	0	2
Yavatmal	0	1	0	0	0	0	0	0	0	0	0	1	0	1
TOTAL : MAHARASHTRA	4	5	0	3	0	1	0	4	0	2	0	4	0	6
Orissa														
Angul	2	3	0	1	0	1	0	2	0	0	0	3	0	3
TOTAL : ORISSA	2	3	0	1	0	1	0	2	0	0	0	3	0	3
Telangana														
Adilabad	1	51	4	0	0	0	0	4	43	1	0	7	0	51
Karimnagar	2	32	0	1	0	1	0	2	17	7	0	8	0	32
Khammam	1	15	0	3	0	0	0	3	5	4	0	7	0	16
Warangal	1	22	2	0	0	0	0	2	18	2	0	3	0	23
Kothagudem	1	0	0	1	0	0	0	1	0	0	0	0	0	0
Kalaburagi	1	3	0	1	0	0	0	1	2	0	0	1	0	3
Mancherial	0	3	0	0	0	0	0	0	1	1	0	1	0	3
TOTAL : TELANGANA	7	126	6	6	0	1	0	13	86	15	0	27	0	128
Uttar Pradesh														
Sonebhadra	1	1	0	1	0	0	0	1	0	1	0	0	0	1
TOTAL : UTTAR PRADESH	1	1	0	1	0	0	0	1	0	1	0	0	0	1
West Bengal														
Bankura	0	1	0	0	0	0	0	0	1	0	0	0	0	1
Birbhum	1	0	0	1	0	0	0	1	0	0	0	0	0	0
Burdwan	9	9	6	2	0	2	0	10	7	0	0	4	0	11
TOTAL : WEST BENGAL	10	10	6	3	0	2	0	11	8	0	0	4	0	12

ALL INDIA : COAL	43	185	21	23	0	7	0	51	111	33	0	48	0	192
2. Lignite														
Cuddalore	0	1	0	0	0	0	0	0	0	1	0	0	0	1
TOTAL : TAMIL NADU	0	1	0	0	0	0	0	0	0	1	0	0	0	1
ALL INDIA : LIGNITE	0	1	0	0	0	0	0	0	0	1	0	0	0	1
ALL INDIA : ALL COAL	43	186	21	23	0	7	0	51	111	34	0	48	0	193

Note 1 : M:Male, F:Female

Note 2 : Fatal as well as serious accidents are considered in computing the figures of number of persons seriously injured in this statement.

Statement 8.2
Casualty/serious injury rates in coal mines for different companies in 2021

Company	Number of Accidents		Number of Persons Killed						Number of Persons Seriously Injured					
			Below Ground	Opencast		Above Ground		Total	Below Ground	Opencast		Above Ground		Total
	Fatal	Serious		Male	Male	Female	Male			Female	Male	Male	Female	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
BCCL	3	7	2	2	0	0	0	4	2	5	0	2	0	9
CCL	2	2	0	1	0	1	0	2	0	1	0	1	0	2
ECL	9	10	6	2	0	2	0	10	8	0	0	3	0	11
MCL	2	3	0	1	0	1	0	2	0	0	0	3	0	3
NCL	3	7	0	3	0	0	0	3	1	6	0	0	0	7
SECL	7	19	5	2	0	0	0	7	11	3	0	5	0	19
WCL	6	5	1	4	0	1	0	6	0	2	0	4	0	6
TOTAL : CIL	32	53	14	15	0	5	0	34	22	17	0	18	0	57
IISCO	0	1	0	0	0	0	0	0	0	0	0	2	0	2
NLC	0	1	0	0	0	0	0	0	0	1	0	0	0	1
SCCL	7	126	6	6	0	1	0	13	86	15	0	27	0	128
TISCO	1	5	0	0	0	1	0	1	3	1	0	1	0	5
WBPDCCL	1	0	0	1	0	0	0	1	0	0	0	0	0	0
NTPC	1	0	0	1	0	0	0	1	0	0	0	0	0	0
RCCPL	1	0	1	0	0	0	0	1	0	0	0	0	0	0
TOTAL : NON-CIL	11	133	7	8	0	2	0	17	89	17	0	30	0	136
TOTAL : ALL INDIA	43	186	21	23	0	7	0	51	111	34	0	48	0	193

STATEMENT NO. 8.3

Number of accidents and casualties/seriously injured persons in coal mines by place and detailed cause in 2021

CAUSE OF ACCIDENT	BELOW GROUND					OPENCAST					ABOVE GROUND					TOTAL						
	Fatal			Accident		S/Accident			Fatal			Accident		S/Accident		Fatal			Accident		S/Accident	
	ACC	KILL	INJ	ACC	INJ	ACC	KILL	INJ	ACC	INJ	ACC	KILL	INJ	ACC	INJ	ACC	KILL	INJ	ACC	INJ		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21		
Fall of Roof	6	10	1	2	2	0	0	0	0	0	0	0	0	0	0	6	10	1	2	2		
Fall of Sides (Other than Overhangs)	2	3	0	6	6	1	1	1	0	0	0	0	0	0	0	3	4	1	6	6		
Fall of Overhangs	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1		
Subsidence	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1	1	0	0	0		
TOTAL : GROUND MOVEMENT	8	13	1	9	9	2	2	1	0	0	0	0	0	0	0	10	15	2	9	9		
Rope Haulage	1	1	0	17	17	0	0	0	0	0	0	0	0	0	0	1	1	0	17	17		
Other Rail Transportation	0	0	0	1	1	0	0	0	0	0	1	1	0	0	0	1	1	0	1	1		
Conveyors	0	0	0	2	2	0	0	0	0	0	1	1	0	0	0	1	1	0	2	2		
Dumpers	0	0	0	0	0	3	3	0	5	5	1	2	0	1	2	4	5	0	6	7		
Wheeled Trackless (Truck, Tanker, etc.)	1	1	0	1	1	6	8	0	1	1	0	0	0	1	1	7	9	0	3	3		
TOTAL : TRANSPORTATION MACHINERY (NON-WINDING)	2	2	0	21	21	9	11	0	6	6	3	4	0	2	3	14	17	0	29	30		
Drilling Machines	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	1	1		
Loading Machines	0	0	0	4	4	0	0	0	0	0	0	0	0	0	0	0	0	0	4	4		
Haulage Engine	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1		
Shovel, Draglines, Frontend Loader, etc.	0	0	0	0	0	3	3	0	0	0	0	0	0	0	0	3	3	0	0	0		
Other Heavy Earth Moving Machinery	0	0	0	0	0	1	1	0	6	7	0	0	0	2	2	1	1	0	8	9		
Other Non-Transportation Machinery	0	0	0	2	2	0	0	0	1	1	0	0	0	5	5	0	0	0	8	8		
TOTAL : MACHINERY OTHER THAN TRANSP. MACHINERY	0	0	0	7	7	4	4	0	7	8	0	0	0	8	8	4	4	0	22	23		
Solid Blasting Projectiles	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1		

Deep Hole Blasting Projectiles	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1	1	0	0	0
Other Explosive Accidents	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1	1	0	0	0
<hr/>																				
TOTAL : EXPLOSIVES	0	0	0	1	1	2	2	0	0	0	0	0	0	0	0	2	2	0	1	1
<hr/>																				
Overhead Lines	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1	1	0	0	0
Switch Gears, Gate End Boxes, Pommel, etc.	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0
Other Electrical Accidents	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	1	1	0	0	0
<hr/>																				
TOTAL : ELECTRICITY	1	1	0	0	0	1	1	0	0	0	1	1	0	0	0	3	3	0	0	0
<hr/>																				
Fall of Person from Height/into Depth	1	1	0	22	22	0	0	0	7	7	0	0	0	16	16	1	1	0	45	45
Fall of Persons on the Same Level	2	2	0	11	11	1	1	0	2	2	0	0	0	3	3	3	3	0	16	16
Fall of Objects incl. Rolling Objects	0	0	0	15	16	2	2	0	2	2	0	0	0	5	5	2	2	0	22	23
Other Accidents due to Falls	0	0	0	6	7	0	0	0	0	0	0	0	0	2	2	0	0	0	8	9
<hr/>																				
TOTAL : FALLS (OTHER THAN FALL OF GROUND)	3	3	0	54	56	3	3	0	11	11	0	0	0	26	26	6	6	0	91	93
<hr/>																				
Drowning in Water	1	1	0	0	0	0	0	0	0	0	1	1	0	0	0	2	2	0	0	0
Bursting/Leakage of Oil Pipe Lines	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1	1
Unclassified	1	1	0	16	16	0	0	0	7	7	1	1	0	10	11	2	2	0	33	34
<hr/>																				
TOTAL : OTHER CAUSES	2	2	0	16	16	0	0	0	8	8	2	2	0	10	11	4	4	0	34	35
<hr/>																				
ALL INDIA : ALL COAL	16	21	1	108	110	21	23	1	32	33	6	7	0	46	48	43	51	2	186	191
<hr/>																				

STATEMENT 8.4**Number of fatal accidents in coal mines by major cause and responsibility during the year 2021**

Responsibility / Major Cause Group	1	2	3	4	5	6	7	8	9	Total
Misadventure	1	0	0	0	0	0	0	1	1	3
Management	3	0	4	0	0	0	0	0	1	8
Management & Sub. Sup. Staff(SSS)	4	0	0	1	0	2	0	2	1	10
Management, SSS & Shotfirer	0	0	0	0	1	0	0	0	0	1
Management, SSS & Coworker	0	0	1	0	0	0	0	0	0	1
Management,SSS,Coworker & Others	0	0	1	0	0	0	0	0	0	1
Management, SSS & Deceased	0	0	0	1	0	0	0	0	0	1
Management, SSS & Others	0	0	0	0	0	1	0	0	0	1
Management, Shotfirer & Coworker	0	0	1	0	0	0	0	0	0	1
Management & Deceased	0	0	0	0	0	0	0	0	1	1
Management,Deceased & Others	0	0	1	0	0	0	0	0	0	1
Management & Contractor's Worker	0	0	2	1	0	0	0	0	0	3
Subordinate Supervisory Staff(SSS)	2	0	0	0	1	0	0	1	0	4
Sub. Sup. Staff & Coworker	0	0	0	1	0	0	0	0	0	1
Sub.Sup.Staff, Coworker & Deceased	0	0	1	0	0	0	0	0	0	1
Deceased	0	0	1	0	0	0	0	1	0	2
Deceased & Others	0	0	1	0	0	0	0	1	0	2
Others	0	0	1	0	0	0	0	0	0	1
Total	10	0	14	4	2	3	0	6	4	43

STATEMENT NO. 8.5

Causewise number of fatal accidents in Coal Mines for different companies in 2021

Cause/Company	BCCL	CCL	ECL	MCL	NCL	NEC	SECL	WCL	CIL	SCCL	IISCO	NLC	TISCO	OTHERS	TOTAL
Fall of Roof	0	0	2	0	0	0	1	0	3	2	0	0	0	1	6
Killed-S/Injured :	0-0	0-0	2-0	0-0	0-0	0-0	1-0	0-0	3-0	6-1	0-0	0-0	0-0	1-0	10-1
Fall of Sides	2	0	0	0	0	0	0	1	3	0	0	0	0	0	3
Killed-S/Injured :	3-1	0-0	0-0	0-0	0-0	0-0	0-0	1-0	4-1	0-0	0-0	0-0	0-0	0-0	4-1
Rope Haulage	0	0	1	0	0	0	0	0	1	0	0	0	0	0	1
Killed-S/Injured :	0-0	0-0	1-0	0-0	0-0	0-0	0-0	0-0	1-0	0-0	0-0	0-0	0-0	0-0	1-0
Dumpers	0	0	1	0	1	0	0	1	3	0	0	0	0	1	4
Killed-S/Injured :	0-0	0-0	2-0	0-0	1-0	0-0	0-0	1-0	4-0	0-0	0-0	0-0	0-0	1-0	5-0
Trucks	1	0	2	0	2	0	0	0	5	2	0	0	0	0	7
Killed-S/Injured :	1-0	0-0	2-0	0-0	2-0	0-0	0-0	0-0	5-0	4-0	0-0	0-0	0-0	0-0	9-0
Other Machinery	0	0	0	1	0	0	1	2	4	0	0	0	1	1	6
Killed-S/Injured :	0-0	0-0	0-0	1-0	0-0	0-0	1-0	2-0	4-0	0-0	0-0	0-0	1-0	1-0	6-0
Explosives	0	1	0	0	0	0	1	0	2	0	0	0	0	0	2
Killed-S/Injured :	0-0	1-0	0-0	0-0	0-0	0-0	1-0	0-0	2-0	0-0	0-0	0-0	0-0	0-0	2-0
Fall of Persons	0	0	0	0	0	0	3	0	3	1	0	0	0	0	4
Killed-S/Injured :	0-0	0-0	0-0	0-0	0-0	0-0	3-0	0-0	3-0	1-0	0-0	0-0	0-0	0-0	4-0
Fall of Objects	0	0	0	0	0	0	0	1	1	1	0	0	0	0	2
Killed-S/Injured :	0-0	0-0	0-0	0-0	0-0	0-0	0-0	1-0	1-0	1-0	0-0	0-0	0-0	0-0	2-0
Other causes	0	1	3	1	0	0	1	1	7	1	0	0	0	0	8
Killed-S/Injured :	0-0	1-0	3-0	1-0	0-0	0-0	1-0	1-0	7-0	1-0	0-0	0-0	0-0	0-0	8-0
Belowground	1	0	6	0	0	0	5	1	13	2	0	0	0	1	16
Killed-S/Injured :	2-0	0-0	6-0	0-0	0-0	0-0	5-0	1-0	14-0	6-1	0-0	0-0	0-0	1-0	21-1
Opencast	2	1	2	1	3	0	2	4	15	4	0	0	0	2	21
Killed-S/Injured :	2-1	1-0	2-0	1-0	3-0	0-0	2-0	4-0	15-1	6-0	0-0	0-0	0-0	2-0	23-1
Aboveground	0	1	1	1	0	0	0	1	4	1	0	0	1	0	6
Killed-S/Injured :	0-0	1-0	2-0	1-0	0-0	0-0	0-0	1-0	5-0	1-0	0-0	0-0	1-0	0-0	7-0
TOTAL	3	2	9	2	3	0	7	6	32	7	0	0	1	3	43
Killed-S/Injured :	4-1	2-0	10-0	2-0	3-0	0-0	7-0	6-0	34-1	13-1	0-0	0-0	1-0	3-0	51-2

STATEMENT NO. 8.6

Causewise number of serious accidents in Coal Mines for different companies in 2021

Cause/Company	BCCL	CCL	ECL	MCL	NCL	NEC	SECL	WCL	CIL	SCCL	IISCO	NLC	TISCO	OTHERS	TOTAL
Fall of Roof	0	0	0	0	0	0	1	0	1	1	0	0	0	0	2
S/Injured :	0	0	0	0	0	0	1	0	1	1	0	0	0	0	2
Fall of Sides	1	0	0	0	0	0	1	0	2	5	0	0	0	0	7
S/Injured :	1	0	0	0	0	0	1	0	2	5	0	0	0	0	7
Rope Haulage	0	0	1	0	0	0	0	0	1	16	0	0	0	0	17
S/Injured :	0	0	1	0	0	0	0	0	1	16	0	0	0	0	17
Dumpers	1	0	0	0	0	0	0	1	2	4	0	0	0	0	6
S/Injured :	1	0	0	0	0	0	0	2	3	4	0	0	0	0	7
Trucks	0	0	0	0	0	0	1	0	1	2	0	0	0	0	3
S/Injured :	0	0	0	0	0	0	1	0	1	2	0	0	0	0	3
Other Machinery	3	0	3	1	2	0	3	1	13	10	0	1	1	0	25
S/Injured :	4	0	3	1	2	0	3	1	14	10	0	1	1	0	26
Explosives	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
S/Injured :	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
Fall of Persons	2	1	4	1	4	0	10	3	25	36	0	0	0	0	61
S/Injured :	2	1	4	1	4	0	10	3	25	36	0	0	0	0	61
Fall of Objects	0	0	1	0	0	0	3	0	4	15	0	0	3	0	22
S/Injured :	0	0	2	0	0	0	3	0	5	15	0	0	3	0	23
Other causes	0	1	1	1	1	0	0	0	4	36	1	0	1	0	42
S/Injured :	0	1	1	1	1	0	0	0	4	37	2	0	1	0	44
Belowground	2	0	7	0	1	0	11	0	21	84	0	0	3	0	108
S/Injured :	2	0	8	0	1	0	11	0	22	85	0	0	3	0	110
Opencast	3	1	0	0	6	0	3	2	15	15	0	1	1	0	32
S/Injured :	4	1	0	0	6	0	3	2	16	15	0	1	1	0	33
Aboveground	2	1	3	3	0	0	5	3	17	27	1	0	1	0	46
S/Injured :	2	1	3	3	0	0	5	4	18	27	2	0	1	0	48
TOTAL	7	2	10	3	7	0	19	5	53	126	1	1	5	0	186
S/Injured :	8	2	11	3	7	0	19	6	56	127	2	1	5	0	191

STATEMENT NO. 8.7**Regionwise/zonewise number of accidents and resultant casualties/seriously injured persons in coal mines in 2021**

Region/Zone	Fatal Accidents			Serious Accidents	
	No. of Accidents	Fatalities	S/Injured	No. of Accidents	S/Injured
Dhanbad I	1	1	0	3	3
Dhanbad III	2	3	1	7	8
Koderma	1	1	0	1	1
Central Zone	4	5	1	11	12
Sitarampur I	5	5	0	5	5
Sitarampur II	2	2	0	3	4
Sitarampur III	3	4	0	3	4
Eastern Zone	10	11	0	11	13
Varanasi	3	3	0	7	7
Northern Zone	3	3	0	7	7
Hyderabad I	5	8	1	69	70
Hyderabad II	2	5	0	57	57
South-Central Zone	7	13	1	126	127
Bhubaneswar	2	2	0	3	3
Ranchi	3	3	0	3	3
South-Eastern Zone	5	5	0	6	6
Chennai	0	0	0	1	1
Southern Zone	0	0	0	1	1
Bilaspur	5	5	0	10	10
Jabalpur	2	2	0	9	9
Nagpur I	3	3	0	2	2
Nagpur II	4	4	0	3	4
Western Zone	14	14	0	24	25
ALL INDIA	43	51	2	186	191

STATEMENT NO. 8.8**Summary of Findings of Fatal Accidents during the year 2021**

Code : 0100 Ground Movement

Code : 0111 Fall of Roof
 (10 Deaths)

1. Date - 05.03.21 Mine - SIAL GHOGRI COAL MINE
 Time - 5.15 Owner - M/S RCCPL PVT. LTD.
 Dist. - Chhindwara, State - Madhya Pradesh
 Person(s) Killed :
 1. Rakesh Nikose, BG Worker, Male, 27 Years

While a support crew of 4 persons were erecting roof bolt in a development gallery, suddenly roof of the immediate outbye junction measuring 3.5m x 3m x 1.65m to 1.2m fell from height of 2.7m and one support man was completely buried under the fallen rocks inflicting fatal injuries, another support man was trapped below his waist under the rock of the roof fall inflicting minor injuries and the other two support men escaped unhurt.

Had,

the roof of the outbye junction been supported with roof bolts of 2.4m length in accordance with method of support of junctions specified in the support plan framed by the manager under regulation 123 of the coal mines regulation 2017,

this accident could have been averted.

2. Date - 20.03.21 Mine - NARSAMODA
 Time - 13.10 Owner - Eastern Coalfields Ltd.
 Dist. - Burdwan, State - West Bengal
 Person(s) Killed :
 1. Md.Safi Khan, Explosive Carrier, Male, 58
Years

While a crew of three persons examining for any misfires after roof blasting operation without ensuring that roof and sides were properly dressed, suddenly a coal boulder fell from roof measuring 1.5m width x 0.3m thick from a height of 2.6m in which one of the crew members succumbed to injuries and other two escaped unhurt."

Had,

a) the roof and sides has been properly dressed down before examining for any misfires after roof blasting operations in an underground coal mine and declared safe in all aspects including misfire before allowing persons as required under the provisions of Regulation 48(1)&(2)(f) read with Regulation 129(5), Regulation 47(2)(c) & (3) read with Regulation 110(3) and 203 of Coal Mine4s regulations, 2017.

b) the code of practice framed by the manager for heightening of roof and blasting been followed as required under the provisions of Regulation 110(3) and 203 of Coal Mines Regulations, 2017.

NATURAL DEATH

3. Date - 07.04.21 Mine - KAKATIYA KHANI NO.6 INCLINE
 Time - 18.20 Owner - Singareni Collieries Company Ltd.
 Dist. - Warangal, State - Telangana
 Person(s) Killed :
 1. S. Shankaraiah, Supportman, Male, 53 Years
 2. K. Narsaiah, Supportman, Male, 51 Years

While a support crew of three persons were erecting a cog in a junction of an extracted area in an underground coal mine, a mass of roof coal of about 8.4m (L) x 3.4m (W) x 1.3m (Thick) departed and fell from a height of about 3.0m, inflicting fatal injuries to two of them and serious injuries to the Mining Sirdar, supervising the job while the third support crew escaped unhurt.

Had,

i) the persons not been allowed to enter in the goaf area, thereby endangering negligently or wilfully the safety of persons employed as required under Regulation 239 read with Reg. 2(ze) of the coal mines Reg., 2017

ii) the following conditions of the permission granted under Regulations 112(1) and 149(6) of the coal mines Regulations, 2017 to extract pillars in conjunction with hydraulic sand stowing issued vide letter no. H1/KTK6/Reg. 112(1)&149(6)/3S/SS-4/3seam/2018/1853 dated 07.05.2018 been followed,

a) Condition no. 7.2: Each part pillar so formed (after splitting the pillar) shall be extracted in turn by driving dip slices not exceeding 1 in 4.5(leaving 0.6m coal in the floor which shall be extracted by dinting the floor coal while retreating) maintaining a rib of coal not less than 2.0m thickness against the adjacent stowed goaf. the rib of coal shall not be reduced.

b) Condition no. 7.7: not more than one void, equivalent to volume of one slice (355 cu.m), shall be left in the panel at a time.

c) Condition no. 7.8: Extraction of pillars shall commence from the dip inbye end and proceed systematically towards rise-outbye side maintaining a diagonal line of faces and avoiding formation of "V" in the life of extraction

d) Condition no. 7.9: Before driving a slice in a split pillar, the galleries on the inbye side are completely stowed with sand and driving of a slice is not commenced until extraction in the immediate inbye slice is completed and goaf edge supports erected.

e) Condition 7.11: the void created as a result of driving the slice, including the roof of original/split gallery at the beginning of the slice is immediately and completely stowed with sand.

this accident could have been averted.

4. Date - 15.04.21 Mine - DHELWADIH PROJECT
 Time - 18.00 Owner - South Eastern Coalfields Ltd.

Dist. - Bilaspur, State - Chhattisgarh
Person(s) Killed :
1. Jairam, Dresser, Male, 56 Years

While a dresser was dressing the roof in a face of a development district a piece of stone measuring about 0.6m x 0.45m x 0.05m, parted from the unsupported portion of roof and fell on him causing injury to his chest to which he succumbed on the way to hospital.

Had,

the mining Sirdar who was present at the spot taken due precautions to ensure the safe positioning of the dresser while dressing of roof stone and thus negligently not endangered his life and safety as required under reg. 48(4)(a) read with reg. 239 of the CMR 2017

this accident could have been averted.

5. Date - 16.08.21 Mine - DHEMOMAIN PIT
Time - 11.00 Owner - Eastern Coalfields Ltd.
Dist. - Burdwan, State - West Bengal
Person(s) Killed :
1. Sanjay Majee, Overman, Male, 53 Years

While a person was on the way to reach his district along travelling roadway, he saw crack in the roof, he started testing and dressing the roof with wooden stick, suddenly a mass of shelly sandstone roof measuring 1.9m length x 1.05m-0.85m width x 0.3m thick dislodged in between two cogs from a height of 1.7m and fell on him inflicting fatal injuries.

Had, the travelling roadway frequented by work persons been carefully examined from time to time which is made and kept secure as required under the provisions of the Regulation 45(1) & (3) read with Regulation 115(1) of Coal Mines Regulations, 2017, this accident could have been averted.

6. Date - 10.11.21 Mine - SRIRAMPUR NO.3 & 3 A
Time - 11.20 Owner - Singareni Collieries Company Ltd.
Dist. - Adilabad, State - Telangana
Person(s) Killed :
1. Bera Laxmaiah, Timberman, Male, 60 Years
2. V. Krishna Reddy, Supportman, Male, 58 Years
3. Renka Chandrasekhar, Badli Worker, Male, 32 Years
4. Gaddam Satyanarasimharaju, B. Worker, Male, 32 Years

While four workmen entered into gallery for the purpose of roof stitching work in a depillaring district of an underground coal mine, a mass of coal roof measuring size of about 8.9m (Length) x 4.2m (Breadth) x 3.0m (Height) fell from a height of 2.8m burying all the workmen completely to which they succumbed on the spot.

had,

(i) roof and sides of the working places and travelling roadways been made and kept secured as required under Regulation 115(1) of the Coal Mines Regulations, 2017; and

this accident could have averted.

the way to the hospital, the other succumbed to death during treatment after about 12Hrs. 50min. whereas other two escaped narrowly. Misadventure.

9. Date - 02.12.21 Mine - MOHAN
Time - 20.15 Owner - Western Coalfields Ltd.
Dist. - Chhindwara, State - Madhya Pradesh
Person(s) Killed :
1. Parasram, LHD Operator, Male, 58 Years

While HD operator was lifting blasted coal from 1st slice 31 L3D a mass of coal measuring 0.3m X 0.3m X 0.15m fell from side from a beg and hit the left arm of the LHD operator causing serious injuries to which he succumbed after four days during treatment at hospital

Had,

the side on made and kept secured by dressing in accordance with the clause I of the Regulation 115 of the Coal Mines Regulations 2017, this accident could have been averted.

Code : 0117 Subsidence
(1 Death)

10. Date - 31.12.21 Mine - NEW KENDA
Time - 16.45 Owner - Eastern Coalfields Ltd.
Dist. - Burdwan, State - West Bengal
Person(s) Killed :
1. Ajoy Kr. Mukherjee, Sr. Overman, Male, 59
Years

While a Senior Overman was engaged for supervision of fly ash filling and dozing operation at the unstable and cracks formed ground, in the meantime he saw smoke coming out at a distance of 50m from fly ash filling area, subsequently he went there on foot to inspect the smoke coming out from newly formed crack, suddenly a pothole was occurred just beneath his feet where he was standing and inspecting the place resulting he fell inside the hot pot hole and body was not recovered till date.

Had,

the necessary measures been taken to eliminate or minimise the risk of formation of potholes and subsidence to maintain the stability of the ground for the safety and health of persons employed in the mine as required under the provision of Regulation 37(2)(c)(h) of the Coal Mine Regulation, 2017 the risk assessment exercise been carried out and implemented for the hazard of potholes subsidence and site-specific SOPs were framed for stabilization work for filling of pot holes in subsidence prone areas and handed over to concerned persons as required under the provisions of Regulation 104(1)(5)(e) of the Coal Mine Regulation, 2017, the emergency response and evacuation plan been properly prepared to use in the case of mine emergencies such as mine fires, explosions and implemented when potholes and subsidence occurred and the procedures clearly framed including special training been imparted to persons supervisors to respond to critical operations such as filling of hot pot holes and

subsidised areas and mock rehearsals conducted at regular intervals required under the provision of Regulation 252(1)(2)(e)(j) of the Coal Mine Regulation, 2017. the supervisor been provided with a plan or tracing showing the position of workings below ground which are prone to potholes and subsidence to prevent inadvertent entry of supervisors un-knowingly in the unstable areas for inspections required under the provisions of Regulation 43(7) of the Coal Mine Regulation, 2017. the pot hole and subsidence area been examined carefully while entering in to the area taken reasonable care for his own safety while inspection and thus negligently omitted to do anything to endanger life for the safety of himself as required under the Regulation 47(3) and Regulation 239 of Coal Mines Regulations, 2017 the accident could have been averted.

Code : 0300 Transportation Machinery (Non-Winding)

Code : 0332 Rope Haulage
(1 Death)

11. Date - 22.08.21 Mine - CHORA BLOCK INCLINE
Time - 6.40 Owner - Eastern Coalfields Ltd.
Dist. - Burdwan, State - West Bengal
Person(s) Killed :
1. Ram Lakhan Ram, Trammer, Male, 52 Years

While lowering a set of nine loaded coal tubs by means of a direct haulage in a steep gradient incline of an underground coal mine, the brake band of the haulage broken into two pieces causing a brake fail and runaway of the tubs to hit the Trammer on duty who received serious bodily injuries to which he succumbed during his treatment."

Had

i. It been ensured that instead of informing the problem in the brake band during the shift to the concerned supervisor or engineer, the haulage brake was fixed negligently and temporarily, thereby omitting to ensure the safety of the mine or persons employed therein, as required under Reg. 59(4) read with Reg. 40(1), Reg. 209 and Reg. 239 of the CMR 2017.

ii. It been ensured that the haulage was operated with its brake in good working order, ensuring the safety of the mine or persons employed therein, as required under Reg. 54(d) read with reg. 57(1), Reg. 40(1), Reg. 209 and 239 of the CMR, 2017.

iii. a standard brake band which is a vital component of the haulage been provided from the Original Equipment Manufacturer (OEM) or other reliable manufacturer ensuring the safety standard of the OEM, ensuring the safety of the mine or persons employed therein, as required under Reg. 54(d) read with Reg. 209, Reg. 239 of the CMR, 2017;

this accident could have been averted.

Code : 0333 Other Rail Transportation
(1 Death)

12. Date - 02.04.21 Mine - ANANTA O/C
 Time - 18.20 Owner - Mahanadi Coalfields Ltd.
 Dist. - Angul, State - Orissa
 Person(s) Killed :
 1. R. Bubunga, Mazdoor, Male, 55 Years

While a group of contractor workers were engaged to shut railway wagon doors at railway siding of an opencast coal mine, one of them was run over during movement of railway wagons to which he succumbed on the spot.

Had,

i) adequate number of officials been appointed to secure the enforcement of requirement of the Mines Act, 1952 and rules and regulations framed thereunder as required under Section 18(4) of the Mines Act, 1952 read with Reg. 35(1)(iv) of the Coal Mines Regulations, 2017 and

ii) all work been carried out in accordance with the provisions of the act and of the regulations and orders made thereunder as required under Reg. 45(1) of the Coal Mines Regulation 2017

iii) competent person been appointed to warn workmen likely to be endangered before movement of railway wagons at railway siding as required under Reg. 102(2) of the Coal Mines Regulation, 2017; and

iv) identification of hazard and assessment of the risks been made to health and safety of employees to which they get exposed while engaged for work at railway siding as required under Regulation 104(1)(a) and 104(1)(b) of the Coal Mines Regulations, 2017

this accident could have been averted.

Code : 0334 Conveyors
(1 Death)

13. Date - 27.03.21 Mine - WEST BOKARO O/C (QUARRY SE)
 Time - 14.00 Owner - Tata Iron & Steel Co. Ltd.
 Dist. - Ramgarh, State - Jharkhand
 Person(s) Killed :
 1. J. Mohammad, Other, Male, 24 Years

While a crew of five persons were engaged in painting job on the structure of moving pipe conveyor belt in a coal beneficiation plant of an opencast coal mine, one of the persons got trapped in between pipe conveyor belt and its idler section roller; inflicting fatal injuries to him.

Had,

i) the person not been allowed to paint/repair the structure of belt conveyor while it is in motion as required on the Regulation 211(4) of the coal mines Regulation 2017

ii) the clause 6.2 (safety precautions during maintenance work in a conveyor belt) of the safe code of practices framed for maintenance to provide for the safety, health, convenience and discipline of the persons so employed been implemented, as required under the provision of Regulation 208(8) of the Coal Mines Regulations, 2017

iii) the moving parts of the belt conveyor been adequately fenced by suitable guards of substantial construction to prevent danger, as required under the provisions of Regulation 211(2) of the Coal Mines Regulations, 2017

this accident could have been averted.

Code : 0335 Dumpers
(5 Deaths)

14. Date - 16.02.21 Mine - SASTI OC
Time - 10.20 Owner - Western Coalfields Ltd.
Dist. - Chandrapur, State - Maharashtra
Person(s) Killed :
1. A.B. Khartad, Dumper Optr., Male, 54 Years

While a dumper operator, without properly wearing the seatbelt, was reversing a loaded dumper for dumping coal at the top of a coal dump having a height of about 6.3m and without adequate berm provided at the edges, the dumper overshoot the edges of the dump, overturned and fell down to the ground, causing serious bodily injuries to the dumper operator, to which he succumbed after about half an hour in hospital.

Had,

the provisions of point no.9 & 10 of the Safe Operating Procedure for dumper operators framed under Regulation 110 of Coal Mines Regulations 2017 been ensured which required, (shall wear seat belt), (While dumping in the dumping area, safe distance of at least 3m shall maintained from the edge of the dump),; and

the berm been provided to prevent dumper from overshooting the edge while dumping coal thus negligently not omitted to take this preventive measure as required under the provisions of Regulation 239 of the Coal Mines Regulations 2017.

this accident could have been averted.

15. Date - 06.04.21 Mine - DUDHICHUA PROJECT
Time - 12.20 Owner - Northern Coalfields Ltd.
Dist. - Singrauli, State - Madhya Pradesh
Person(s) Killed :
1. S.Kewat, Driver, Male, 46 Years

While a contractor tipper unloading overburden by moving it back and forth to give jerk with it's dump body raised to its full height at an overburden dump in an

opencast coal mine, the tipper became unbalanced and toppled on its left side over the adjacent tipper badly damaging it's driver's cabin causing serious bodily Injury to the tipper driver to which he succumbed instantaneously on the spot.

Had,

i) the instruction of supervisor posted at dump yard been obeyed by tipper drivers and dumped overburden at the predefined dump having wide place without endangering the life of person deployed in a mine as required under the provisions of the Regulation 40(4)(a) read with Regulation 239, further read with provisions at Sl. no. 1 of Codes of practice for safe dumping of OB at dump yard by dumpers and tippers framed under the provisions of Regulation 110 of the Coal Mine Regulation, 2017.

ii) the tipper not been placed in close proximity of the other tipper for dumping overburden at dump yard, thus not negligently endangering life of persons employed in a mine as required under the provision of Regulation 40 (4) (a) read with Regulation 239, further read with provision at Sl. no.- (7) of Codes of practice for safe dumping of OB at dump yard by dumpers and tippers framed under the provisions of Regulation 110 of the Coal Mine Regulation, 2017

iii) the restricted narrow Place at dump yard been kept securely fenced or blocked with strong parapet wall of adequate height and width demarcated with red flag as required under the provisions of Regulation 128(7) read with provision at Sl. no.-14 of Codes of practice for safe dumping of OB at dump yard by dumpers and tippers framed under the provisions of Regulation 110 of the Coal Mine Regulation, 2017.

iv) the proper and effective supervision been provided by appointing adequate number of Assistant managers, overmans and Mining Sirdars for safety and proper discipline of persons employed at East section of the mine as required under the provision of Regulation 36(1) & 37(5), read with provision of Regulation, 30, 33(1), 129, Gazette Notification no. G.S.R 427(E) dated 13.06.2019 under Coal Mines Regulation, 2017 and Section 18(4) of the Mines Act, 1952.

the accident could have been averted.

16. Date - 23.06.21
Time - 14.30

Mine - SONEPUR BAZARI PROJ.(KUMARKHALA O.C.P)
Owner - Eastern Coalfields Ltd.
Dist. - Burdwan, State - West Bengal
Person(s) Killed :

1. Madan Das Vaisnav,Helper, Male, 25 Years
2. Surojit Rana,Helper, Male, 20 Years

While two work persons were removing the wheel nuts from a tyre mounted on dumper which was ripped by Tyre handler, Rim came out hitting the persons removing the nuts causing fatal injuries to both.

Had,

i) the tyre been deflated before demounting as required under Reg. 239,

ii) no person was allowed when Tyre handler was holding inflated tyre as required under Reg. 239,

iii) the discarding criterion be framed and followed for Lock-ring and rim assemblies of tyre as required under Reg. 209, and

iv) the SOP's been made considering guidelines given by the tyre manufacturers/OEM as required under Reg. 110(3) (a) of the Coal Mines Regulations, 2017 read with

this accident could have been averted.

17. Date - 19.09.21 Mine - PAKRI BARWADIH COAL MINING PROJECT
Time - 10.35 Owner - NTPC LTD.
Dist. - Hazaribagh, State - Jharkhand
Person(s) Killed :
1. Nausad Alam,Dy. safety officer, Male, 30
Years

While a supervisor was standing in proximity of the dumper after came down from the operator cabin of 100te dumper, the dumper operator without confirming the position of supervisor suddenly moved dumper forward to run over the supervisor, causing serious bodily injuries to him, to which he succumbed whilst on the way to hospital.

Had,

i) the dumper operator not moved his dumper when the persons are in such proximity to be endangered contravening Regulation 62(g) of the Coal Mines Regulations, 2017;

ii) the supervisor followed the established process to check the HEMM deployed in the mine as required under code of practice framed for checking the HEMM under Reg.110(3) of the CMR, 2017 and

iii) the dumper operator not allowed any unauthorized persons to ride on the dumper thus contravening the provisions of Regulation 63(3) of the Coal Mines Regulations,2017 read with condition No. 5D(3) of code of transport rules framed by manager under Regulation 109 of CMR,2017 and

this accident could have been averted.

Code : 0339 Wheeled Trackless (Truck,Tanker,etc.)
(9 Deaths)

18. Date - 13.02.21 Mine - NICHITPUR
Time - 2.45 Owner - Bharat Coking Coal Ltd.
Dist. - Dhanbad, State - Jharkhand
Person(s) Killed :
1. Nepal Mahto,Cont. Tipper Driver, Male, 55
Years

While an overburden loaded Volvo-tipper was reversing for unloading overburden in an overburden dump of an opencast coal mine, the tipper rolled back and fell down 50m below the dump, to which the tipper driver received serious bodily injuries and succumbed on way to the hospital

Had,

i. the berm of adequate height and width been provided at the edge of the overburden dump, thus negligently not endangering the life of a person, as required under Reg. 239 of the CMR, 2017,

ii. it been ensured that height of overburden dumping was less than 30m to maintain the slope of spoil bank (angle of repose) about 37.5o from the horizontal and to stop the sliding down of tipper, as required under Reg. 108 of the CMR, 2017,

iii. the adequate supervision been ensured in the contractual workings by the mine management, this accident could have been averted.

19. Date - 08.03.21
Time - 23.30

Mine - MIC JHANJHRA PROJECT
Owner - Eastern Coalfields Ltd.
Dist. - Burdwan, State - West Bengal
Person(s) Killed :
1. Samsher khan, MUV Operator, Male, 31 Years

While an empty MUV(Multi Utility Vehicle propelled by a diesel engine) was about to reach surface in an underground coal mine, suddenly it started running down the incline and the operator lost control; in the process the vehicle toppled, skipped down for a distance of about 400m and then hit another upcoming MUV in the incline before being to rest, wherein the operator of the first MUV received seriously bodily injury to which he succumbed and the other operator escaped with a minor injury."

Had;

(i) The brakes of the MUV been effective to bring the vehicle to rest as soon as it started to run down the incline as required under Regulation 209 read with Reg.54(a) of CMR 2017,

(ii) No length of the roadways condition in the incline on which the vehicle was running been conducive to skidding as required under DGMS's condition 22(a) of the Permission issued vide letter No.EZ/Mechanical/1010796/2018/106 dated 01.02.2018 read with reg.239 of CMR 2017 and

(iii) No equipment or person been allowed in the ramp while there is an equipment already moving in it as required under DGMS's condition 15(H) of Permission vide letter No.EZ/Mechanical/1010796/2018/106 dated 01.01.2018 read with Reg.239 of CMR 2017 and SOP made there under.

This accident could have been averted.

20. Date - 21.04.21
Time - 1.15

Mine - BINA PROJECT
Owner - Northern Coalfields Ltd.
Dist. - Sonbhadra, State - Uttar Pradesh
Person(s) Killed :
1. M.E. Rao, Contract, Male, 21 Years

While two contractor workers were removing cross-joint of rear propeller shaft underneath of a water tanker parked on haul road of an opencast the coal mine, the water tanker inadvertently started moving down the gradient on removing cross joint

and rolled over to one of the contractor worker causing serious bodily injuries to which he succumbed on the spot and other escaped unhurt.

Had,

the contractor workers been deployed as helper under the supervision of an engineer or other competent person having technical knowledge and experience for removal of cross joint of rear propeller shaft of water tanker as required under the Regulation 217(3) read with 54(d) of CMR 2017 and the clause nos. 1.0, 3.0 & 4.0 of the code of practice to attend breakdown of dumper/tipper/tankers in mine framed by the manager under regulation 110(1) of the CMR, 2017

the competent persons been deployed in third shifts to secure proper installation, running and maintenance of all machinery in safe working order at North section of the mine thus negligently not endanger the safety of person employed in the mine as required under the clause nos. 1.0, 3.0 & 4.0 of the code of practice to attend breakdown of dumper/tipper/tankers in mine framed by the manager under regulation 110(1) of the CMR, 2017 Reg. 239 read with Reg. 43(6) of CMR 2017

the parking brake been applied and stoppers been placed on wheels before removal of cross joint of rear propeller shaft of water tanker parked on down gradient thus not negligently endangering the safety of the persons employed in a mine as required under the code of practices framed by the manager under Reg. 110(1) of Coal Mines Regulations 2017

the effective coordination and communication system in between the contractor and appropriate level of supervisors of mine been established for information sharing prior to commencing of any work in mine as required Reg. 39(1)(a) of the Coal Mines Regulations 2017

this accident could have been averted.

21. Date - 03.06.21
Time - 14.25

Mine - MANUGURU OPENCAST MINE
Owner - Singareni Collieries Company Ltd.
Dist. - BHADRADRI KOTHAGUDEM, State - Telangana
Person(s) Killed :
1. Kalevaru Satyanarayana, OC Worker, Male, 55

Years

While a motor grader was just moved out of an internal parking yard of an opencast coal mine, the grader blade hit a person moving along the haul road junction, fell him down and run over by the rear left tyre, inflicting serious bodily injuries to which he succumbed while on the way to the hospital.

Had,

the operator been more vigilant and careful while operating the Motor Grader and followed the transport rule and code of practice framed by the manager as required under Regulation 62(g) read with Regulation 109 & 239 of the Coal mines Regulation, 2017, and the person been more vigilant and careful while moving along the haul road as required under Regulation 40(4)(a) and Regulation 239 of the Coal Mines Regulations, 2017

this accident could have been averted.

22. Date - 18.08.21
Time - 13.00

Mine - PRAKASHAM KHANI OPENCAST MINE
Owner - Singareni Collieries Company Ltd.
Dist. - Khammam, State - Telangana
Person(s) Killed :
1. Azmeera Bhasya, Electrician, Male, 47 Years
2. Parsa Sagar, Genral Mazdoor, Male, 34 Years
3. Venpula Chinna Venkanna, Cont. Work., Male,

45 Years

While a light vehicle (Bolero) with 03 persons (electrical maintenance crew) was trying to overtake a dumper (100T capacity), being driven on an unauthorized road i.e. not designated for heavy vehicle, in a coal mine, suddenly the operator of the dumper took right turn and run over the light vehicle causing fatal injury to all the 03 persons instantaneously.

Had,

(i) the transport rules and code of practices/safe operating procedure (SOP), framed by manager of the mine in accordance with Regulation 109 and 110 of the Coal Mines Regulations, 2017, been followed

(ii) the dumper not being driven or allowed to be driven through the unauthorized road, thereby negligently or wilfully endangered safety of persons as required under Regulation 239 of the Coal Mines Regulations, 2017

this accident could have been averted.

23. Date - 19.09.21
Time - 11.30

Mine - SONEPUR BAZARI PROJ. (KUMARKHALA O.C.P)
Owner - Eastern Coalfields Ltd.
Dist. - Burdwan, State - West Bengal
Person(s) Killed :
1. Chinmoy Ghosh, Dumper Operator, Male, 42

Years

While a person was walking along the left side of a haul road, he was hit and run over by a conveyance vehicle approaching from behind causing grievous bodily injuries resulting in his death on the spot.

Had,

(i) the vehicle driver taken reasonable care for the safety of the other persons who may be affected by his acts as stipulated under Regulation 40(4) (a) of the Coal Mines Regulations, 2017;

(ii) the Shot Firer ensured compliance of Condition No. 11 of Safe Operating Procedure (SOP) issued to him which stipulates that no person engaged in blasting operation shall leave his assigned work place without the prior permission of the Blasting Officer/Shot firer as required under Regulation 49(b) of the said regulations;

(iii) the Assistant Manager ensured that the persons under his charge understood and carried out their respective duties as stipulated under Regulation 42(2) of the said regulations

this accident could have been averted.

24. Date - 20.10.21 Mine - AMLOHRI OCP
Time - 22.45 Owner - Northern Coalfields Ltd.
Dist. - Singrauli, State - Madhya Pradesh
Person(s) Killed :
1. R. Prasad, Dumper Optr., Male, 46 Years

While the operator of a loaded tipper, being driven in fourth gear, was attempting to overtake another loaded tipper on rising gradient of a haul road in an opencast coal mine, the engine of the former tipper suddenly shut-off when its operator jumped-off his cabin leaving the tipper rolling back in uncontrolled manner, which collided with an empty tipper parked down the gradient and also ran over its operator present nearby on ground, inflicting him serious bodily injuries to which he succumbed almost instantaneously.

had,

i) the code of practice for safe operation of tippers issued by the manager been effectively implemented, as required under Regulation 110(4) read with Regulations 45(1) and 47(2) (d) of the Coal Mines Regulations, 2017,

ii) one of the brakes of the tipper been of failsafe type enabling the tipper to keep stationary when engine shut-off abruptly or when air pressure drops below the certain required level, as required under Notification No. GSR 987(E), published in Part II, Section 3, Sub-section (i) of the Gazette of India on 4th October, 2018 under Regulation 216(2) of the Coal Mines Regulations, 2017,

iii) the tipper operator not driven the tipper too fast and driven it defensively without attempting to overtake another tipper at higher gear on rising gradient and thus negligently not endangered the life and safety of the person employed in the mine, as required under Regulation 40(4) (a), Regulation 63(d) and Regulation 239 of the Coal Mines Regulations 2017, and

iv) the operator of empty tipper not been present and parked his tipper at an unsafe position on the haul road and thus negligently not endangered his own life, as required under Regulation 40(4) (a) and Regulation 239 of the Coal Mines Regulations 2017;

this accident could have been averted.

Code : 0400 Machinery Other than Transp. Machinery

Code : 0446 Shovel, Draglines, Frontend Loader, etc.
 (3 Deaths)

25. Date - 05.02.21 Mine - PENGANGA OC MINE
Time - 1.50 Owner - Western Coalfields Ltd.
Dist. - Chandrapur, State - Maharashtra

Person(s) Killed :

1. Sachin Karmakar, Auto Elec. Helper, Male, 33

Years

While an auto-electrician along with his helper was repairing the reverse light of the front end loader parked at the coal face bench in an opencast coal mine, suddenly another front end loader which was parked on the same bench having gradient of 1 in 12 starts rolling back in reverse direction and hit the rear end chassis of the loader trapping an auto-electrician helper between both the loader, thus inflicting serious bodily injuries to him to which he succumbed in hospital whereas the auto-electrician escaped with minor injuries.

Had,

i) effectiveness of the parking brake of the front end loader been ensured and parking brake been maintained in safe working order, as required under the provision of the Regulation 216(2) read with clause H(iii) of gazette notification file no. Z-20045/01/2018/S&T(HQ), Dhanbad, dated 1.10.2018 and Regulation 42(1), Regulation 54(a) and Regulation 43(d) of Coal Mines Regulations, 2017

ii) front end loader been operated after satisfying that it is mechanically sound and in efficient working order and parked in safe condition as required under the provision of Regulation 62(b) and Regulation 62(j) read with clause 12&13 of code of practices for safe operation of loader framed by the manager under provision of Regulation 110 of Coal Mines Regulations, 2017;

this accident could have been averted.

26. Date - 04.03.21
Time - 5.45

Mine - DIPKA MINE NO.IA
Owner - South Eastern Coalfields Ltd.
Dist. - Korba, State - Chhattisgarh
Person(s) Killed :
1. G. Singh, Cableman, Male, 56 Years

While a 42 Cu.m shovel was being repositioned in an opencast coal mine, a cable man deployed near the shovel suddenly came in its swing area who in the process of escaping from there was hit by a piece of stone fallen from the shovel's bucket, from a height of about 15 meters using serious head injuries, to which he succumbed on the way to hospital"

Had,

i. the shovel operator been careful to see for the presence of any person and not swung the bucket of the shovel when the cable man was in such proximity as to be endangered, as required under Regulation. 62(g) & (j) of the CMR 2017 read with Code of practice for shovel operation issued by the Manager vide letter No. 112 dated 07.06.2020, framed under Reg. 110 of the Coal Mines Regulations 2017;

ii. it been ensured that the cable man engaged near the 42 Cu.m (P & H) shovel not moved into the swing area of the shovel while the bucket was being swung and thus safe operation of the machinery been ensured as required under Regulation 47(6) (h) of the CMR 2017,

this accident could have been averted.

27. Date - 29.10.21
Time - 22.00

Mine - PENGANGA OC MINE
Owner - Western Coalfields Ltd.
Dist. - Chandrapur, State - Maharashtra
Person(s) Killed :
1. Dinesh Pd.Patel, Contractor Worker, Male, 41
Years

While an excavator deployed for removal of OB material at an opencast mine was unauthorizedly operated by a contractor supervisor, the designated operator of the excavator accidentally came into the operating area of excavator and run over by it and crushed to death on the spot."

Had,

1) it been ensured that excavator was not operated by unauthorized persons as required under clause 6.0 of SOP No. 4 for operating excavator/shovel read with clause 8.0 of SOP No. 108 for contractor supervisor framed by manager under the provisions of Regulation 110 and (2) the excavator operator taken reasonable care for his own safety by not entering in the operating area of the excavator, thus not endangered his own safety as required under the provisions of Regulation 239 read with Regulation 40(1), 40(4)(a) of the Coal Mines Regulations, 2017 and clause 11.0 of SOP No. 4.0 framed under the provision of Regulation 110 of the Coal Mines Regulation 2017. this accident could have been averted. Fault of Management Supervisor Mining Statistical

Code : 0448 Other Heavy Earth Moving Machinery
(1 Death)

28. Date - 05.10.21
Time - .20

Mine - GANGARAMCHAK & GANGARAMCHAK BHADULIA
Owner - WEST BENGAL POWER DEVELOPMENT CORP. LTD.
Dist. - Birbhum, State - West Bengal
Person(s) Killed :
1. Surendra Ray, Operator, Male, 43 Years

While a dozer being operated for levelling of in-pit OB dump at the edge the operator lost control over the dozer and it fell from the edge and slide on the slope of the overburden dump due to which operator fell down under the crawler of the dozer and received serious bodily injuries to which he succumbed on the spot.

Had,

(i) the reverse gear arrangement of the dozer were properly maintained and kept in good condition as required under Reg. 217(1) of the Coal Mines Regulations, 2017,

(ii) the roll over protection and operators cabin provided in the dozer as required under Reg. 216(2) of the Coal Mines Regulations, 2017,

(iii) the seat belt provided in the dozer as required under clause 2 of the SOP,

this accident could have been averted.

Code : 0500 Explosives

Code : 0552 Deep Hole Blasting Projectiles
 (1 Death)

29. Date - 28.08.21 Mine - BOKARO
 Time - 15.20 Owner - Central Coalfields Ltd.
 Dist. - Bokaro, State - Jharkhand
 Person(s) Killed :
 1. T. Khan, Driver, Male, 49 Years

While a person was sitting in the cabin of explosive van by keeping the left door partially opened which was parked on haul road in front of blasting face and at about 170m away from place of blasting in an opencast coal mine, blasting projectiles travelled and hit the van cabin, inflicting serious injuries to him and to which he succumbed eight days later in hospital.

Had,

i. the person not been negligently sat in the cabin of explosive van by keeping the door partially opened, which was parked in the vicinity of blasting, without taking proper shelter, by endangering his life in contravention of the Regulation 239 of the Coal Mines Regulations, 2017;

ii. the shot firer not been fired the shots without ensuring the taking of proper shelter by persons in the vicinity and within the danger zone of blasting in contravention of the Regulation 196(2) (a) & (b) of the Coal Mines Regulations, 2017;

iii. the blasting operation been stopped when the person found within the vicinity and danger zone of blasting by implementing the control measures defined in Safety Management Plan prepared by mine management vide No. CCL/B&K/BKO/Project officer/2013-14, dated 06.01.2021, which was reviewed vide No. PO/Bokaro Colliery/2021/2021-22/490, dated 24.04.2021, as required under Regulation 104 (3) of the Coal Mines Regulations, 2017.

iv. the shot holes been effectively muffled to prevent blasting projectiles travel not more than 10.0m away from the place blasting as required by condition no. 5.5 of the permission granted vide this Directorate's letter no. KR/91, dated 29.01.2007 under Regulation 196(3) of the Coal Mines Regulations, 2017 (Reg. 170 (1A) & (1B) of the erstwhile Coal Mines Regulations, 1957);

v. the blasting not been done in broken and crushed overburden face in contravention with condition no. 5.7 of the permission granted vide this Directorate's letter no. KR/91, dated 29.01.2007 under Regulation 196(3) of the Coal Mines Regulations, 2017 (Reg. 170 (1A) & (18) of the erstwhile Coal Mines Regulations, 1957);

this accident could have been averted.

Code : 0559 Other Explosive Accidents
 (1 Death)

30. Date - 30.12.21 Mine - RAJNAGAR R.O.

Time - 7.30

Owner - South Eastern Coalfields Ltd.

Dist. - Anuppur, State - Madhya Pradesh

Person(s) Killed :

1. Suresh, Support Mistry, Male, 49 Years

While an explosive carrier was crossing a dismantled belt conveyor in an underground coal mine, suddenly he fell down due to sticking of his foot on the dismantled belt and his head struck on a bracket of dismantled belt causing profuse bleeding from fore head (just above left eye) to which he succumbed after about one hour in the hospital."

Had,

(i) prompt attention to remove the dismantled belt been taken or the area been adequately fenced off as required under Regulation 47(5)(1) and 48 (4)(b) of the Coal Mines Regulations, 2017,

(ii) the victim not been instructed to examine the blasted face after blasting, thereby crossing of dismantled belt was not warranted, as required under Regulation 203(1) of the Coal Mines Regulations, 2017,

this accident could have been averted.

Code : 0600 Electricity

Code : 0661 Overhead Lines
(1 Death)

31. Date - 16.07.21

Mine - JAGANNATH

Time - 9.45

Owner - Mahanadi Coalfields Ltd.

Dist. - Angul, State - Orissa

Person(s) Killed :

1. Amar Behra, Cont. Employee, Male, 41 Years

While the conductors of an old 11 KV overhead line at a double pole on the surface of an open cast coal mine were being approached for dismantling by a contractor labour, he came in contact with live conductor of the overhead line; an electric flash over occurred, inflicting serious burn injuries resulting into death.

had,

adequate precautions been taken, before a conductor of the overhead line is handled, by earthing or other means to discharge electrically such conductor and adjacent conductor as required under Regulation 19(1) read with 1 & 5216 Regulation 94(1) of the Central Electricity Authority (Measures relating to Safety and Electric supply) Regulations, 2010(2); the work been carried out under direct supervision of electrical supervisor as directed by the engineer of the mine required under Regulation 115(2), Regulation 115(3) and Regulation 94(1) of the Central Electricity Authority (Measures relating to Safety and Electric supply) Regulations, 2010;

This accident could have been averted.

Code : 0663 Switch Gears, Gate End Boxes, Pommel, etc.
(1 Death)

32. Date - 26.12.21 Mine - CHURCHA
 Time - 15.30 Owner - South Eastern Coalfields Ltd.
 Dist. - Korea, State - Chhattisgarh
 Person(s) Killed :
 1. Hiranand Ram, Electrician, Male, 41 Years

While an electrician was working in an underground coal mine and was trying to disconnect for interchanging the second outgoing lead connection of vacuum circuit breaker from its thorough inspection window of 3.3KV flameproof vacuum circuit breaker, inadvertently palms of his hands came in contact with the nearby live incoming conductors of the vacuum circuit breaker and received electric shock which turned fatal after an hour.

Had,

the power supply to the complete system been cut off by switching off the main circuit breaker controlling power supply to underground 3.3KV. flameproof vacuum circuit breaker before interchanging the cable lead connection, as required under the provision of Regulation 19(1) of the Central Electricity Authority (Measures relating to Safety and Electric Supply) Regulations, 2010, and Clause No.6 of Standard Operating Procedure for Electrical Shutdown formulated as required under the provision of Regulation 104(5)(e) of Coal Mines Regulation, 2017, and proper tools and devices been used such as gloves, rubber shoes prior to undertaking maintenance work on live electric supply line as required under the provision of Regulation 19(2) of the Central Electricity Authority (Measures relating to Safety and Electric Supply) Regulations, 2010, and earth fault or earth leakage protective system of the circuit breaker been always kept and maintained in working order to automatically disconnect the supply under abnormal conditions as required under the provision of Regulations 45(2)(ii), 100(1) 100(3) of the Central Electricity Authority (Measures relating to Safety and Electric Supply) Regulations, 2010, this accident could have been averted.

Code : 0669 Other Electrical Accidents
(1 Death)

33. Date - 15.03.21 Mine - TOPA OC
 Time - 10.00 Owner - Central Coalfields Ltd.
 Dist. - Ramgarh, State - Jharkhand
 Person(s) Killed :
 1. A. Ghosal, Engineer, Male, 40 Years

While a person was doing maintenance work on a live 11kV/3.3kV transformer located at main surface substation in an open cast coal mine received electric shock and fell down from a height of 0.75 meters, resulting into serious bodily injuries to which he succumbed on the way hospital.

Had,

1) adequate precautions bee. taken as stipulated in shut down procedure, which includes Loci: Out Tag Out, to electrically discharge and prevent any apparatus from being accidentally or inadvertently electrically charged as required under Regulation 19(1) of the Central Electricity Authority Regulations, 2010

2) the system to authorize persons who give services on call as and when required for any work been implemented as required under Regulation 35(3) of the Coal Mines Regulations, 2017,

3) the Safety Management Plan been effectively implemented as required under Regulation 104(8) of the Coal Mines regulations, 2017

the accident could have been averted.

Code : 0800 Falls(Other than Falls of Ground)

Code : 0881 Fall of Person from Height/into Depth
(1 Death)

34. Date - 28.11.21 Mine - SURAKACHAR 3&4
Time - 3.30 Owner - South Eastern Coalfields Ltd.
Dist. - Korba, State - Chhattisgarh
Person(s) Killed :
1. Ramcharan, Driller, Male, 59 Years

While a workman returning to surface after doing his work got unbalanced and slipped in a conveyor roadway being used as the travelling roadway, hit the rail piece grouted at floor for the purpose of fencing, received head injury to which he succumbed.

Had,

i. the travelling roadway In charge carefully examined the travelling roadway and had provided steps at steeply incline and slippery places in order to prevent fall of persons as required under the provisions of Regulation 99 read with Regulation 239 of Coal Mines Regulation, 2017;

ii. the Overman in charge of the district provided steps at steeply incline and slippery places in order to prevent fall of persons and thus enforced the provisions of the Mines Act, 1952, of these regulations and order made thereunder and secure the safety of the persons employed therein as required under Regulation 47(3) read with Regulation 239 of Coal Mines Regulation, 2017;

iii. the Assistant Manager, being Shift In charge, carefully examined every travelable part of the mine or part thereof placed under his charge, from time to time and had provided steps at steeply incline and slippery places in order to prevent fall of persons as required under Regulation 45(3) read with Regulation 239 of Coal Mines Regulation, 2017;

this accident could have been averted.

Code : 0882 Fall of Persons on the Same Level
(3 Deaths)

35. Date - 17.03.21 Mine - VINDHYA PROJECT
Time - 6.15 Owner - South Eastern Coalfields Ltd.
Dist. - Umaria, State - Madhya Pradesh
Person(s) Killed :
1. B. Majumder, Welder, Male, 26 Years

While a contractor employee was travelling back to working place following travelling roadway in an underground coal mine, he fell down and his head struck with side of the stranded Pass bolter m/c resulting in head injury to which he succumbed after about four hours whilst treatment at hospital.

Had,

the victim himself been careful while going on a travelling roadway and put on helmet properly thus not negligently omitted to ensure his own safety in contravention of Regulation 239 of the Coal Mines Regulation, 2017

this accident could have been averted.

36. Date - 04.07.21 Mine - CHURCHA
Time - 9.00 Owner - South Eastern Coalfields Ltd.
Dist. - Korea, State - Chhattisgarh
Person(s) Killed :
1. Jagat Ram, Mistry, Male, 57 Years

While a support Mistry was repairing temporary ventilation stopping made of old conveyor belt pieces by putting nails with a hammer by standing on a stool of 1.8m height in an underground coal mine, he slipped and fell down on the ground receiving serious injuries in his head and neck portions. He was shifted to and admitted in a hospital, however he succumbed to his injuries during treatment after six days of the accident.

Had,

i) the overman in charge of the district inspected the district and given such directions as may be necessary to secure the safety of the district and of the persons employed therein and also ensured that sufficient tools and tackles, appliances and other necessities required for safe working of the district at convenient places there in that there is no risk to the person working at the stopping as required under Reg. 47(3) & (4) read with Reg. 239 of the Coal Mines Regulations 2017

ii) the mining Sirdar in charge of the district of the district supervised the work of repairing of the temporary ventilation stopping to ensure that the work is carried as per the safe operating procedure framed under these regulations & issued by the manager as required under Reg. 48(4)(g) read with Reg. 239 of the Coal Mines Regulations 2017

this accident could have been averted.

37. Date - 01.12.21
Time - 12.40

Mine - RAMAGUNDAM OC-II
Owner - Singareni Collieries Company Ltd.
Dist. - Karimnagar, State - Telangana
Person(s) Killed :
1. Vegolapu Saraiah, Contract.Employee, Male,
45 Years

While a motor grader was moving in reverse direction on the haul road of an opencast coal mine, the grader blade hit a person, moving along the haul road, inflicting serious bodily injuries to which he succumbed after two days during treatment in the hospital."

Had

(i) The Motor grader not been operated when persons are in such proximity to endanger him as required under Regulation 62(g) of the Coal Mines Regulations, 2017;

(ii) The code of Practices (COP) framed by the Manager been followed thereby wilfully or negligently do anything necessary for the safety of person employed therein as required under Regulation 110 read with Regulation 239 of the Coal Mines Regulations, 2017.

this accident could have been averted.

Code : 0883 Fall of Objects incl. Rolling Objects
(2 Deaths)

38. Date - 19.05.21
Time - 12.15

Mine - TAWA - II MINE
Owner - Western Coalfields Ltd.
Dist. - Betul, State - Madhya Pradesh
Person(s) Killed :
1. Ramcharan,Dresser, Male, 59 Years

While a support crew was withdrawing a breaker line prop erected at goaf edge by pulling the prop by a LHD with the help of a wire rope, the tensioned rope hit another prop fixed in the level and due to the impact of the rope the prop got dislodged and hit a person (dresser) standing in front of the LHD inflicting injuries to which he succumbed on the way to hospital.

Had,

all persons been removed from the front side of LHD and it been ensured that all persons stood behind the LHD at a safe place behind the anchoring of the LHD in accordance with the clause 5.5 of the standing orders for withdrawal of supports framed by the manager under Regulation 125 of the Coal Mines Regulations 2017 and implemented vide letter no. VECOLI/PK/KHAPR/Tawa Mine no. 2/Suraksha/3530-dated 23.03.2021

this accident could have been averted

39. Date - 19.11.21 Mine - KALYANI KHANI OCP
Time - 13.50 Owner - Singareni Collieries Company Ltd.
Dist. - Kalaburagi (Formely-GULBERGA), State -
Telangana

Person(s) Killed :
1. K. purushotham, Assistant Manager, Male, 58

Years

While an Assistant Manager was walking along the toe of a muck pile in a opencast coal mine, a piece of stone measuring size about of 1.2m x 0.8m x 0.7m rolled from the muck pile inflicting him seriously injured to which he succumbed on the spot. Misadventure.

Code : 0900 Other Causes

Code : 0993 Drowning in Water
(2 Deaths)

40. Date - 03.04.21 Mine - PAUNI O.C
Time - 16.40 Owner - Western Coalfields Ltd.
Dist. - Chandrapur, State - Maharashtra
Person(s) Killed :
1. V.G. Hanskar, Contract, Male, 19 Years

While a team of four persons were holding one end of a 8" MS suction pipe for connecting it with the pump, standing at the edge of a face sump in an opencast mine, the other end of the suction pipe, which was floating on the water with the help of drums attached to it suddenly sunk in water and one of the person standing near the edge of water holding the suction pipe also fell into the sump having depth of about 3.2m and got drowned. He was recovered from the sump after 20 minutes and found dead.

Had,

i) the provisions of point no 4 of SOP for pump shifting framed under Reg. 110(1) of Coal Mines Regulations 2017 been ensured, which required, machines or crane under the supervision of Asst. Foreman/Foreman/Eng.)

ii) the guard rails, fence or safety belt or rope suitably fixed been provided at the edge of the sump to prevent the work persons from falling into the sump of having about 3.2m depth as required the Regulation 131(1) of the Coal Mines Regulation, 2017

iii) untrained and inexperienced contractual person been not deployed for working at heights as required under the Regulation 131(8) of the Coal Mines Regulations, 2017; and

iv) code of safe practices been framed and implement for working at height as required under Regulation 131(7) of the Coal Mines Regulations 2017

this accident could have been averted.

41. Date - 31.07.21 Mine - NIMCHA (R)
Time - 5.00 Owner - Eastern Coalfields Ltd.
Dist. - Burdwan, State - West Bengal
Person(s) Killed :
1. Jaydev Maji, Onsetter, Male, 59 Years

This is a case of "Misadventure".

Code : 0999 Unclassified
(2 Deaths)

42. Date - 01.03.21 Mine - CHORA 7 & 9 PIT COLLIERY
Time - 12.30 Owner - Eastern Coalfields Ltd.
Dist. - Burdwan, State - West Bengal
Person(s) Killed :
1. Arup Mondal, Sampling Assistant, Male, 45
Years

While a crew of three persons went for sampling, one of the crew persons reached sectionalisation stopping and others remained out bye area of the stopping, suddenly he felt discomfort due to chest and stomach pain and became unconscious, he was shifted to hospital where he was declared brought dead".

Had,

(a) adequate ventilation been provided to clear away smoke, steam and dust in all parts of the mine belowground which are not sealed off, to dilute gases that are inflammable or noxious so as to render them harmless and coursed ventilation with in 3.0m of the working face as required under the provisions of the Regulation 153(1)(b), 160 and 161(1) of the coal Mines Regulation, 2017.

(b) the sampling been done under the direct supervision of a competent person as required under the provisions of the Regulation 167(1) of the Coal Mines Regulation, 2017

this accident could have been averted.

43. Date - 22.12.21 Mine - RAMAGUNDAM OC-I
Time - 5.10 Owner - Singareni Collieries Company Ltd.
Dist. - Karimnagar, State - Telangana
Person(s) Killed :
1. K.Srinivasa Rao, Dumper Operator, Male, 46
Years

While a dumper operator was driving a dumper, loaded with coal, in haul road of an Open Cast Coal Mine, suddenly it collided with a stationary dumper, parked in one side of the haul road, causing fatal injury to operator instantaneously.

Had,

(i) the operator remained alert, driven defensively and judged well ahead about the road clearance for passage of dumper, thus not negligently omitting his own safety as required under Regulation 239 of the Coal Mines Regulations 2017 and

(ii) the warning system for operator's fatigue and mechanical type device to protect operator in case of head to tail collision of dumpers been provided in both the dumpers involved in the accident as required under Regulation 216 (2) of the Coal Mines Regulations, 2017 read with clause 1.0 (L)(ii), clause 2.1(b) and clause 3.0 of Gazette notification G.S.R. 987(E) dated 01.10.2018 published in The Gazette of India Extraordinary Part II- section 3- sub-section (1) No. 705 dated 04.10.2018, thereby wilfully not endangering life of persons employed in the mine, as required under Regulation 239 of the Coal Mines Regulations, 2017

the accident could have been averted.



9. ACCIDENT ANALYSIS IN COAL MINES: 2022

- The number of fatal accidents in coal mines in the year 2022 stands at 24 with 28 fatalities and 3 seriously injured in these fatal accidents. Year 2022 witnesses least number of fatal accidents in last three decades. The number of fatal accidents has decreased as compared to previous year 2021.
- The number of serious accidents in the year 2022 stands at 181 with 187 seriously injured persons. The number of serious accidents has decreased as compared to previous year 2021.
- Among the broad category of causes, most number of fatal accident occurred due to “Ground Movement”. Details can be seen in the tables.
- Among the broad category of causes, most number of serious accident occurred due to “Falls (other than fall of ground)”. Details can be seen in the tables.
- Maximum number of fatal accident occurred in South Eastern Coalfields Limited. Maximum number of serious accident occurred in Singareni Collieries Company Limited. Details can be seen in the tables.
- Maximum number of fatal accident occurred in the mines under Western Zone of this Directorate and maximum number of serious accident occurred in the mines under South Central Zone of this Directorate.
- There was no major accident.

Statement 9.1
Casualty/serious injury rates in coal mines for different companies in 2022

Sl.	Mineral/State/ District	Number of Accidents		No. of Persons Killed						No. of Persons Seriously Injured					
		-----		Below Ground	Opencast		Above Ground		Total	Below Ground	Opencast		Above Ground		Total
		Fatal	Serious		M	F	M	F			M	F	M	F	
		-----	-----	-----						-----					
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

1.	Coal														
	Chhattisgarh														
	Raigarh	0	5	0	0	0	0	0	0	1	1	0	3	0	5
	Surguja	0	3	0	0	0	0	0	0	3	0	0	0	0	3
	Korea	0	7	0	0	0	0	0	0	5	1	0	2	0	8
	Korba	4	4	0	3	0	1	0	4	0	2	0	2	0	4

TOTAL : CHHATTISGARH		4	19	0	3	0	1	0	4	9	4	0	7	0	20

	Jharkhand														
	Dhanbad	4	11	0	5	0	0	0	5	7	3	0	2	0	12
	Hazaribagh	1	2	1	0	0	0	0	1	0	2	0	0	0	2
	Bokaro	1	1	1	0	0	0	0	1	0	0	0	1	0	1
	Chatra	1	0	0	1	0	0	0	1	0	0	0	0	0	0
	Ramgarh	0	2	0	0	0	0	0	0	0	1	0	1	0	2

TOTAL : JHARKHAND		7	16	2	6	0	0	0	8	7	6	0	4	0	17

	Madhya Pradesh														
	Betul	1	0	2	0	0	0	0	2	0	0	0	0	0	0
	Chhindwara	0	1	0	0	0	0	0	0	1	0	0	0	0	1
	Shahdol	2	4	2	0	0	0	0	2	4	0	0	0	0	4
	Umaria	0	1	0	0	0	0	0	0	1	0	0	0	0	1
	Anuppur	2	4	0	1	0	0	1	2	4	0	0	0	0	4
	Singrauli	1	8	0	0	0	1	0	1	0	6	0	2	0	8

TOTAL : MADHYA PRADESH		6	18	4	1	0	1	1	7	10	6	0	2	0	18

Maharashtra															
Chandrapur	0	5	0	0	0	0	0	0	0	5	0	2	0	7	
Nagpur	0	1	0	0	0	0	0	0	1	0	0	0	0	1	
Yavatmal	0	3	0	0	0	0	0	0	0	2	0	1	0	3	
TOTAL : MAHARASHTRA	0	9	0	0	0	0	0	0	1	7	0	3	0	11	
Orissa															
Angul	0	2	0	0	0	0	0	0	0	2	0	0	0	2	
Jharsuguda	0	2	0	0	0	0	0	0	0	0	0	2	0	2	
TOTAL : ORISSA	0	4	0	0	0	0	0	0	0	2	0	2	0	4	
Telangana															
Adilabad	2	35	1	0	0	1	0	2	26	2	0	7	0	35	
Karimnagar	1	29	3	0	0	0	0	3	16	8	0	7	0	31	
Khammam	0	5	0	0	0	0	0	0	2	2	0	2	0	6	
Warangal	0	24	0	0	0	0	0	0	22	1	0	3	0	26	
Jayashankar-Bhupalpally	1	0	0	1	0	0	0	1	0	0	0	0	0	0	
Kalaburagi	1	6	0	1	0	0	0	1	1	2	0	3	0	6	
Mancherial	0	3	0	0	0	0	0	0	0	2	0	1	0	3	
TOTAL : TELANGANA	5	102	4	2	0	1	0	7	67	17	0	23	0	107	
Uttar Pradesh															
Sonebhadra	0	1	0	0	0	0	0	0	0	1	0	0	0	1	
TOTAL : UTTAR PRADESH	0	1	0	0	0	0	0	0	0	1	0	0	0	1	
West Bengal															
Burdwan	2	8	2	0	0	0	0	2	5	2	0	1	0	8	
Purulia	0	1	0	0	0	0	0	0	1	0	0	0	0	1	
TOTAL : WEST BENGAL	2	9	2	0	0	0	0	2	6	2	0	1	0	9	
ALL INDIA : COAL	24	178	12	12	0	3	1	28	100	45	0	42	0	187	

2. Lignite															
Kutch	0	1	0	0	0	0	0	0	0	1	0	0	0	1	
<hr/>															
TOTAL : GUJARAT	0	1	0	0	0	0	0	0	0	1	0	0	0	1	
<hr/>															
Rajasthan															
Alwar	0	1	0	0	0	0	0	0	0	0	0	1	0	1	
<hr/>															
TOTAL : RAJASTHAN	0	1	0	0	0	0	0	0	0	0	0	1	0	1	
<hr/>															
Tamil Nadu															
Cuddalore	0	1	0	0	0	0	0	0	0	1	0	0	0	1	
<hr/>															
TOTAL : TAMIL NADU	0	1	0	0	0	0	0	0	0	1	0	0	0	1	
<hr/>															
ALL INDIA : LIGNITE	0	3	0	0	0	0	0	0	0	2	0	1	0	3	
<hr/>															
ALL INDIA : ALL COAL	24	181	12	12	0	3	1	28	100	47	0	43	0	190	
<hr/>															

Note 1 : M:Male, F:Female

Note 2 : Fatal as well as serious accidents are considered in computing the figures of number of persons seriously injured in this statement.

Statement 9.2
Casualty/serious injury rates in coal mines for different companies in 2022

Company	Number of Accidents		Number of Persons Killed						Number of Persons Seriously Injured					
			Below Ground	Opencast		Above Ground		Total	Below Ground	Opencast		Above Ground		Total
	Fatal	Serious		Male	Male	Female	Male			Female	Male	Male	Female	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
BCCL	4	5	0	5	0	0	0	5	1	3	0	2	0	6
CCL	3	3	2	1	0	0	0	3	0	2	0	1	0	3
ECL	2	9	2	0	0	0	0	2	6	2	0	1	0	9
MCL	0	4	0	0	0	0	0	0	0	2	0	2	0	4
NCL	1	8	0	0	0	1	0	1	0	7	0	1	0	8
SECL	8	27	2	4	0	1	1	8	17	4	0	7	0	28
WCL	1	10	2	0	0	0	0	2	2	7	0	3	0	12
TOTAL : CIL	19	66	8	10	0	2	1	21	26	27	0	17	0	70
GMDC	0	1	0	0	0	0	0	0	0	1	0	0	0	1
NLC	0	1	0	0	0	0	0	0	0	1	0	0	0	1
SCCL	4	102	4	1	0	1	0	6	67	17	0	23	0	107
TISCO	0	8	0	0	0	0	0	0	6	1	0	1	0	8
RSMML	0	1	0	0	0	0	0	0	0	0	0	1	0	1
SASAN	0	1	0	0	0	0	0	0	0	0	0	1	0	1
TSPGCL	1	0	0	1	0	0	0	1	0	0	0	0	0	0
AMBUJA	0	1	0	0	0	0	0	0	1	0	0	0	0	1
TOTAL : NON-CIL	5	115	4	2	0	1	0	7	74	20	0	26	0	120
TOTAL : ALL INDIA	24	181	12	12	0	3	1	28	100	47	0	43	0	190

STATEMENT NO. 9.3

Number of accidents and casualties/seriously injured persons in coal mines by place and detailed cause in 2022

CAUSE OF ACCIDENT	BELOW GROUND					OPENCAST					ABOVE GROUND					TOTAL				
	Fatal		Accident		S/Accident	Fatal		Accident		S/Accident	Fatal		Accident		S/Accident	Fatal		Accident		S/Accident
	ACC	KILL	INJ	ACC	INJ	ACC	KILL	INJ	ACC	INJ	ACC	KILL	INJ	ACC	INJ	ACC	KILL	INJ	ACC	INJ
	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
Fall of Roof	4	5	0	3	4	0	0	0	0	0	0	0	0	0	0	4	5	0	3	4
Fall of Sides (Other than Overhangs)	1	3	2	6	6	2	3	0	0	0	0	0	0	0	0	3	6	2	6	6
TOTAL : GROUND MOVEMENT	5	8	2	9	10	2	3	0	0	0	0	0	0	0	0	7	11	2	9	10
Overwinding of Cages/Skip etc.(upgoing)	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
TOTAL : TRANSPORTATION MACHINERY (WINDING)	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
Rope Haulage	1	1	0	12	12	0	0	0	0	0	0	0	0	0	0	1	1	0	12	12
Conveyors	0	0	0	2	2	0	0	0	1	1	0	0	0	0	0	0	0	0	3	3
Dumpers	0	0	0	0	0	1	1	0	7	7	0	0	0	0	0	1	1	0	7	7
Wheeled Trackless(Truck,Tanker,etc.)	1	1	0	0	0	2	2	0	4	6	0	0	0	2	2	3	3	0	6	8
TOTAL : TRANSPORTATION MACHINERY (NON-WINDING)	2	2	0	14	14	3	3	0	12	14	0	0	0	2	2	5	5	0	28	30
Drilling Machines	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	2	2
Cutting Machines	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0
Loading Machines	0	0	0	2	2	0	0	0	1	1	0	0	0	0	0	0	0	0	3	3
Shovel, Draglines, Frontend Loader, etc.	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1	1
Crushing & Screening Plants	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	2	2
Other Heavy Earth Moving Machinery	0	0	0	0	0	2	2	0	4	4	0	0	0	2	2	2	2	0	6	6
Other Non-Transportation Machinery	0	0	0	5	5	0	0	0	3	3	0	0	0	0	0	0	0	0	8	8

TOTAL : MACHINERY OTHER THAN TRANSP. MACHINERY	1	1	0	7	7	2	2	0	11	11	0	0	0	4	4	3	3	0	22	22
Misfires/Sockets(While Drilling into)	0	0	0	1	3	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3
Other Explosive Accidents	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1	1
TOTAL : EXPLOSIVES	0	0	0	1	3	0	0	0	1	1	0	0	0	0	0	0	0	0	2	4
Overhead Lines	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	1	1	0	0	0
TOTAL : ELECTRICITY	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	1	1	0	0	0
Other Accidents due to Dust/Gas/Fire	1	1	0	0	0	1	1	0	0	0	0	0	0	0	0	2	2	0	0	0
TOTAL : DUST, GAS & OTHER COMBUSTIBLE MATERIAL	1	1	0	0	0	1	1	0	0	0	0	0	0	0	0	2	2	0	0	0
Fall of Person from Height/into Depth	0	0	0	18	18	2	2	0	8	8	1	1	0	10	10	3	3	0	36	36
Fall of Persons on the Same Level	0	0	0	13	14	0	0	0	1	1	0	0	0	3	3	0	0	0	17	18
Fall of Objects incl. Rolling Objects	0	0	0	12	12	1	1	1	2	2	1	1	0	4	4	2	2	1	18	18
Other Accidents due to Falls	0	0	0	1	1	0	0	0	0	0	0	0	0	1	1	0	0	0	2	2
TOTAL : FALLS (OTHER THAN FALL OF GROUND)	0	0	0	44	45	3	3	1	11	11	2	2	0	18	18	5	5	1	73	74
Flying Pieces(Except due to Explosives)	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1	1
Unclassified	0	0	0	18	18	0	0	0	8	8	1	1	0	19	19	1	1	0	45	45
TOTAL : OTHER CAUSES	0	0	0	18	18	0	0	0	9	9	1	1	0	19	19	1	1	0	46	46
ALL INDIA : ALL COAL	9	12	2	94	98	11	12	1	44	46	4	4	0	43	43	24	28	3	181	187

STATEMENT 9.4**Number of fatal accidents in coal mines by major cause and responsibility during the year 2022**

Responsibility / Major Cause Group	1	2	3	4	5	6	7	8	9	Total
Management	0	0	0	0	0	0	0	1	0	1
Management & Sub. Sup. Staff(SSS)	4	0	1	1	0	1	2	2	0	11
Management, SSS & Deceased	0	0	0	0	0	0	0	0	1	1
Management, SSS & Others	0	0	1	2	0	0	0	0	0	3
Management, Coworker & Others	0	0	0	0	0	0	0	1	0	1
Management & Deceased	1	0	0	0	0	0	0	0	0	1
Management & Contractor's Worker	0	0	1	0	0	0	0	0	0	1
Subordinate Supervisory Staff(SSS)	1	0	0	0	0	0	0	0	0	1
Sub.Sup.Staff & Others	1	0	0	0	0	0	0	0	0	1
Deceased	0	0	1	0	0	0	0	1	0	2
Others	0	0	1	0	0	0	0	0	0	1
Total	7	0	5	3	0	1	2	5	1	24

STATEMENT NO. 9.5

Causewise number of fatal accidents in Coal Mines for different companies in 2022

Cause/Company	BCCL	CCL	ECL	MCL	NCL	NEC	SECL	WCL	CIL	SCCL	IISCO	NLC	TISCO	OTHERS	TOTAL
Fall of Roof	0	0	2	0	0	0	1	1	4	0	0	0	0	0	4
Killed-S/Injured :	0-0	0-0	2-0	0-0	0-0	0-0	1-0	2-0	5-0	0-0	0-0	0-0	0-0	0-0	5-0
Fall of Sides	2	0	0	0	0	0	0	0	2	1	0	0	0	0	3
Killed-S/Injured :	3-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	3-0	3-2	0-0	0-0	0-0	0-0	6-2
Rope Haulage	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
Killed-S/Injured :	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	1-0	0-0	0-0	0-0	0-0	1-0
Dumpers	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1
Killed-S/Injured :	0-0	0-0	0-0	0-0	0-0	0-0	1-0	0-0	1-0	0-0	0-0	0-0	0-0	0-0	1-0
Trucks	1	2	0	0	0	0	0	0	3	0	0	0	0	0	3
Killed-S/Injured :	1-0	2-0	0-0	0-0	0-0	0-0	0-0	0-0	3-0	0-0	0-0	0-0	0-0	0-0	3-0
Other Machinery	0	0	0	0	0	0	2	0	2	1	0	0	0	0	3
Killed-S/Injured :	0-0	0-0	0-0	0-0	0-0	0-0	2-0	0-0	2-0	1-0	0-0	0-0	0-0	0-0	3-0
Explosives	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Killed-S/Injured :	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0	0-0
Fall of Persons	0	0	0	0	1	0	1	0	2	0	0	0	0	1	3
Killed-S/Injured :	0-0	0-0	0-0	0-0	1-0	0-0	1-0	0-0	2-0	0-0	0-0	0-0	0-0	1-0	3-0
Fall of Objects	1	0	0	0	0	0	1	0	2	0	0	0	0	0	2
Killed-S/Injured :	1-1	0-0	0-0	0-0	0-0	0-0	1-0	0-0	2-1	0-0	0-0	0-0	0-0	0-0	2-1
Other causes	0	1	0	0	0	0	2	0	3	1	0	0	0	0	4
Killed-S/Injured :	0-0	1-0	0-0	0-0	0-0	0-0	2-0	0-0	3-0	1-0	0-0	0-0	0-0	0-0	4-0
Belowground	0	2	2	0	0	0	2	1	7	2	0	0	0	0	9
Killed-S/Injured :	0-0	2-0	2-0	0-0	0-0	0-0	2-0	2-0	8-0	4-2	0-0	0-0	0-0	0-0	12-2
Opencast	4	1	0	0	0	0	4	0	9	1	0	0	0	1	11
Killed-S/Injured :	5-1	1-0	0-0	0-0	0-0	0-0	4-0	0-0	10-1	1-0	0-0	0-0	0-0	1-0	12-1
Aboveground	0	0	0	0	1	0	2	0	3	1	0	0	0	0	4
Killed-S/Injured :	0-0	0-0	0-0	0-0	1-0	0-0	2-0	0-0	3-0	1-0	0-0	0-0	0-0	0-0	4-0
TOTAL	4	3	2	0	1	0	8	1	19	4	0	0	0	1	24
Killed-S/Injured :	5-1	3-0	2-0	0-0	1-0	0-0	8-0	2-0	21-1	6-2	0-0	0-0	0-0	1-0	28-3

STATEMENT NO. 9.6

Causewise number of serious accidents in Coal Mines for different companies in 2022

Cause/Company	BCCL	CCL	ECL	MCL	NCL	NEC	SECL	WCL	CIL	SCCL	IISCO	NLC	TISCO	OTHERS	TOTAL
Fall of Roof	0	0	0	0	0	0	1	0	1	1	0	0	0	1	3
S/Injured :	0	0	0	0	0	0	1	0	1	2	0	0	0	1	4
Fall of Sides	0	0	0	0	0	0	2	0	2	4	0	0	0	0	6
S/Injured :	0	0	0	0	0	0	2	0	2	4	0	0	0	0	6
Rope Haulage	0	0	1	0	0	0	1	0	2	10	0	0	0	0	12
S/Injured :	0	0	1	0	0	0	1	0	2	10	0	0	0	0	12
Dumpers	1	1	0	1	0	0	0	1	4	2	0	0	0	1	7
S/Injured :	1	1	0	1	0	0	0	1	4	2	0	0	0	1	7
Trucks	0	0	0	1	0	0	0	2	3	2	0	1	0	0	6
S/Injured :	0	0	0	1	0	0	0	4	5	2	0	1	0	0	8
Other Machinery	1	1	2	1	4	0	5	2	16	9	0	0	1	0	26
S/Injured :	1	1	2	1	4	0	5	2	16	9	0	0	1	0	26
Explosives	0	0	0	0	1	0	0	0	1	1	0	0	0	0	2
S/Injured :	0	0	0	0	1	0	0	0	1	3	0	0	0	0	4
Fall of Persons	1	1	4	1	0	0	11	2	20	32	0	0	0	1	53
S/Injured :	1	1	4	1	0	0	12	2	21	32	0	0	0	1	54
Fall of Objects	0	0	0	0	1	0	1	0	2	13	0	0	3	0	18
S/Injured :	0	0	0	0	1	0	1	0	2	13	0	0	3	0	18
Other causes	2	0	2	0	2	0	6	3	15	28	0	0	4	1	48
S/Injured :	2	0	2	0	2	0	6	3	15	28	0	0	4	1	48
Belowground	1	0	6	0	0	0	16	2	25	62	0	0	6	1	94
S/Injured :	1	0	6	0	0	0	17	2	26	65	0	0	6	1	98
Opencast	2	2	2	2	7	0	4	5	24	17	0	1	1	1	44
S/Injured :	2	2	2	2	7	0	4	7	26	17	0	1	1	1	46
Aboveground	2	1	1	2	1	0	7	3	17	23	0	0	1	2	43
S/Injured :	2	1	1	2	1	0	7	3	17	23	0	0	1	2	43
TOTAL	5	3	9	4	8	0	27	10	66	102	0	1	8	4	181
S/Injured :	5	3	9	4	8	0	28	12	69	105	0	1	8	4	187

STATEMENT NO. 9.7**Regionwise/zonewise number of accidents and resultant casualties/seriously injured persons in coal mines in 2022**

Region/Zone	Fatal Accidents			Serious Accidents	
	No. of Accidents	Fatalities	S/Injured	No. of Accidents	S/Injured
Dhanbad I	1	1	1	5	5
Dhanbad II	1	1	0	2	2
Dhanbad III	2	3	0	4	4
Koderma	1	1	0	1	1
Central Zone	5	6	1	12	12
Sitarampur I	1	1	0	7	7
Sitarampur II	0	0	0	2	2
Sitarampur III	1	1	0	0	0
Eastern Zone	2	2	0	9	9
Ahmedabad	0	0	0	1	1
North-Western Zone	0	0	0	1	1
Ajmer	0	0	0	1	1
Varanasi	1	1	0	9	9
Northern Zone	1	1	0	10	10
Hyderabad I	2	4	2	58	61
Hyderabad II	3	3	0	44	44
South-Central Zone	5	7	2	102	105
Bhubaneswar	0	0	0	4	4
Raigarh	0	0	0	3	3
Ranchi	2	2	0	4	4
South-Eastern Zone	2	2	0	11	11
Chennai	0	0	0	1	1
Southern Zone	0	0	0	1	1
Bilaspur	4	4	0	16	17
Jabalpur	4	4	0	9	9
Nagpur I	1	2	0	2	2
Nagpur II	0	0	0	8	10
Western Zone	9	10	0	35	38
ALL INDIA	24	28	3	181	187

STATEMENT NO. 9.8**Summary of Findings of Fatal Accidents during the year 2022**

Code : 0100 Ground Movement

Code : 0111 Fall of Roof
 (5 Deaths)

1. Date - 17.02.22 Mine - JAYKAYNAGAR
 Time - 20.15 Owner - Eastern Coalfields Ltd.
 Dist. - Burdwan, State - West Bengal
 Person(s) Killed :
 1. Dablu Hari, Roof Support Gang, Male, 49 Years

While a person was dressing roof in a fallen cola district, suddenly a coal layer measuring 18m (length) x 1.8m (width) x 0.45m (Thickness) fell from a height of 2.15m on him causing fatal injury.

Had,

it been ensured that person performing the dangerous operation involving dressing of roof understood and carried out his duty properly with due precautions as required under Regulation 42(2) and 48(4) of the Coal Mines Regulations, 2017,

this accident could have been averted.

2. Date - 13.05.22 Mine - TAWA
 Time - 22.15 Owner - Western Coalfields Ltd.
 Dist. - Betul, State - Madhya Pradesh
 Person(s) Killed :
 1. Chaitram, Worker, Male, 28 Years
 2. Bhola, Other, Male, 33 Years

While a support crew of three persons were drilling hole in the roof for roof bolting in a development gallery of an underground coal mine, suddenly a mass of shale roof measuring 3 m X 1.5 m X 0.15 m thick fell over them from a height of 1.8m inflicting fatal injuries to two persons while the third person escaped with minor injuries.

Had,

i. Strata Control and Management Plan based on scientific study been prepared for W-7 X-cut district and implemented as required under Regulation 123 of the Coal Mines Regulations, 2017;

ii. the roof been made and kept secure as required under Regulation 115(1) of the Coal Mines Regulations, 2017 and

iii. the supporting work been supervised and the not negligently commenced from unsupported end of the gallery, thereby endangering the safety of support crew, as required under Regulation 239 of the Coal Mines Regulations, 2017

the accident could have been averted.

3. Date - 18.09.22 Mine - SATGRAM INCLINE
Time - 5.45 Owner - Eastern Coalfields Ltd.
Dist. - Burdwan, State - West Bengal
Person(s) Killed :
1. S. Bhunia, Driller, Male, 39 Years

While a drilling crew consists of three persons drilling shot holes after completion of dressing operation in a development working face, suddenly a shale boulder measuring 2.7m length x 1.55m width x 0.4m thick fell from a height of 2.6m by dislodging from the roof over the drilling crew inflicting one fatal, one reportable and other escaped with minor injuries.

Had,

a) the supervisor could have given prompt attention on roof and taken reasonable care for dressing and kept secure before allowing the drilling crew in the face as required under the provisions of Regulation 48(2)(f) and Regulation 47(3) 47(5)(i) of Coal Mines Regulations, 2017. b) the roof been supported with a temporary support before allowing the drilling crew in the face as per the approved strata control and monitoring plan (SCAMP) to secure the roof and sides of belowground working place as required under the provisions Regulation 124(15) read with Regulation 123(1)(a) (5) of the Coal Mines Regulations, 2017, c) the dresser been taken reasonable care for his own safety and health and that of other persons who may be affected by his own act and omission at work including proper care by dressing the roof as required under the provisions of Regulation 40(4)(a) read with Regulation 239 of Coal Mines Regulations, 2017

this accident could have been averted.

4. Date - 16.11.22 Mine - KURJA UG PROJECT
Time - 11.15 Owner - South Eastern Coalfields Ltd.
Dist. - Shahdol, State - Madhya Pradesh
Person(s) Killed :
1. Narendra Singh Kanwar, Supporter, Male, 35 Years

While a Twin Bolter machine (TBM) was installing rock bolts in the widened area of old developed gallery after its widening and heightening of a Continuous Miner (CM) panel in an underground coal mine, a support helper went ahead of the Temporary Roof Support (TRS) of TBM under the unsupported widened area, where suddenly pieces of rock measuring about 1.3m(L)*1.2m(W)*0.20m(T) parted from roof and fell from a height of about 1.9m on him inflicting serious injury to which he succumbed during treatment in the hospital".

Had,

(i) The Mining Sirdar ensured that roof of the working places were made and kept secured and all the entrance leading to the unsupported area were dept fenced across the whole width so as to prevent any persons from entering in unsupported place and adhered to regulation 48(2)(f), 48(4)(a), 48(4)(b) of the Coal Mines Regulations, 2017 read with conditions of the Do's and Don'ts of the Code of practice framed by the mine manager of the mine vide his letter no. Man/Kurja/21/652 dated 25.08.2021 and condition No. 1 of the Do's and Don'ts of the Code of practice framed by the mine manager of the mine vide his letter no. Man/Kurja/21/652 dated 25.08.2021,

(ii) The Overman enforced in his district the provision of the Act, of these regulation and order made there and checked the roof condition prior to installation of support to ensure that mining operations were carried out as per the Code of practice framed thereunder as

required under Regulation 47 (3), 47(2)(d) of the Coal Mine Regulations, 2017 read with condition no. 8(d) of the SCAMP enclosed as annexure-1 of the permission granted vide this Directorate's letter no. 010542/WZ/Jabalpur region/perm/2022/237994 dated, 29.07.2022 under regulation 111(2), 111(5), 112 of the Coal Mine Regulations, 2017 and also read with conditions of Do's and Don'ts of the Code of Practice framed by the mine manager of the mine, vide letter no. Man/Kurja/21/652 dated 25.08.2021.

(iii) The Contractor's supervisor ensured compliance of the provisions of the Act, and the rules and regulations framed there under as required under regulation 39(1)(d) of the Coal Mine Regulations, 2017 read with conditions of Do's and Don'ts of the Code of Practice framed by the mine manager of the mine vide letter no. Man/Kurja/21/652 dated 25.08.2021,

(iv) The Assistant Manager ensured that all work was carried out in accordance with provisions of the Act, and of the regulations and orders made thereunder in part of mine assigned to him by the manager as required under regulation 45(1) of the Coal Mine Regulations, 2017 read with conditions of Do's and Don'ts of the Code of Practice framed by the mine manager of the mine vide letter no. Man/Kurja/21/652 dated 25.08.2021.

Code : 0112 Fall of Sides (Other than Overhangs)
(6 Deaths)

5. Date - 20.02.22 Mine - ROCP/SOUTH JHARIA
 Time - 9.00 Owner - Bharat Coking Coal Ltd.
 Dist. - Dhanbad, State - Jharkhand
 Person(s) Killed :
 1. Shivram Kumbhakar, Excav.Operator, Male, 39 Years

While a excavator was deployed for cleaning and levelling haul road near toe of the bench made in the in-pit waster dump of height 11m & slope 55 degree having fire in an opencast coal mine, a chunk of heated material roll down from the bench and fragmented heated limp pieces pierced in to the operator cabin by breaking over portion of the front glass, causing burn injury to the operator who succumbed while undergoing treatment at a hospital after three and half days of the accident."

Had,

i. the height of the bench not been exceeded three meters as required under the provision of the Regulation 106(4) of the Coal Mines Regulations, 2017;

ii. the slope of the bench not been exceeded 37.5 degree from the horizontal as required under the provision of the Regulation 108(2) of the Coal Mines Regulations, 2017;

iii. effective steps been taken without delay to deal with the fire and the excavator not been deployed at the toe of the bench known to have fire as required under the provision of the Regulations 138(1)&(2) of the Coal Mines Regulations, 2017;

iv. the place been inspected by statutory personnel before deployment of excavator and necessary directions been given to ensure safety of the persons employed therein as required under the provisions of the Regulations 47(2)(b)&(3) of the Coal Mines Regulations, 2017 and

v. effective ongoing communication and co-ordination between mine officials been established by the contractor for identifying hazards and taking measures to eliminate and control risk, arrangements for reporting injuries been ensured and workplace safety

awareness been provided to work persons prior to commencement of work as required under the provision of the Regulation 39(1) of the Coal Mines regulations, 2017;

this accident could have been averted.

6. Date - 07.03.22 Mine - ADRIYALA LONGWALL PROJECT
Time - 13.20 Owner - Singareni Collieries Company Ltd.
Dist. - Karimnagar, State - Telangana
Person(s) Killed :
1. S. Jayaraju, Safety Officer, Male, 58 Years
2. Seetaramulu, Asst.Manager, Male, 32 Years
3. Kanakaiah, Contract Worker, Male, 26 Years

While a group of 10 persons were supporting the roof & sides and cleaning the fallen coal in old developed gallery (tail gate road of longwall panel No.4), suddenly a portion of coal pillar from rise side measuring about 36m(length) x 3.5m(height) x 2.5(width), collapsed trapping six (06) persons out of which 03 persons succumbed to their injuries and 02 persons seriously injured.

Had,

geotechnical study been done after occurrence of roof fall in the area and accordingly Strata Control and Monitoring Plan(SCAMP) been framed with due regard to the engineering classification of strata, local geological condition, past experience and accordingly support plan for securing the sides been framed and implemented before allowing any person to the work in the area as required under Reg.123(1) (2) of Coal Mines Regulations, 2017; monitoring of support performance, measurement of strata behavior including movement of the sides and re-setting of supports, and clearing of falls of ground been done properly according to support plan as required under Reg.123(6) of the Coal Mines Regulations, 2017; every ledge and every prominent crack or slip been supported with at least a pair of cogs and suitably lagged, as required under Reg.124(10) of Coal Mines Regulations, 2017; the overhanging sides been dressed down as required under Reg.124(11) of Coal Mines Regulations, 2017; every place wherein fall of roof or sides has occurred, no work of cleaning the dislodged coal or the fall or any part thereof shall be undertaken nor shall any persons be allowed to pass until the newly exposed roof and sides in the vicinity thereof have been examined and made safe if necessary by temporary supports as required under Reg.124(15) of Coal Mines Regulations, 2017; the roof and sides of all working places and travelling roadways including airways and travelling roadways to second outlets been made and kept secured as required under Reg.115(1) of Coal Mines Regulations, 2017,

this accident could have been averted.

7. Date - 11.08.22 Mine - BHOWRA(SOUTH)
Time - 2.15 Owner - Bharat Coking Coal Ltd.
Dist. - Dhanbad, State - Jharkhand
Person(s) Killed :
1. G.C. Mahto, Pump Opnr, Male, 54 Years
2. H.S. Gorh, Pump Opnr., Male, 59 Years

While four workmen were engaged at a pump station at a distance of about 14m from the toe of side of an opencast coal mine, having fiery strata; about 154.72 Cu.m of hot strata dislodged from a height of about 70.40m during heavy rain, emanating cloud of steam and hot ash causing burn injuries to them; to which one of them succumbed in hospital next day, another succumbed in hospital after twelve days and remaining two joined duty after recovery."

Had, (1) the pump station not been negligently kept at an unsafe location without assessing the risk to safety of workmen to which they were exposed while at work, as required under the Regulation 104(1)(b), Regulation 239 read with Regulations 43(11), 45(1), 54(a) and 54(d) of the Coal Mines Regulations, 2017, and (2) the workmen been timely withdrawn from the pump station where there was serious danger to their life due to fire and during heavy rain, as required under the Regulation 48(3) of the Coal Mines Regulations, 2017,

this accident could have been averted.

Code : 0300 Transportation Machinery(Non-Winding)

Code : 0332 Rope Haulage
(1 Death)

8. Date - 08.09.22 Mine - SRIRAMPUR NO.1
 Time - 21.30 Owner - Singareni Collieries Company Ltd.
 Dist. - Adilabad, State - Telangana
 Person(s) Killed :
 1. B. Rayalingu, Trammer, Male, 59 Years

While a set of loaded coal tubs was being hauled by an endless haulage in a below ground coal mine, suddenly the set of tubs ran away and pushed the rope of a direct haulage causing movement of a loaded coal tub, attached to the direct haulage, hitting incidentally one work person, standing nearby, inflicting serious bodily injury to which he succumbed on the way to the hospital.

Had,

(i) safety hooks, jazz-rails or other suitable contrivances been provided to prevent runaway of tubs in forward direction as required under Regulation 92(4)(d) of the Coal Mines Regulations, 2017; and

(ii) attachment between endless rope and tub used in the mine been of an approved type as required under Regulation 94(3) of the Coal Mines Regulations, 2017;

this accident could have been averted.

Code : 0335 Dumpers
(1 Death)

9. Date - 08.10.22 Mine - KUSMUNDA OCP
 Time - 15.30 Owner - South Eastern Coalfields Ltd.
 Dist. - Korba, State - Chhattisgarh
 Person(s) Killed :
 1. Ramcharan, Helper, Male, 20 Years

While a tipper was being maintained by maintenance crew in over burden dump area in a coal mine, suddenly one of the maintenance crew members was run over by that tipper during removal of stopper resulting fatal injury instantaneously.

Had,

(i)the code of practice for tipper maintenance framed by management been followed as required under Regulation 110(1) read with Regulation 239 of Coal Mines Regulations, 2017,

(ii)the operation of maintenance of tipper in over burden dump area been supervised, thereby negligently or wilfully not endangering the life of person as required under Regulation 239 of the Coal Mines Regulations, 2017, and

(iii)the tipper not been operated without ensuring none presence of any person within the operational area of the tipper, thereby wilfully or negligently not endangering the life of person as required under Regulation 239 of the Coal Mines Regulations, 2017;

this accident could have been averted.

Code : 0339 Wheeled Trackless (Truck, Tanker, etc.)
(3 Deaths)

10. Date - 15.02.22 Mine - URIMARI PROJECT
Time - 8.35 Owner - Central Coalfields Ltd.
Dist. - Hazaribagh, State - Jharkhand
Person(s) Killed :
1. Hari Saw, Security Gaurd, Male, 50 Years

While a loaded truck was going out from check post barrier, a Security guard inadvertently entered in the close proximity of the truck and run over by its rear right wheels to receive bodily injuries to which he succumbed on the spot."

Had,

i) the truck driver not moved his truck when the person are in such proximity to be endangered contravening provision of Regulation 62(g) of the Coal Mines Regulations, 2017 read with provision at Sl.no.06 of transport rule for tippers framed under the provisions of Regulation 109 of the Coal Mines Regulations, 2017;

ii) the Security Guard been alert and careful and non-had ventured in the close proximity of the moving truck, thus not negligently endangering his own life, as called for by the regulation 239 of the Coal Mines Regulations, 2017 and

iii) the extra trucks not been deployed to transport coal from coal dump to railway siding, had not there been uncontrolled movements of trucks in confined space thus not following the code of transport rules framed with regards to the size and capacity of the transport machinery in use and the prevailing local conditions contravening Regulation 109(1) read with Section 18(4) of the Mines Act, 1952,

this accident could have been averted.

11. Date - 25.02.22 Mine - ASHOK OPENCAST PROJECT
Time - 10.48 Owner - Central Coalfields Ltd.

Dist. - Chatra, State - Jharkhand

Person(s) Killed :

1. S.K.Ambastha, Asst. Manager, Male, 58 Years

While an empty truck (road sale) was entering at a parking yard, an Assistant Manager inadvertently entered in the close proximity whilst taking on mobile phone was run over by its rear right wheels and received serious bodily injuries to which he succumbed while undergoing treatment at hospital."

Had,

i) the truck been driven carefully and defensively as called for by provision Regulation 63(1)(d) of the Coal Mines Regulations, 2017 read with condition No. Ashoka OCP/SOP/COP/27/Gen./5 of traffic rule framed under Regulation 109 of CMR, 2017 and \

ii) the Assistant Manager been alert and careful and had not used mobile phone and none had ventured in the close proximity of the moving truck, thus not negligently endangering his own life, as called for by the Regulation 239 of the Coal Mines Regulations, 2017 read with condition No. Aswhoka OCP/SOP/COP/49/1 of SOP framed under Regulation 110(3) of CMR, 2017.

12. Date - 31.12.22

Time - 6.45

Mine - AMALGAMATED DHANSAR INDUSTRY COLLIERY

Owner - Bharat Coking Coal Ltd.

Dist. - Dhanbad, State - Jharkhand

Person(s) Killed :

1. Ghanshyam Bhuiya, Dumper Operator, Male, 50 Years

While a dumper operator was engaged to operate a dumper, drove an empty dumper towards top of overburden dump, got down from it at a surface having mild gradient without applying the parking break and run over by the same dumper when it moved backwards uncontrolled; to which he succumbed almost instantly.

Had,

such circumstance was not been created to allow the dumper to move uncontrolled by disobeying the Code of Practice and thus not negligently endangered his own life by contravening Regulations 40(1)&239 of the Coal Mines Regulations, 2017;

this accident could have been averted.

Code : 0400 Machinery Other than Transp. Machinery

Code : 0442 Cutting Machines
(1 Death)

13. Date - 30.11.22

Time - 7.25

Mine - BANGWAR U/G PROJECT

Owner - South Eastern Coalfields Ltd.

Dist. - Shahdol, State - Madhya Pradesh

Person(s) Killed :

1. Teekam Singh, Other BG Worker, Male, 25 Years

While Continuous Miner (CM) Machine was being turned from dip to level gallery in a development district of an underground coal mine, a person handling its trailing cable came in close contact with cutter head and got pressed by it against the coal pillar, inflicting him serious bodily injury to which he succumbed during treatment in the hospital".

Had,

(i)The CM Machine operator taken reasonable care for safety of other person who may be affected by his acts and inspected the area around the machine to ensure that no person(s) were present in the operational area of the CM Machine before marching and adhered to Regulations 40(4) (a) & 40(1) of the Coal Mines Regulations, 2017 read with Condition No. 3, 10 of the duty of Machine operator in Safe operating procedure (SOP), made for machine marching, framed by mine manager of the mine vide Letter no. M.Manager/Bangwar/2022/SO/SOP/55 dated, 07.11.2022 and condition no.14 in the Do's and Don'ts of Safe Operating Procedure (SOP) for machine operation framed by the mine manager vide Letter no. M.Manager/Bangwar/2021/SO/SOP//08 dated, 13.09.2022,

(ii)Mining Sirdar taken reasonable means to ensure proper observance of the requirements of the Mines Act and of the Regulations and Orders made there under by the persons under his charge as required under the provisions of the Regulation 48(2) (a) of the Coal Mines Regulations, 2017, and mining operations in the district assigned to him were carried out as per Code of practice/SOP framed by the manager of the mine as required under the provisions of the Regulation 48(4) (G) read with Regulation 110(3) (a) of the Coal Mines Regulations, 2017 and also read with condition No. 3 of the Safe operating procedure SOP) for cable handling framed by the mine manager vide Letter no. M.Manager/Bangwar/2022/SO/SOP/12 dated 13.09.21,

(iii)Overman enforced in his district the provisions of the Mines Act and of the Regulations and orders made thereunder and ensured the compliance of those provisions to secure safety of the persons employed threat as required under the provisions of the Regulations 47(3) of the Coal Mines Regulations,2017 read with condition No. 2 regarding duty of overman as mentioned in the Safe operating procedure (SOP) made under the provisions of the regulation 47(2) (d) read with Regulation 110(3) (a) of the Coal Mines Regulation,2017 for machine marching framed by the mine manager vide letter no. M.Manager/Bangwar/2022/SO/SOP//55 dated 07.11.2022,

(iv)The Assistant Manager of shift ensured that all works were being carried out in accordance with the provisions of the Act and of the Regulations and orders made thereunder as required under the provisions of the Regulation 45(1) of the Coal Mines Regulations,2017 read with duty of the Assistant Manager at condition no. 6 of the Safe operating procedure (SOP) for machine marching framed by mine manager vide letter no. M.Manager/Bangwar//2022/SO/SOP//55 dated 07.11.2022,

(v)Contractor's Shift supervisor supervised the cable handling in his presence and ensured the compliance of the provisions of the Act and rules and Regulations framed thereunder as required under the provisions of the Regulation 39(1) (d) of the Coal Mines Regulations,2017 read with Condition No. 3 of the Safe Operating procedure (SOP) for cable handling framed by mine manager vide Letter no. M.Manager/Bangwar/2022/SO/SOP/12 dated 13.09.2021,

the accident could have been averted.

Code : 0448 Other Heavy Earth Moving Machinery
(2 Deaths)

14. Date - 18.06.22 Mine - RK OCP MINE
Time - 16.10 Owner - Singareni Collieries Company Ltd.
Dist. - Kalaburagi (Formerly-GULBERGA), State - Telangana
Person(s) Killed :
1. R.A.Kumar, Cont. Worker, Male, 24 Years

While a motor grader was crossing a junction on the haul road of an opencast mine, an unqualified supervisor standing on the haul road was run over by the motor grader, sustained serious bodily injuries and was declared brought dead in the hospital.

Had,

i) a person without having prescribed qualification not been authorised and engaged as competent person to supervise the operations in the mine contravening reg. 2(m) read with reg. 247(2) of the coal mines regulations, 2017; and

ii) reasonable care been taken for safety of other person who may be affected due to operation of motor grader and the motor grader not been operated when person standing in close proximity thus contravening reg. 40(4)(a) read with 62(g) of the coal mines reg. 2017; and

iii) sufficient number of assistant managers been appointed under reg. 45(1) of the coal mines reg. 2017; and

15. Date - 29.09.22 Mine - DIPKA MINE NO.IA
Time - 12.30 Owner - South Eastern Coalfields Ltd.
Dist. - Korba, State - Chhattisgarh
Person(s) Killed :
1. Lal Das Khare, Sr. Mechanic, Male, 52 Years

While a crew of three mechanics were removing the rear tyre assembly of a crane for replacing the bearing of reduction gear box in an opencast coal mine, its outer disc suddenly thrown out of its position with intense pressure and hit one of the mechanic sitting in-front of it, to which he succumbed instantaneously, whereas other two escaped unhurt."

Had,

(i) proper air pressure been maintained in the rubber tube of tyre and the conditions of threads of disc studs & tightness of the disc nuts been ensured, as specified by original equipment manufacturer, as required under provision of Regulation 217(1) of Coal Mines Regulations, 2017;

(ii) the code of practice (COP) for dismantling of tyre assembly prepared by the management been followed, as required under Regulation 110(4) of the Coal Mines Regulations, 2017;

the accident could have been averted.

Code : 0600 Electricity

Code : 0661 Overhead Lines

(1 Death)

16. Date - 06.11.22 Mine - KALYAN KHANI NO.1
Time - 16.20 Owner - Singareni Collieries Company Ltd.
Dist. - Adilabad, State - Telangana
Person(s) Killed :
1. Peetla Gopal, Contract Workman, Male, 26 Years

While a contract worker was replacing top pin type insulator on a 33 KV Electric overhead line pole positioning himself at a height of around 7.2 meter on cross arm of the pole, suddenly received electric shock and fell down on the ground, later succumbed on the way to hospital.

Had,

Withdrawal of workmen been ensured before returning of line clearance permit as required under provision of Regulation 12 (2) of the Central Electricity Authority (Measures relating to Safety and Electric Supply) Regulations, 2010 read with Indian standard IS:5216 (part-1)-1982 Adequate precautions been taken before commencement of working on 33 KV overhead line by earthing through earth rods at relevant location (near to working place) as required under provision of Regulation 19(1) of the Central Electricity Authority (Measures relating to Safety and Electric Supply) Regulations, 2010 The laid down code of practice SOP No EL-1 (Standard operating procedure for Overhead line laying and maintenance) been ensured as required under provision of Regulation 12(1) of the Central Electricity Authority (Measures relating to Safety and Electric Supply) Regulations, 2010 and Regulation 54 (d) of Coal Mine Regulations, 2017 GOAB switch provided at incoming end of the tapping point for local isolation of power supply not been removed as required under the provision of Regulation 105(3) of Central Electricity Authority (Measures relating to Safety and Electric Supply) Regulations, 2010 Overhead Line maintenance was not allowed without direct supervision of competent electrical supervisor as required under provision of Regulation 115(2)(4) of the Central Electricity Authority (Measures relating to Safety and Electric Supply) Regulations, 2010 The designated person possessing certificate of competency or electrical work permit issued by the appropriate Government been engaged to operate and carryout works on electric supply lines and apparatus as required under the provision of Regulation 3 of the Central Electricity Authority (Measures relating to Safety and Electric Supply) Regulations, 2010,

This accident could have been averted.

Code : 0700 Dust, Gas, & Other Combustible Material

Code : 0779 Other Accidents due to Dust/Gas/Fire
(2 Deaths)

17. Date - 24.06.22 Mine - SELECTED DHORI QRY.NO.1 (KALYANI PROJ.)
Time - 13.45 Owner - Central Coalfields Ltd.
Dist. - Bokaro, State - Jharkhand
Person(s) Killed :
1. Mahendra Yadav, Cont. Employee, Male, 32 Years

While an excavator was deployed for loading of overburden from an old overburden dump of about 11m in height and sloped at about 72 degrees having fire in remnant rib of coal seam about 2.5-3.5m thickness in an opencast coal mine, a chunk of heated material roll down from the highwall side of the bench and broken hot lumps pierced in to the operator cabin by breaking the front glass, causing burn injury to the operator to which he succumbed on the spot.

Had,

i) the excavator not been deployed very close to the highwall of the bench in an old overburden dump having fire thus not negligently endangering his own life as required under the provision of the Regulation 239 of the Coal Mines Regulations, 2017;

ii) the codes of practice framed to work near fire affected area been strictly enforced as required under the provision of the Regulation 110 (4) of the Coal Mines Regulations, 2017;

iii) the height of the bench in an old overburden dump not been exceeded three meters as required under the provision of the Regulation 106 (4) of the Coal Mines Regulations, 2017;

iv) the slope of the bench in an old overburden dump not been exceeded 37.5 degrees from the horizontal as required under the provision of the Regulation 108 (2) of the Coal Mines Regulations, 2017 and

v) an effective steps been taken without delay to deal with the fire or heating in an old overburden dump and the excavator not been deployed at the toe of the bench until fire or heating was extinguished as required under the provision of the Regulations 138 (1) & (2) of the Coal Mines Regulations, 2017.

this accident could have been averted.

18. Date - 27.11.22
Time - 9.30

Mine - DIPKA MINE NO.IA
Owner - South Eastern Coalfields Ltd.
Dist. - Korba, State - Chhattisgarh
Person(s) Killed :

1. Paras Ram Yadav, Contractor worker, Male, 35 Years

While a contractor worker was trying to bring a water hose pipe from top of the old ramp to bottom bench, slipped from the edge of the ramp and fell on hot ash at the bottom edge of ramp on fire, inflicted burn injury which resulted into fatality during the treatment at the hospital."

Had,

i. the deceased been accompanied by the co-worker/supervisor at the remote place of work,

ii. the deceased been properly trained in firefighting work,

iii. the deceased been wearing proper PPE and Fire protective cloth during firefighting work.

this accident could have been averted.

Code : 0800 Falls(Other than Falls of Ground)

Code : 0881 Fall of Person from Height/into Depth
(3 Deaths)

19. Date - 13.01.22 Mine - JAYANT
Time - 11.30 Owner - Northern Coalfields Ltd.
Dist. - Singrauli, State - Madhya Pradesh
Person(s) Killed :
1. Patwari Rawat, Contract. worker, Male, 27 Years

While contractor workers were cleaning a walkway near a ground bunker of a Coal Holding Plant of an opencast coal mine, one of them went near the top edge of the ground bunker when a solidified block of stuck coal at the side of the bunker near his feet suddenly collapsed and he fell down into the bunker from a height of about 6m along with the fallen mass causing injuries to which he succumbed on the way to hospital."

Had,

(i) the top of the ground bunker of Coal Handling Plant been kept securely fenced to prevent any person from approaching near the edge, as required under Regulation 237(1) of the Coal Mines Regulations, 2017,

(ii) the place been properly inspected to see that the opening in the fence provided at the topo of the ground bunker was properly guarded to prevent any person from approaching near the edge, as required under the code of practice framed by the manager read with Regulation 13(7) of the Coal Mines Regulations, 2017, and

(iii) it been ensured by the supervisor that person under his charge understood and carried out his duties properly, as required under Regulation 42(1)&(2) of the Coal Mines Regulations, 2017;

this accident could have been averted.

20. Date - 21.04.22 Mine - TADICHERLA-I COAL BLOCK OC MINE
Time - 16.30 Owner - TSPGC LTD.
Dist. - Jayashankar-Bhupalpally, State - Telangana
Person(s) Killed :
1. T. Kiran, Helper, Male, 32 Years

While a helper was fixing light fittings on a lighting pole sitting at a height of around 2.28mtr on welded angle joint of the pole, suddenly he fell on the ground causing serious injuries to his spinal cord and succumbed after seven days in hospital.

Had,

i) safety belt been used as required under Regulation 19(2) of the Central Electricity Authority (Measures relating to Safety and Electric Supply) Regulations, 2010 read with Regulation 131(1) of the Coal Mines Regulations, 2017,

ii) fixing of light fittings been supervised so as to prevent danger as required under Regulation 115(3) of the Central Electricity Authority (Measures relating to Safety and Electric Supply) Regulations, 2010,

iii) the fixing of light fitting been done by designated person as required under Regulation 3 of the Central Electricity Authority (Measures relating to Safety and Electric Supply) Regulations, 2010,

this accident could have been averted."

21. Date - 30.07.22	Mine - AMADAND OPEN CAST MINE
Time - 23.45	Owner - South Eastern Coalfields Ltd.
	Dist. - Anuppur, State - Madhya Pradesh
	Person(s) Killed :
	1. Ramprakash, Dumper Operator, Male, 55 Years

While a dumper operator was trying to get down from cabin of dumper which stuck at the edge overburden dump of an opencast coal mine, he fell down to a depth of about 8 meter onto the lower side of bench inflicting serious injury in left leg and left shoulder and he succumbed in the hospital after 11 days of treatment.

Had,

the victim not tried to get down from the cabin of dumper which stuck on the edge of an opencast coal mine overburden dump where risk of falling was apprehended thus negligently omitted to ensure his own safety in contravention of Regulation 239 of the Coal Mines Regulation, 2017.

this accident could have been averted.

Code : 0883 Fall of Objects incl. Rolling Objects
(2 Deaths)

22. Date - 05.07.22	Mine - RAJGAMAR 4&5
Time - 12.10	Owner - South Eastern Coalfields Ltd.
	Dist. - Korba, State - Chhattisgarh
	Person(s) Killed :
	1. Radhe Shyam, Other, Male, 54 Years

While a person was engaged beneath a surface bunker, fully loaded with coal, in an underground coal mine for clearing the opening of chocked chute, suddenly conical portion of the bunker separated from its support and fell down along with coal, burying the person to death instantly.

Had,

(i) the surface coal bunker been of good design, sound construction, adequate strength and free from visible defects and been maintained in safe working order, as required under Regulation 217 (1) of the Coal Mines Regulations, 2017;

(ii) proper precaution been taken before deployment of person beneath a fully loaded and deteriorated surface coal bunker, thereby wilfully or negligently not endangered the safety of person employed therein, as required under Regulation 239 of the Coal Mines Regulations, 2017;

(iii) the examination of surface coal bunker been done periodically to ensure its stability and safe operation, as required under Regulation 54 (d) of the Coal Mines Regulations, 2017;

(iv) code of practice for clearing the chocked chute opening of the bunker been framed & implemented, as required under Regulation 110 (1) of the Coal Mines Regulations, 2017;

the accident could have been averted.

23. Date - 19.11.22	Mine - NICHITPUR
Time - 10.50	Owner - Bharat Coking Coal Ltd.
	Dist. - Dhanbad, State - Jharkhand
	Person(s) Killed :
	1. Opindar paswan, Tyndel, Male, 43 Years

While a group of eight workmen were repairing a pump at a distance of about 16m from side of a bench of height about 15m at bottom of an opencast coal mine, suddenly the berm along the edge of the haul road situated about 45 m above, was breached by a Pay-Loader machine during cleaning of the road, resulting in rolling down of stone pieces along the slope towards the pump, hitting two of the workmen by stone pieces of size about 1/2 feet x 1/2 feet causing serious injuries; to which one succumbed in hospital after 21 hours and other recovered.

Had,

(1) the Pay-Loader machine been operated safely after ensuring that no person was present in the nearby bottom of the opencast mine as per Standard Operating Procedure (SOP) and the berm along the edge of the haul road not been negligently breached to ensure the safety of persons employed therein as required under the provisions of the Regulation 62(j) read with the Regulation 239 of the Coal Mines Regulations, 2017;

(2) communication and coordination between senior officials of the mine been done before deployment of Pay-Loader machine, thus negligently omitted to ensure the safety of persons employed therein as required under Regulation 39(1)(a) read with the Regulation 239 of the Coal Mines Regulations, 2017;

(3) communication with assistant manager or manager been done before commencement of maintenance of the pump, thus negligently omitted to ensure the safety of persons employed therein as required under Regulation 239 of the Coal Mines Regulations, 2017;

(4) the Standard Operating Procedure (SOP) of operating the Pay-Loader machine been ensured to follow, thus negligently omitted to ensure the safety of persons employed therein as required under Regulations 110(1) read with the Regulation 239 of the Coal Mines Regulations, 2017 & Section 18(4) of the Mine Act 1952;

(5) the deceased worn helmet at the time of repairing the pump, thus endangered his own life, as required Regulation 241(1) of the Coal Mines Regulations, 2017

this accident could have been averted.

Code : 0900 Other Causes

Code : 0999 Unclassified
(1 Death)

24. Date - 07.05.22 Mine - BARTARAI
Time - 8.30 Owner - South Eastern Coalfields Ltd.
Dist. - Anuppur, State - Madhya Pradesh
Person(s) Killed :

1. Ramkali, Lamp Fitter, Female, 56 Years

While a female lamp fitter was igniting a flame safety lamp, suddenly the burning match stick dropped on a wiping cloth, partially soaked with fuel, causing fire on it which incidentally initiated fire on her saree (due to fall of fired wiping cloth) sustaining serious burn injury which proved fatal after 12 days in the hospital during treatment.

Had,

(i) reasonable care been taken for safety during igniting the flame safety lamp including proper care and use of protective clothing (not wearing synthetic saree) as required under Reg.40(4) (a) of Coal Mines Regulations, 2017

(ii) the works of igniting flame safety lamp and cleaning, refilling, refitting etc., been done on separate table, thereby wilfully or negligently endangered the safety of persons engaged in the job as required under reg.239 of Coal Mines Regulations, 2017

(iii) a competent person holding Manager's, Overman's or Gas Testing certificate been appointed for maintenance and examination of safety lamp as required under Regulation 179(7) of the Coal Mines Regulations, 2017

this accident could have been averted.

10. MAJOR ACCIDENT SINCE 1901

Details of major accidents in coal Mines (involving 4 or more deaths)
during the year 1901-2022

Sl.	Date of Accident	Name of Mine	Number of Persons		Cause of Accident
			Killed	S/Injured	
1	31-10-1901	Tikkak	4	0	Explosions of damp/coal dust
2	20-10-1903	No. 3 Pit	5	3	Fall of Coal in working places
3	01-04-1906	Upper Ledo	4	0	Suffocation by gases
4	16-06-1908	Nadir Khas	20	0	Explosions of fire-damp
5	21-11-1908	North Kustore	7	0	Fall of roof
6	25-11-1908	North Kustore	8	0	Fall of roof
7	21-12-1908	Kanchka	4	0	Inshaft while ascending
8	12-05-1909	Dhobidih	4	0	Fall of roof
9	29-05-1909	Sodepur	7	0	Fall of roof
10	05-07-1909	Sodepur	5	0	Inshaft (falling)
11	07-02-1910	Dishergarh	11	0	Explosion of fire-damp
12	10-03-1910	Kendwadih	4	0	Fall of roof
13	15-10-1910	Sitalpur	12	0	Fall of roof
14	26-10-1910	Murulidih	6	0	Irruption of water
15	26-11-1910	Namdang	14	4	Explosion of fire-damp
16	09-11-1911	Kendwadih	14	0	Explosion of fire-damp
17	19-04-1912	Sripur	4	3	Fall of object in shaft
18	11-07-1912	phularitand	21	0	Irruption of water
19	02-03-1913	Barkui	6	1	Fall of roof
20	28-06-1913	Jotejanake	13	0	Irruption of water
21	07-08-1913	Jamadoba	7	0	Irruption of Water
22	08-08-1913	Bhatdih	7	0	Irruption of water
23	22-10-1913	Chowrasi	27	0	Explosion of fire-damp
24	23-10-1913	Sodepur No. 9 & 10 pits	4	0	Inshaft(overhanging)
25	24-06-1914	Dhobidih	6	0	Fall of Roof
26	31-08-1915	Chanda	10	0	Miscellaneous on Surface
27	04-02-1916	Bhowra	24	0	Miscellaneous on Surface
28	20-02-1916	Sitalpur	6	0	In Shaft(Ascending/Descending)
29	20-07-1916	Dishergarh	14	4	Explosion of Fire-damp
30	09-12-1916	Jamuria	4	0	Fall of Roof
31	18-11-1918	Dishergarh	10	4	Explosion of Fire-damp
32	17-05-1919	Bhuggutdih	4	1	Fall of Roof
33	25-09-1919	Nodhia	7	0	Fall of Roof
34	12-11-1919	Khas Jayrampur	6	1	Fall of Roof
35	24-11-1919	Kustore South	14	0	In Shaft(Rope/Chain Breaking)

Sl.	Date of Accident	Name of Mine	Number of Persons		Cause of Accident
			Killed	S/Injured	
36	30-01-1920	Parbelia	4	0	In Shaft while Ascending/Desce
37	11-05-1920	Loyabad	4	0	Fall of Roof
38	04-08-1920	Namma	8	0	Irruption of Water
39	29-01-1921	East Bagdiggi	5	0	Fall of Side
40	20-02-1921	Barkui	4	1	Explosives
41	28-02-1921	Amlabad	11	0	Explosion or Fire-damp
42	25-08-1921	Seebpore	4	0	Fall of Roof
43	16-09-1921	Pandeybera	5	0	Fall of Side
44	09-03-1922	Khost	13	3	Explosions
45	29-04-1922	Sodepur	8	8	Overwinding
46	05-07-1922	Parbelia	4	2	Explosions
47	04-01-1923	Parbelia	74	0	Explosion/Ignition of Firedamp
48	25-01-1923	Mahakali	8	0	Fall of Side
49	20-02-1923	Raniganj	4	1	Fall of Roof
50	26-03-1923	Bonbiddin	4	0	Fall of Side
51	14-04-1923	Rawanwara	16	1	Fall of Roof
52	01-05-1923	Sodepur	9	0	Suffocation of Gases
53	21-06-1923	Dhori	7	0	Fall of Side
54	21-12-1923	Benahir	5	0	Fall of Roof
55	27-12-1923	Jharia Khas	5	0	Fall of Roof
56	28-03-1924	Khost	4	0	Fall of Roof
57	05-07-1924	Bararee	4	0	Explosives
58	01-11-1924	Bagdigi	4	0	Rope/Chain Breaking
59	22-01-1925	Raniganj	5	0	Fall of Roof
60	10-09-1925	Burra Dhemmo	4	0	Shaft (Ascending/Descending)
61	28-01-1926	Chanch	5	0	Fall of Roof
62	01-09-1926	Bararee	4	0	Fall of Side
63	09-04-1928	Mudidih	6	5	Miscellaneous
64	30-10-1928	Sripur	4	1	Fall of Roof
65	20-12-1928	Bhaskajuri	7	0	Irruption of Water
66	09-04-1929	Sripur	4	0	Fall of Roof
67	16-04-1929	Sawang	6	3	Explosion of Firedamp
68	20-07-1929	Sikdarpur	4	0	Fall of Roof
69	15-10-1929	Datla	4	2	Fall of Roof
70	19-11-1929	Serampur	5	0	Fall of Roof
71	10-12-1929	Lodna	5	1	Fall of Roof
72	24-02-1930	Bararee	4	0	Suffocation by Gases
73	08-04-1930	Deoli	6	0	Fall of Roof
74	14-10-1930	Dishergarh West	6	0	Explosion of Firedamp

Sl.	Date of Accident	Name of Mine	Number of Persons		Cause of Accident
			Killed	S/Injured	
75	17-02-1931	Nongah	13	3	Explosives
76	24-11-1931	Sodepur 9 & 10 Pits	5	1	Fall of Roof
77	09-04-1932	Methani	5	2	Explosion/Ignition of Firedamp
78	21-02-1934	Porpiapur	6	0	Fall of Roof
79	12-05-1934	Seebpur	5	0	Fall of Roof
80	16-07-1934	Khas Jharia	6	0	Fall of Roof
81	16-01-1935	Loyabad	11	0	Irruption of Water
82	29-06-1935	Bagdigi	19	7	Explosion/Ignition of Firedamp
83	24-07-1935	Kurhurbaree	62	14	Explosion/Ignition of Firedamp
84	30-01-1936	Loyabad	35	0	Fire/Suffocation by Gases
85	14-07-1936	Adjai Second	4	1	Explosion/Ignition of Firedamp
86	13-12-1936	Damdot	4	0	Surface Railway/Tramways
87	18-12-1936	Poidih	209	0	Explosion/Ignition of Firedamp
88	06-09-1938	Dhemo Main	9	0	Fall of Roof
89	05-01-1940	Kalithan Gurgaon	4	0	Fall of Roof
90	27-02-1940	Manksimula	6	0	Fall of Roof
91	16-04-1940	Raneepur	4	1	Explosion/Ignition of Firedamp
92	21-10-1940	Bhualbararee	6	5	Fall of Sides
93	04-12-1940	Ekra Khas	8	0	Fall of Roof
94	15-12-1940	Jitpur	4	0	Fall of Roof
95	28-12-1940	Kustore	4	0	Suffocation by Gases
96	24-04-1941	Dishergarh West	6	0	Fall of Roof
97	05-05-1941	South Bulliari Kendwadiah	9	0	Fall of Roof
98	04-08-1941	Sodepur 9 & 10 Pits	4	0	Fall of Roof
99	03-12-1941	Dhemo Main	4	1	Fall of Sides
100	16-01-1942	Kurhurbaree	5	5	Fall of Roof
101	12-02-1942	Ghogri-Berkui	4	0	Fall of Roof
102	27-03-1942	Seetalpur	4	0	Falling down Shafts
103	06-07-1942	Makerwal	14	0	Irruption of Water
104	17-07-1942	Pinalgoria	4	0	Irruption of Water
105	27-11-1942	Jotejanaki Khas	6	0	Fall of Roof
106	22-02-1943	Sodepur 9, 10 & 11 Pits	13	3	Fall of Roof
107	14-04-1943	Banksimulla 11 & 12 Pits	5	0	Explosions
108	26-07-1943	Ghorawari	7	0	Explosions
109	08-10-1943	Jhamuria 7 & 8 Pits	12	1	Sundries Underground
110	04-02-1944	Huririladih	4	1	Fall of Roof
111	10-04-1944	Khodo Valley	8	0	Fall of Sides
112	14-06-1944	North Brook	4	0	Descending Shaft
113	25-08-1944	Bright Jharia	4	0	Fall of Roof

Sl.	Date of Accident	Name of Mine	Number of Persons		Cause of Accident
			Killed	S/Injured	
114	07-09-1944	Dhemo Main	6	0	Fall of Roof
115	13-03-1945	Dhemo Main	4	1	Fall of Sides
116	13-06-1945	Banksimula 9 & 10 Pits	8	0	Fall of Sides
117	19-03-1946	Begunia	13	0	Explosion/Ignition of Firedamp
118	09-06-1946	Malkera-Choitodih	4	0	Overwinding of Shaft
119	04-11-1946	Gazlitand	5	0	Fall of Roof
120	20-03-1947	Methani	4	1	Fall of Roof
121	23-03-1948	Chapui Khas	5	1	Explosions
122	19-05-1948	Jamuria A & B Pits	4	0	Fall of Roof
123	08-10-1948	Ekra Khas	6	0	Irruption of Water
124	15-12-1948	Parbelia	8	2	Haulage
125	27-12-1948	Kargali	4	0	Fall of Sides
126	24-10-1949	Jamai Datla No. 2	4	0	Breakage of Rope/Chain
127	17-11-1949	New Satgram	6	3	Fall of Roof
128	25-02-1950	Rana	4	1	Fall of Roof
129	15-04-1950	Bhatdee	4	0	Fall of Roof
130	29-08-1950	Parbelia	4	0	Fall of Roof
131	04-10-1950	Dhori	7	0	Irruption of Water
132	14-01-1951	Chinakuri	4	1	In Shaft(Miscellaneous)
133	28-01-1951	Ranipur	9	3	Descending Shaft
134	31-05-1951	Methani	7	2	Fall of Roof
135	22-08-1951	East Bhalgora	4	0	Fall of Roof
136	22-02-1952	Dhemo Main	6	0	Fall of Roof
137	19-05-1952	Mithapur	4	1	Fall of Sides
138	17-06-1952	South East Baraboni Khas	5	4	Miscellaneous Surface
139	12-07-1952	Dhemo Main	12	0	Fall of Roof
140	17-09-1952	Bhatdee	5	0	Fall of Roof
141	19-11-1952	Pure Chirimiri	7	0	Fall of Roof
142	22-01-1953	Sonardih	4	0	Fall of Sides
143	15-05-1953	Pure Chirimiri	8	1	Fall of Roof
144	05-07-1953	Bhulabararee	4	0	Fall of Roof
145	31-07-1953	Bejdih	4	0	Fall of Roof
146	05-08-1953	Majri	11	0	Irruption of Water
147	23-08-1953	Dhemo Main	6	1	Fall of Roof
148	24-08-1953	Chinakuri	6	2	Irruption of Water
149	26-09-1953	Jhagrakhand	4	0	Fall of Roof
150	30-09-1953	Dhemo Main	4	0	Fall of Roof
151	08-01-1954	Swang	7	0	Fall of Roof
152	19-01-1954	Handiduah	4	0	Fall of Roof

Sl.	Date of Accident	Name of Mine	Number of Persons		Cause of Accident
			Killed	S/Injured	
153	14-03-1954	Damra	10	0	Explosion/Ignition of Firedamp
154	02-04-1954	Kothagudium No. 3 Incline	5	0	Fall of Roof
155	16-06-1954	Monoharbahal	4	0	Fall of Roof
156	11-10-1954	Loyabad	4	0	Fall of Roof
157	10-12-1954	Newton Chikli	63	0	Irruption of Water
158	02-02-1955	Model Dharmaband	8	3	Miscellaneous on Surface
159	05-02-1955	Amlabad	52	1	Explosion of Inflammable Gas
160	03-06-1955	Pootkee	4	0	Fall of Objects in Shafts
161	14-07-1955	Kalimati	6	0	Fall of Roof
162	09-09-1955	Burradhemo	4	0	Fall of Roof
163	08-02-1956	Bhulabararee	4	1	Fall of Roof
164	13-06-1956	Girimint	4	0	Haulage
165	12-09-1956	Lodna	4	0	Irruption of Water
166	26-09-1956	Binodicutta	4	0	Irruption of Water
167	26-09-1956	Burradhemo	28	0	Irruption of Water
168	19-02-1958	Chinakuri 1 & 2 Pits	176	7	Explosions
169	20-02-1958	Central Bhowrah	23	0	Irruption of Water
170	09-10-1958	North Kujama	8	0	Fall of Roof
171	27-01-1959	Saunda II	4	0	Explosion of Inflammable Gas
172	02-03-1959	Kurhurbaree	4	0	Outbreak of Fire
173	19-11-1959	Sripur 1 & 2 Pits	7	2	Fall of Roof
174	05-01-1960	Damua	16	0	Irruption of Water
175	29-05-1960	Bachra	5	1	Fall of Roof
176	23-01-1961	Jambad Selected	6	0	In Shaft (Miscellaneous)
177	27-02-1961	Simlabahal	4	0	Fall of Roof
178	05-03-1961	Budroochuck	5	4	Fall of Roof
179	22-04-1961	East Kajora	5	1	Fall of Roof
180	06-05-1961	Datla West	4	0	Fall of Roof
181	10-06-1961	Burragarh	4	0	Fall of Roof
182	08-03-1962	Upper Mandra	5	0	Fall of Roof
183	23-03-1962	Sarpi Kajora	5	0	Fall of Roof
184	19-07-1962	Sitanala	6	1	Fall of Roof
185	24-08-1962	South Bulliari	6	0	Fall of Roof
186	15-02-1963	Jamuna	6	0	Fall of Sides
187	19-02-1963	Jharkhand	4	2	Fall of Sides
188	21-03-1963	Jamuria A & B Pits	7	1	Fall of Roof
189	04-06-1963	Kargali	8	1	Fall of Sides
190	22-04-1965	Kendwadih	6	0	Irruption of Water
191	28-05-1965	Dhori	268	9	Explosion of Coal Dust

Sl.	Date of Accident	Name of Mine	Number of Persons		Cause of Accident
			Killed	S/Injured	
192	24-07-1965	Ena	7	0	Fall of Roof
193	08-11-1965	Rajnagar	5	1	Fall of Roof
194	11-01-1966	Lower Badjna	5	2	Fall of Roof
195	17-05-1966	Katras-Choitodih	8	1	Fall of Roof
196	16-01-1967	Gonshadih	4	0	Fall of Roof
197	16-01-1967	Laikdih Deep	4	0	Fall of Roof
198	28-09-1967	Central Kujama	4	0	Overwinding of Cage
199	11-04-1968	West Chirimiri	14	16	Fall of Sides
200	27-09-1968	North Salanpur	6	0	Fall of Sides
201	21-11-1969	New Satgram	5	3	Fall of Roof
202	06-09-1971	Mudidih	4	1	Fall of Roof
203	24-12-1971	Kuya & Kuya Khas	4	0	Fall of Roof
204	18-03-1973	Noonodih Jitpur	48	13	Explosion/Ignition of Gas/Dust
205	03-05-1973	Bhowra South	4	1	Fall of Roof
206	11-01-1974	Handiduha	4	3	Fall of Roof
207	11-03-1974	Burhar No.1	7	0	Fall of Roof
208	16-05-1974	Parasea	4	1	Fall of Roof
209	31-10-1974	Ranipur	4	1	Explosion/Ignition of Gas/Dust
210	10-01-1975	Kalyan Khani No.1	4	0	Fall of Roof
211	28-02-1975	Hessalong	6	0	Fall of Sides
212	19-04-1975	Churcha	5	0	Fall of Roof
213	14-05-1975	Ara	5	0	Fall of Roof
214	27-07-1975	Pannandhro Lignite	4	0	Fall of Sides
215	08-08-1975	Kessurgarh	11	1	Fall of Roof
216	18-11-1975	Silewara	10	1	Irruption of Water
217	27-12-1975	Chasnalla	375	0	Irruption of Water
218	28-01-1976	Bellampalli 2 Incline	5	0	Fall of Roof
219	05-04-1976	Chasnalla	5	0	Irruption of Water
220	18-07-1976	Kalyan Khani No.5	4	1	Fall of Roof
221	16-09-1976	Central Saunda	10	0	Irruption of Water
222	04-10-1976	Sudamdih Shaft	43	3	Explosion/Ignition of Gas/Dust
223	31-03-1978	Tara	5	2	Fall of Roof
224	17-08-1978	Industry	4	0	Irruption of Water
225	31-12-1978	Prakasam Khani No.2	6	3	Fall of Roof
226	22-01-1979	Baragolai	16	0	Explosion/Ignition of Gas/Dust
227	09-10-1979	Bhanora	5	2	Fall of Roof
228	16-11-1979	Bankola	4	3	Fall of Roof
229	09-06-1980	Jorekuri Palasthali	4	0	Landslides
230	03-07-1980	Gopalichak	4	1	Fall of Roof

Sl.	Date of Accident	Name of Mine	Number of Persons		Cause of Accident
			Killed	S/Injured	
231	24-06-1981	Jagannath	10	4	Fire
232	16-07-1982	Topa	16	4	Fall of Roof
233	14-09-1983	Huririladih	19	0	Inundation
234	18-09-1984	Saunda D West	6	0	Explosives
235	09-06-1985	Somagudem 1	6	1	Fall of Roof
236	15-09-1985	Patherdih	4	1	Fall of Roof
237	14-10-1985	Kalyan Khani No.5	4	3	Fall of Roof
238	27-03-1986	Godavari Khani No.9	7	0	Explosion/Ignition of Gas/Dust
239	09-04-1986	Banki	4	0	Fall of Roof
240	20-04-1986	Satpura No.1	4	1	Fall of Roof
241	26-11-1986	Kenduadih	6	0	Fall of Roof
242	25-05-1988	North Jhagrakhand	4	0	Fall of Roof
243	18-06-1988	Dubeswari	4	0	Fall of Roof
244	30-06-1989	South Govindpur	5	2	Fall of Roof
245	13-11-1989	Mahabir(R)	6	0	Irruption of Water
246	18-10-1990	Dhanpuri Incline	4	1	Fall of Roof
247	19-11-1993	Tipong	9	0	Explosion/Ignition of Gas/Dust
248	18-01-1994	Mahabir Khani No.1	4	0	Fall of Roof
249	25-01-1994	New Kenda	55	0	Fire
250	05-03-1994	Kotma West	6	1	Fall of Roof
251	11-12-1994	Bararee/Bhulanbararee	4	0	Other Winding Operation Acc.
252	27-09-1995	Gaslitand	64	0	Irruption of Water
253	27-09-1995	Katras-Choitodih	4	0	Irruption of Water
254	05-01-1996	Kusunda	4	5	Fall of Roof
255	13-11-1996	Satgram Incline	4	0	Fall of Roof
256	03-03-1997	New Moghla	10	12	Explosion/Ignition of Gas/Dust
257	18-10-1997	Sirka U/G	5	0	Fall of Roof
258	09-06-1998	Kuju	5	1	Fall of Roof
259	06-07-1999	Parascole (West)	5	3	Air Blast
260	06-10-2000	Godavari Khani No.IX	5	0	Fall of Roof
261	03-11-2000	Dobary	4	1	Fall of Roof
262	24-06-2000	Kawdi Open Cast	10	0	Fall of Sides
263	02-02-2001	Bagdigi	29	0	Irruption of Water
264	05-03-2001	Durgapur Rayatwari	6	0	Fall of Roof
265	25-01-2002	Bankola	4	0	Fall of Object
266	26-02-2002	Kalyan Khani No. II	5	1	Fall of Roof
267	28-01-2003	Murpar U/G	4	1	Fall of Object
268	16-06-2003	Godavari Khani No.7 LEP	17	0	Irruption of Water
269	17-10-2003	Godavari Khani No. 8A	10	2	Fall of Roof
270	22-11-2005	Busseriya	4	0	Fall of Roof

Sl.	Date of Accident	Name of Mine	Number of Persons		Cause of Accident
			Killed	S/Injured	
271	15-06-2005	Central Sounda	14	0	Irruption of Water
272	06-09-2006	Bhatdee	50	0	Explosion/Ignition of Gas/Dust
273	12-11-2006	Venkatesh Khani No. 7	4	2	Fall of Roof
274	30-11-2006	Shyamsundarpur	6	0	Fall of Roof
275	11-05-2008	Ledo	5	14	Explosion/Ignition of Gas/Dust
276	17-12-2008	Jayant	5	0	Landslides
277	06-05-2010	Anjan Hill	15	5	Other explosive accident
278	11-11-2013	Basantimata	4	2	Fall of Roof
279	29-12-2016	Rajmahal OCP	23	0	Landslide
280	21-07-2018	Tapin North	4	7	Other HEMM
281	25-10-2018	Nehariya UG Mine	4	0	Fall of Roof
282	23-07-2019	Bharatpur Project	4	0	Landslide
283	02-06-2020	Ramagundam OC-I	4	3	Secondary Blasting Projectile
284	10-11-2021	Srirampur No. 3 & 3A	4	0	Fall of Roof

11. COURT OF INQUIRY

Particulars of Court of enquiries instituted under the Mines Act to enquire into the accidents in coal mines during the year 1901-2022

Sl. No.	Date of Accident	Name of Mine & Cause	No. of Persons Killed	Constitution of Court of Enquiry	Assessors
1	2	3	4	5	6
				S/Shri	S/Shri
1	07/08/13	Jamadoba (Inundation)	7	Information not readily available.	
2	08/08/13	Bhatdih (Inundation)	7	Information not readily available.	
3	22/10/13	Chowrasi (Explosion)	27	Information not readily available.	
4	04/02/16	Bhowra (Subsidence)	24	Dy. Commissioner	1. Chief Inspector of Mines 2. T.H.Ward, Mining Engineer
5	20/02/16	Sitalpur (Winding)	6	Collector of Burdwan	1. Chief Inspector of Mines 2. G.C.Lathbury, Mining Engr.
6	20/07/16	Dishergarh (Explosion)	14	Collector of Burdwan	1. Chief Inspector of Mines 2. G.C.Lathbury, Mining Engr.
7	18/11/18	Dishergarh (Explosion)	10	Collector of Burdwan	1. Chief Inspector of Mines 2. T.H.Ward, Mining Engineer
8	24/11/19	Kustore South (Winding)	14	Dy. Commissioner	1. Chief Inspector of Mines 2. A.Wright, Mining Engineer
9	04/01/23	Parbelia (Explosion)	74	Dy. Commissioner	1. Chief Inspector of Mines 2. Colliery Superintendent
10	14/04/23	Rawanwara (Fall of Roof)	16	Dy. Commissioner	1. Chief Inspector of Mines
11	18/01/25	Newton Chikli (Breaking of Rope)	1	Information not readily available.	
12	09/04/28	Mudidih (Subsidence)	6	Addl. Dy. Commissioner	1. Chief Inspector of Mines 2. J.B.Wardlaw, Mining Engr.
13	20/12/28	Bhaskajuri (Inundation)	7	District Magistrate	1. Chief Inspector of Mines 2. J.Mackie, Mining Engineer
14	09/04/29	Sripur (Fall of Roof)	4	District Magistrate	1. Chief Inspector of Mines 2. J.B.Wardlaw, Mining Engr. 3. J.Mackie, Mining Engineer

Statement 5.15 (continued)

Sl. No.	Date of Accident	Name of Mine & Cause	No. of Persons Killed	Constitution of Court of Enquiry	Assessors
1	2	3	4	5	6
				S/Shri	S/Shri
15	14/10/30	Dishergarh West (Explosion)	6	Chief Inspector of Mines	1. Dr. D. Penman, Mining Engr. 2. J. Thomas, Mining Engineer
16	29/06/35	Bagdigi (Explosion)	19	Chief Inspector of Mines	1. Addl. Dy. Commissioner 2. J. B. Wardlaw, Mining Engr.
17	24/07/35	Kurhurbaree (Explosion)	62	Chief Inspector of Mines	1. Dy. Commissioner 2. J. Mackie, Mining Engineer
18	30/01/36	Loyabad (Suffocation by Gases)	35	Commissioner, Chotanagar	1. Inspector of Mines 2. J. Mackie, Mining Engineer 3. B. K. Bose, Mining Engineer
19	18/12/36	Poidih (Explosion)	209	Commissioner, Burdwan Div.	1. Inspector of Mines 2. L. A. Jacobs, Mining Engineer 3. B. K. Bose, Mining Engineer
20	19/03/46	Begunia (Explosion)	13	Commissioner, Burdwan Div.	1. Dy. Chief Insp. of Mines 2. J. K. Dholakai, Mining Engr. 3. A. G. Mackay, Mining Engineer
21	15/05/53	Pure Chirimiri (Fall of Roof)	8	Dy. Commissioner	1. Chief Inspector of Mines 2. R. L. Malviya (Labour) 3. M. S. Dhandha (Management)
22	08/01/54	Swang (Fall of Roof)	7	Dy. Commissioner	1. D. R. Bagrey, Mining Engr. 2. Bindeswari Dubey, M. L. A. 3. Dy. Chief Insp. of Mines
23	10/12/54	Newton Chikli (Inundation)	63	Justice B. R. Sen	1. M. L. Shome, Mining Engineer 2. W. S. Barlingay, M. P.
24	05/02/55	Amlabad (Explosion)	52	Justice B. P. Jamuar	1. M. L. Shome, Mining Engineer 2. N. Das, M. P.
25	26/09/56	Burradhemo (Inundation)	28	Commissioner, Burdwan	1. Chief Inspector of Mines 2. S. C. Samanta, M. P.
26	19/02/58	Chinakuri 1 & 2 Pits (Explosion)	176	Justice S. N. Guha Roy	1. S. C. Samanta, M. P. 2. Dr. J. W. Whitakar
27	20/02/58	Central Bhowrah (Inundation)	23	T. P. Singh, I. A. S., C. A.	1. B. H. Engineer 2. Jai Pal Singh, M. P.

Statement 5.15 (Continued)

Sl. No.	Date of Accident	Name of Mine & Cause	No. of Persons Killed	Constitution of Court of Enquiry	Assessors
1	2	3	4	5	6
				S/Shri	S/Shri
28	28/05/65	Dhori (Explosion)	268	Justice S. K. Das	1. B. H. Engineer 2. Das Gupta, G. S. I.
29	18/03/73	Noonodih Jitpur (Explosion)	48	R. C. Dutt, I. C. S.	1. Kanti Mehta 2. Lalit Burman 3. Prof. G. B. Mishra 4. M. B. Tawadey
30	08/08/75	Kessurgarh (Fall of Roof)	11	R. C. Dutt, I. C. S.	1. Prof. K. V. Subrahmanyam 2. S. L. Chakravarty 3. R. N. Sharma, M. P. 4. Lalit Burman
31	18/11/75	Silewara (Inundation)	10	P. M. Nayak, I. C. S.	1. V. L. Karwande 2. Prof. G. S. Marwaha 3. S. W. Dhabe 4. S. K. Sanyal
32	27/12/75	Chasnalla (Inundation)	375	Justice U. N. Sinha	1. C. Karunakaran 2. G. S. Marwaha 3. Damodar Pandey, M. P.
33	05/04/76	Chasnalla (Inundation)	5	Justice U. N. Sinha	1. C. Karunakaran 2. G. S. Marwaha 3. Damodar Pandey, M. P.
34	16/09/76	Central Saunda (Inundation)	10	N. P. Dube, I. A. S.	1. Prof. S. S. Saluja 2. S. Das Gupta
35	04/10/76	Sudamdih Shaft (Explosion)	43	H. C. Sarin, I. C. S.	1. S. Bagchi 2. Damodar Pandey, M. P.
36	22/01/79	Baragolai (Explosion)	16	T. S. Sankaran	1. S. Dasgupta 2. H. B. Ghose
37	24/06/81	Jagannath (Miscellaneous)	10	K. Ramamurthy	1. Damodar Pandey 2. H. B. Ghose
38	16/07/82	Topa (Fall of Roof)	16	Justice L. K. Pandey	1. S. Dasgupta 2. H. B. Ghose
39	14/09/83	Huririladih (Inundation)	19	Justice C. T. Dighe	1. K. M. Trivedi 2. G. S. Marwaha

Statement 5.15 (Continued)

Sl. No.	Date of Accident	Name of Mine & Cause	No. of Persons Killed	Constitution of Court of Enquiry	Assessors
1	2	3	4	5	6
				S/Shri	S/Shri
40	13/11/89	Mahabir (Irruption of Water)	6	P. C. Hota	1. B. N. Tiwari 2. A. K. Ghosh
41	25/01/94	New Kenda (Ignition of Gas/Dust)	55	Justice S. Ahmed	1. B. N. Tiwari, AITUC 2. Prof. D. P. Singh, BHU, IT
42	27/09/95	a) Gaslitand (Irruption of Water)	64	Justice S. K. Mukherjee	1. Prof. B. K. Mazumdar, ISM 2. Rajender Singh, INTUC
	26/09/95	b) Bera (Irruption of Water)	3		
	26/09/95	c) South Gobindpur (Irruption of Water)	3		
	27/09/95	d) Katras-Choitodih (Irruption of Water)	4		
43	02/02/01	Bagdigi (Irruption of Water)	29	Justice Gurusharan Sharma	1. Prof. Ravindra Nath, BHU 2. Kamallesh Sahay, CCKS
44	16/06/03	Godavari Khani No. 7 (LEP) (Irruption of Water)	17	Justice Bilal Nazki	1. A. K. Rudra 2. Kamallesh Sahay
45	17/10/03	Godavari Khani NO. 8A (Fall of Roof)	10	Justice Bilal Nazki	1. A. K. Rudra 2. Kamallesh Sahay
46	15/06/05	Central Sounda (Irruption of Water)	14	Dr. D. P. Shenoy	1. Ravindra Sharma 2. Rajendra Pd. Singh
47	06/09/06	Bhatdee (Ignition of Gas/Dust)	50	P. C. Parakh	1. Ravindra Sharma 2. O. P. Lala
48	06/05/10	Anjan Hill (Ignition of Gas/Dust)	15	Justice P. V. Shetty	1. S. K. Dubey 2. S. Kumar
49	29/12/16	Rajmahal Opencase Mine (Landslide)	23	Smt. Rashmi Verma	1. Ravinder Sharma 2. Akhter Javed Usmanee

12. MISCELLANEOUS

STATEMENT 1

Codes for classification of accidents by cause and place of occurrence

Code	Cause of Accident	Code	Cause of Accident
Ground movement		Explosives	
0111	Fall of roof	0551	Solid blasting projectiles
0112	Fall of sides(other than overhangs)	0552	Deep hole blasting projectiles
0113	Fall of overhang	0553	Secondary blasting projectiles
0114	Rock burst/bumps	0554	Other projectiles
0115	Air blast	0555	Misfires/sockets(while drilling into)
0116	Premature collapse of workings/pillars into)	0556	Misfire/socket(other than drilling
0117	Subsidence	0557	Delayed ignition
0118	Landslide	0558	Blown through shots
0119	Collapse of shaft	0559	Other explosive accident
Transportation machinery(winding)		Electricity	
0221	Overwinding of cages/skip, etc. (upgoing)	0661	Overhead lines
0222	Breakage of rope, chain, draw/susp. gear	0662	Trailing cables
0223	Falls of persons from cages, skip, etc. etc.	0663	Switch gears, gate end boxes, pommel,
0224	Falling of objects from cages, skip, etc.	0664	Energized machines
0225	Hit by cages, skip, etc. cables	0665	Power cables other than trailing
0228	Overwinding of cages/skip (downgoing)	0669	Other electrical accidents
0229	Other accident due to winding operation	Dust, gas & other combustible material	
Transportation machinery(non winding)		0771	Occurrence of gas
0331	Aerial ropeway	0772	Influx of gas
0332	Rope haulage	0774	Explosion/ignition of gas/dust, etc.
0333	Other rail transportation	0775	Outbreak of fire or spontaneous heating
0334	Conveyors	0776	Well blowout (with fire)
0335	Dumpers	0777	Well blowout (without fire)
0336	Wagon movements	0778	Other combustible material
0339	Wheeled trackless(truck, tanker, etc.)	0779	Other accidents due to dust/gas/fire
Machinery other than transp. machinery		Falls(other than fall of ground)	
0441	Drilling machines	0881	Fall of person from height/into depth
0442	Cutting machines	0882	Fall of persons on the same level
0443	Loading machines	0883	Fall of objects incl. rolling objects
0444	Haulage engine	0889	Other accident due to falls
0445	Winding engine	Other causes	
0446	Shovel, dragline, frontend loader, etc.	0991	Irruption of water
0447	Crushing & screening plants	0992	Flying pieces(except due to
0448	Other heavy earth moving machinery explosives)	0993	Drowning in water
0449	Other non-transportation machinery	0994	Buried in sands, etc.
		0995	Bursting/leakage of oil pipe lines
		0999	Unclassified

Code	Place of Accident
BELOW GROUND	
Development area	
111	< 10m of development face
112	> 10m and within working district
Long wall panel	
121	> 10m of long wall face
122	Gate roads in long wall panels
Depillaring / stoping	
131	< 10m of face
132	> 10m but < 30m
133	> 30m but within working district
Outside working district	
141	Traveling roadways
149	Unclassified
Tramming roadways	
151	Within district
152	Outside district
Haulage roadways (within district)	
161	Rope haulage roadways
162	Conveyor roadways
163	Loco roadways
169	Unclassified
Haulage roadways (outside district)	
171	Rope haulage roadways
172	Conveyor roadways
173	Loco roadways
179	Unclassified
180	Shaft
199	Other below ground places

Code	Place of Accident
OPENCAST	
Benches	
211	Waste/overburden alluvium
212	Waste/overburden float
213	Waste/overburden hard rock
214	Coal/ore benches
Quarry (other than benches)	
221	Top of the quarry
222	Bed of the quarry
Roads	
231	Haul roads
232	Rope haulage roads
239	Other transportation roads
Other open cast places	
241	Waste dump
249	Other places (specify)
ABOVE GROUND	
Transportation road/sites	
311	Aerial ropeways
312	Rope haulage roads
313	Wheeled trackless transportation roads
314	Railway lines belonging to mines
315	Petroleum pipelines
319	Unclassified
Plant sites	
321	Site of ore handling plants
322	Workshop, powerhouse, engine room, etc.
323	Erection/rigging site
324	Gas col stn/gas comp stn/group gather.
325	Oil wells/water inject wells
329	Unclassified
Other above ground places	
331	Depot
332	Waste dump
333	Water reservoir
339	Unclassified



This page is intentionally left blank.

Statistics Division at DGMS



Shri Prabhat Kumar
Director General



Shri Jyoti Prasad Arya (ISS 2001)
Deputy Director General



Shri P C Bhaskar (ISS 2011)
Joint Director



Smt Gunjan Vaish (ISS 2011)
Joint Director



Shri Ashish Kumar (ISS 2016)
Deputy Director



Shri Pravez
Ansari
SSO



Shri Brajeshwar
Kumar
SSO



Smt Manju
Stella Jojo
SSO



Shri Ravindra
N Tiu
SSO



Smt Pravita
Dhama
SSO



Shri Sadashiv
Prasad
DPA



Shri Kranti
Kumar
JSO



Shri Bipin
Kumar Verma
JSO



Shri Dhananjay
Kumar
JSO



Shri Mandeep
Singh
JSO



Shri Anil
Kumar Gupta
JSO



Shri Sandeep
Kumar
JSO



Shri Ranjeet Prasad
PS



Shri Basant Yadav
OS



Md. Zaki Akber
UDC

खान सुरक्षा महानिदेशालय

1902 से खनिकों की सुरक्षा में